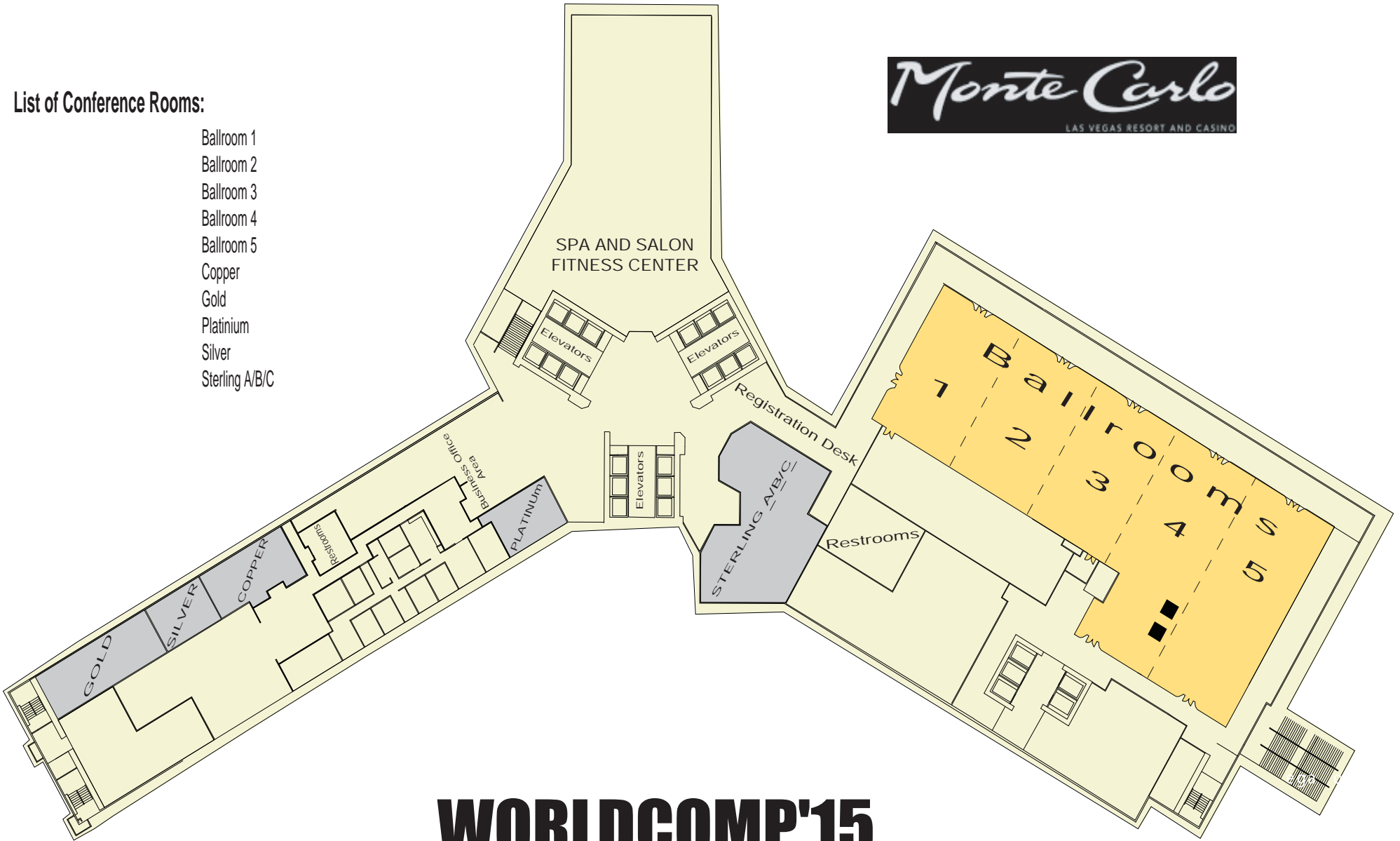




List of Conference Rooms:

- Ballroom 1
- Ballroom 2
- Ballroom 3
- Ballroom 4
- Ballroom 5
- Copper
- Gold
- Platinum
- Silver
- Sterling A/B/C



# WORLDCOMP'15 Conference Floor Map

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## **REGISTRATION DATES AND TIMES & CONFERENCE PACKAGE PICKUP**

**July 26, 2015 (Sunday):**

03:00pm - 08:30pm  
(LOCATION: Second Floor, Conference Lobby: 1-5)

**July 27, 2015 (Monday):**

06:45am - 05:00pm  
(LOCATION: Second Floor, Conference Lobby: 1-5)

**July 28, 2015 (Tuesday):**

06:45am - 05:00pm  
(LOCATION: Second Floor, Conference Lobby: 1-5)

**July 29, 2015 (Wednesday):**

06:45am - 05:00pm  
(LOCATION: Second Floor, Conference Lobby: 1-5)

**July 30, 2015 (Thursday):**

06:45am - 05:00pm  
(LOCATION: Second Floor, Conference Lobby: 1-5)

## **CONFERENCE RECEPTION DINNER / SOCIAL**

**July 27, 2015 (Monday):**

09:00 - 11:45pm  
(LOCATION: Ballrooms 1-5)

## CONFERENCES ACRONYMS AND THEIR FULL TITLES

ABDA'15:	The 2nd International Conference on Advances in Big Data Analytics
BIOCOMP'15:	The 16th International Conference on Bioinformatics & Computational Biology
BIOENG'15:	International Conference on Biomedical Engineering and Science
CSC'15:	The 13th International Conference on Scientific Computing
DMIN'15:	The 11th International Conference on Data Mining
EEE'15:	The 14th International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government
ESA'15:	The 13th International Conference on Embedded Systems and Applications
FCS'15:	The 11th International Conference on Foundations of Computer Science
FECS'15:	The 11th International Conference on Frontiers in Education: Computer Science and Computer Engineering
GCA'15:	The 11th International Conference on Grid & Cloud Computing and Applications
HIMS'15:	International Conference on Health Informatics and Medical Systems
ICAI'15:	The 17th International Conference on Artificial Intelligence
ICOMP'15:	The 16th International Conference on Internet Computing and Big Data
ICWN'15:	The 14th International Conference on Wireless Networks
IKE'15:	The 14th International Conference on Information & Knowledge Engineering
IPCV'15:	The 19th International Conference on Image Processing, Computer Vision, & Pattern Recognition
MSV'15:	The 12th International Conference on Modeling, Simulation and Visualization Methods
PDPTA'15:	The 21st International Conference on Parallel and Distributed Processing Techniques and Applications
SAM'15:	The 14th International Conference on Security and Management
SERP'15:	The 13th International Conference on Software Engineering Research and Practice

## PARTIAL LIST OF ADDITIONAL KEYNOTES, INVITED TALKS, & PANEL DISCUSSIONS

These talks are in addition to the focused keynotes/invited talks that appear in the individual conference schedules. The talks are open to all attendees and are scheduled in a way that various targeted attendees can attend/participate in them. Therefore, this list should be considered as a partial one.

### 0. WORLDCOMP KEYNOTE ADDRESS: (JULY 27)

Opening Remarks

Prof. Hamid R. Arabnia

Congress Co-Chair, Steering Committee & Coordinator;  
Professor of Computer Science; Editor-in-Chief, Journal of Supercomputing (Springer); Editor, Transactions of Computational Science & Computational Intelligence (Springer); Editor, Emerging Trends in Computer Science and Applied Computing (Elsevier); University of Georgia, Georgia, USA;

Date & Time: July 27 (Monday), 2015; 08:30am - 08:45am

LOCATION: Monte Carlo (Blue Man Group) Theater

### 0. WORLDCOMP KEYNOTE LECTURE 1: (JULY 27)

Computing the Context at the End of the Non-Semantic Era

Prof. Victor Raskin

Distinguished Professor of English and Linguistics and Professor of Computer Science and of Computer and Information Technology (Courtesy); Co-Founder, Associate Director, and Charter Fellow of Center for Education and Research in Information Assurance and Security (CERIAS); Purdue University, USA

Date & Time: July 27 (Monday), 2015; 08:45am - 09:35am

LOCATION: Monte Carlo (Blue Man Group) Theater

### 0. WORLDCOMP KEYNOTE LECTURE 2: (JULY 27)

Lessons from Commercializing Ideas from Colleges Around the World: What College Students, Faculty and Researchers Must do to be Successful

Dr. Sandeep Chatterjee

EVx Global; Named Young Global Leader by the World Economic Forum for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world.

Date & Time: July 27 (Monday), 2015; 09:40am - 10:20am

LOCATION: Monte Carlo (Blue Man Group) Theater

### 0. WORLDCOMP KEYNOTE LECTURE 3: (JULY 27)

Artificial Neurogenesis

Dr. James A. Crowder

Chief Engineer, Raytheon Intelligence, Information, and Services; Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation, Robotics and Artificial Intelligence Research Lab - Alexandria School of Innovation, Douglas County, Colorado, USA

Date & Time: July 27 (Monday), 2015; 10:40am - 11:20am

LOCATION: Monte Carlo (Blue Man Group) Theater

**O. WORLDCOMP KEYNOTE LECTURE 4: (JULY 27)**

The Infinity Computer and Numerical Computations with Infinities and Infinitesimals

Prof. Yaroslav D. Sergeyev, Ph.D., D.Sc., D.H.C.

Inventor of the Infinity Computer; Distinguished Professor, Head of Numerical Calculus Laboratory, University of Calabria, Rende, Italy; and Professor (part-time), Lobachevsky State University, Nizhni Novgorod, Russia

Date & Time: July 27 (Monday), 2015; 11:20a - 12:00p

LOCATION: Monte Carlo (Blue Man Group) Theater

**O. WORLDCOMP KEYNOTE LECTURE 5: (July 27)**

World of IoT and Connected Cars

Dr. Akash Singh, PhD

IBM Corporation, USA

Date & Time: July 27 (Monday), 2015; 12:00 - 12:15pm

(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

**O. INVITED TALK - DMIN'15: (JULY 27)**

Data Mining for RUL Estimation of Complex Assets

Prof. Diego Galar

Division of Operation and Maintenance Engineering, Lulea University of Technology, Lulea, Sweden

Date & Time: July 27 (Monday), 2015; 03:20pm - 04:00pm

LOCATION: Ballroom 1

**O. PANEL DISCUSSION - SAM'15: (JULY 28)**

Security

PANEL CHAIR/MODERATOR: Prof. George Markowsky,

Professor and Associate Director, School of Computing and Information Science, University of Maine, Orono, Maine, USA

Date & Time: July 28 (Tuesday), 2015; 10:40am - 11:40am

LOCATION: Ballroom 2

**O. INVITED TALK - EEE'15: (JULY 28)**

Funding Enabling Technologies

Dr. Steve Richfield

Founder of Savant AI Holdings, USA

Date & Time: July 28 (Tuesday), 01:00pm - 01:40pm

LOCATION: Silver Room

**O. PANEL DISCUSSION - ICAI'15: (JULY 28)**

Virtual Intelligence vs. Artificial Intelligence: The Good, The Bad, and the Ugly

PANEL CHAIR/MODERATOR: Dr. James A. Crowder,  
Chief Engineer, Raytheon Intelligence, Information and Services,  
Aurora, Colorado, USA

PANELISTS:

\* Prof. Victor Raskin; Distinguished Professor of English & Linguistics and Professor of Computer Science and of Computer and Information Technology (Courtesy); Co-Founder, Associate Director, and Charter Fellow of Center for Education and Research in Information Assurance and Security (CERIAS); Purdue University, Indiana, USA

\* Dr. Julia Taylor; Assistant Professor, Computer and Information Technology; Fellow of Center for Education and Research in Information Assurance and Security (CERIAS), Purdue University, Indiana, USA

\* Dr. John N. Carbone; Engineering Fellow, Raytheon Intelligence, Information and Services, Aurora, Colorado, USA

Date & Time: July 28 (Tuesday), 2015; 05:40pm - 07:00pm

LOCATION: Ballroom 3

**O. INVITED TALK - DMIN'15: (JULY 29)**

Data Science: The Road Ahead

Dr. Peter Geczy

National Institute of Advanced Industrial Science and Technology (AIST),  
Japan

Date & Time: July 29 (Wednesday), 2015; 08:20am - 09:20am

LOCATION: Ballroom 1

**O. INVITED TALK - ABDA'15 & BIOCAMP'15: (JULY 29)**

Systems Genomics Approaches for Streamlined Big-Data Integrative Genomics Analysis

Dr. Mary Yang

Director of MidSouth Bioinformatics Center; Director of the Joint Bioinformatics Ph.D. Program of University of Arkansas Little Rock Donaghey College of Engineering & IT and University of Arkansas for Medical Sciences, Arkansas, USA

Date & Time: July 29 (Wednesday), 2015; 05:00pm - 05:40pm

LOCATION: Silver Room

**O. INVITED TALK - SERP'15: (JULY 30)**

Evolving Systems: Theory, Implementation, Application

Prof. Igor Schagaev

London Metropolitan University, London, UK; Research Advisor of ITACS Ltd, UK

Date & Time: July 30 (Thursday), 2015; 10:20am - 11:00am

LOCATION: Sterling ABC Room

## PLANNED TUTORIALS

Each tutorial is between 1 and 3 hours long and are free to all registered attendees.

### **0. July 27 (Monday)**

Energy-Aware Resource Management for Computing Systems

Prof. H. J. Siegel

Fellow of IEEE, Fellow of ACM; Abell Endowed Chair Distinguished Professor of Electrical and Computer Engineering and Professor of Computer Science, Colorado State University, Fort Collins, Colorado, USA

Date & Time: July 27, 2015 (05:40pm - estimated duration: about 2+ hours)

LOCATION: Gold Room

### **0. July 27 (Monday)**

Best Practices for Developing Real-World Mobile Apps, Software as a Service (SaaS) and Web Services

Dr. Sandeep Chatterjee

Chief Executive Officer, SHUV GRAY LLC, USA; Named Young Global Leader by the World Economic Forum for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world.

Date & Time: July 27, 2015 (05:40pm - estimated duration: about 2+ hours)

LOCATION: Platinum Room

### **0. July 27 (Monday)**

Building Dependable Distributed Systems

Dr. Wenbing Zhao

Associate Professor, Department Electrical and Computer Engineering, Cleveland State University, USA

Date & Time: July 27, 2015 (05:40pm - estimated duration: about 2+ hours)

LOCATION: Sterling ABC Room

### **0. July 27 (Monday)**

What Should We Know About Computational Humor

Dr. Julia M. Taylor

Assistant Professor, Computer and Information Technology; Fellow of Center for Education and Research in Information Assurance and Security (CERIAS), Purdue University, Indiana, USA

Date & Time: July 27, 2015 (05:40pm - estimated duration: about 2+ hours)

LOCATION: Copper Room

### **0. July 27 (Monday)**

Introduction to Cryptography and Network Security

Dr. Asoke Nath

Associate Professor, Department of Computer Science, St. Xavier's College (Autonomous), Kolkata, India

Date & Time: July 27, 2015 (05:40pm - estimated duration: about 2+ hours)

LOCATION: Silver Room

### **0. July 28 (Tuesday)**

JavaFX Quickstart - Moving Beyond Swing for Rich User Interfaces

Prof. Mark C. Lewis

Department of Computer Science, Trinity University, San Antonio, Texas, USA

Date & Time: July 28, 2015 (05:40pm - estimated duration: about 2+ hours)

LOCATION: Ballroom 4



- 0. July 28 (Tuesday)**  
 Cyberwarfare, Cybercrime and Cybersecurity  
 Prof. George Markowsky  
 Professor of Computer Science; Director Cybersecurity Lab School of Computing and Information Science, University of Maine, Orono, USA  
 Date & Time: July 28, 2015 (05:40pm - estimated duration: about 2+ hours)  
 LOCATION: Ballroom 2
- 0. July 28 (Tuesday)**  
 Human Motion Tracking and Recognition with Microsoft Kinect  
 Dr. Wenbing Zhao  
 Associate Professor, Department Electrical and Computer Engineering, Cleveland State University, USA  
 Date & Time: July 28, 2015 (05:40pm - estimated duration: about 2+ hours)  
 LOCATION: Ballroom 5
- 0. July 28 (Tuesday)**  
 eMaintenance: Knowledge Discovery in Asset Data by the Means of Data Mining  
 Prof. Diego Galar  
 Division of Operation and Maintenance Engineering, Lulea University of Technology, Lulea, Sweden  
 Date & Time: July 28, 2015 (06:00pm - estimated duration: about 2+ hours)  
 LOCATION: Ballroom 1
- 0. July 28 (Tuesday)**  
 Application of MATLAB in Science and Engineering  
 Dr. Asoke Nath  
 Associate Professor, Department of Computer Science, St. Xavier's College (Autonomous), Kolkata, India  
 Date & Time: July 28, 2015 (05:40pm - estimated duration: about 2+ hours)  
 LOCATION: Sterling ABC
- 0. July 28 (Tuesday)**  
 Analyzing and Protecting RFID and Card Access Systems  
 Dr. Rob Byrd  
 Associate Professor of IT and Computing, Abilene Christian University, Abilene, Texas, USA  
 Date & Time: July 28, 2015 (05:40pm - estimated duration: about 2+ hours)  
 LOCATION: Platinum Room
- 0. July 29 (Wednesday)**  
 Data Privacy for Emerging Mobile Cloud Apps  
 Mehdi Bahrami  
 Senior Member, IEEE; University of California Merced, California, USA  
 Date & Time: July 29, 2015 (05:40pm - estimated duration: about 2+ hours)  
 LOCATION: Ballroom 1
- 0. July 30 (Thursday)**  
 Integrative Big-Data Analysis for Translational Genomics Research  
 William Yang\* and Kenji Yoshigoe\*\*  
 \* NSF Research Trainee and Scholar, Texas Advanced Computing Center, University of Texas at Austin, Austin, Texas, Texas;  
 \*\* Director of National Center of Academic Excellence in Cyber Defense Education, University of Arkansas at Little Rock, Little Rock, Arkansas, USA  
 Date & Time: July 30, 2015 (03:40pm - estimated duration: about 1+ hour)  
 LOCATION: Gold Room

# **PDPTA'15 CONFERENCE SCHEDULE**

## **The 2015 International Conference on Parallel & Distributed Processing Techniques and Applications**

*There are a number of other sessions (not listed as part of PDPTA'15 in this schedule) that are of potential interest to PDPTA'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, some sessions in ABDA'15, ICOMP'15, SAM'15, BIOCOMP'15, CSC'15, GCA'15, and ESA'15, conferences discuss topics that are within the scope of PDPTA'15; these have been scheduled so that selected PDPTA'15 groups/attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

- 08:30 - 08:45am: CONGRESS OPENING REMARKS - July 27, Monday:**  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am: KEYNOTE LECTURE 1 - July 27, Monday:**  
**COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA**  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am: KEYNOTE LECTURE 2 - July 27, Monday:**  
**LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL**  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE  
AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS**  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

10:40 - 11:20am: **KEYNOTE LECTURE 3 - July 27, Monday:**  
**ARTIFICIAL NEUROGENESIS**  
**Dr. James A. Crowder**  
**Chief Engineer, Raytheon Intelligence, Information, and Services;**  
**Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,**  
**Robotics and Artificial Intelligence Research Lab - Alexandria**  
**School of Innovation, Douglas County, Colorado, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**

11:20a - 12:00p: **KEYNOTE LECTURE 4 - July 27, Monday:**  
**The Infinity Computer and Numerical Computations with Infinities**  
**and Infinitesimals**  
**Prof. Yaroslav D. Sergeev, Ph.D., D.Sc., D.H.C.**  
**Inventor of the Infinity Computer; Distinguished Professor, Head**  
**of Numerical Calculus Laboratory, University of Calabria, Rende,**  
**Italy; and Professor (part-time), Lobachevsky State University,**  
**Nizhni Novgorod, Russia**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**

12:00 - 12:15pm: **KEYNOTE LECTURE 5 - July 27, Monday:**  
**World of IoT and Connected Cars**  
**Dr. Akash Singh, PhD**  
**IBM Corporation, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**

12:15 - 01:00pm: **LUNCH (On Your Own)**

**SESSION 1-PDPTA: WORKSHOP ON MATHEMATICAL MODELING AND PROBLEM SOLVING (MPS)**  
**Chair: Prof. Hayaru Shouno; University of Electro-Communications, Japan**  
**July 27, 2015 (Monday); 01:00pm - 05:50pm**  
**(LOCATION: Ballroom 4)**

01:00 - 01:17pm: **Codebook Graph Coding of Descriptors**  
**Tetsuya Yoshida, Yuu Yamada**  
**Graduate School of Humanities and Science, Nara Women's University,**  
**Kitauoya Nishimachi, Nara, Japan**

01:17 - 01:34pm: **A Personal Classification Method Using Spatial Information of**  
**Multi-channel EEG**  
**Yu Ishikawa, Chinami Yoshida, Masami Takata, Hiroyasu Kamo, Kazuki Joe**  
**Department of Advanced Information and Computer Science,**  
**Nara Women's University, Kitauoya Nishimachi, Nara, Japan**

01:34 - 01:51pm: **A Method to Maintain the Field Coverage by Static and Mobile**  
**Sensor Nodes Using Wireless Charging**  
**Yuki Tsuchiya, Ryo Katsuma**  
**Graduate School of Science, Osaka Prefecture University, Sakai,**  
**Osaka, Japan**

01:51 - 02:08pm: **Performance Evaluation of Golub-Kahan-Lanczos Algorithm with**  
**Reorthogonalization by Classical Gram-Schmidt Algorithm and OpenMP**  
**Masami Takata, Hiroyuki Ishigami, Kinji Kimura, Yuki Fujii,**  
**Hiroki Tanaka, Yoshimasa Nakamura**  
**Research Group of Information and Communication Technology for Life,**  
**Nara Women's University, Kitauoya Nishimachi, Nara, Japan**

02:08 - 02:25pm: **Dimension Reduction Using Nonnegative Matrix Tri-Factorization in**  
**Multi-label Classification**  
**Keigo Kimura, Mineichi Kudo, Lu Sun**  
**Graduate School of Information Science and Technology,**  
**Hokkaido University, Sapporo, Japan**

- 02:25 - 02:42pm: A Music Composition Model with Genetic Programming - A Case Study of Chord Progression and Bassline  
Kanae Kunimatsu, Yu Ishikawa, Masami Takata, Kazuki Joe  
Department of Advanced Information and Computer Science,  
Nara Women's University, Kitauoya Nishimachi, Nara, Japan
- 02:42 - 02:59pm: Sign Language Recognition using Leap Motion Controller  
Makiko Funasaka, Yu Ishikawa, Masami Takata, Kazuki Joe  
Department of Advanced Information and Computer Science,  
Nara Women's University, Kitauoya Nishimachi, Nara, Japan
- 03:00 - 03:15pm: BREAK**
- 03:15 - 03:32pm: Semi-supervised Based Learning for Idiopathic Interstitial Pneumonia on HRCT Images  
Hayaru Shouno, Shoji Kido  
Graduate School of Informatics and Engineering,  
University of Electro-Communications, Chofu, Tokyo, Japan
- 03:32 - 03:49pm: An Effective and Interactive Training Data Collection Method for Early-Modern Japanese Printed Character Recognition  
Kazumi Kosaka, Taeka Awazu, Yu Ishikawa, Masami Takata, Kazuki Joe  
Department of Advanced Information and Computer Science,  
Nara Women's University, Kitauoya Nishimachi, Nara, Japan
- 03:49 - 04:06pm: Residual Inter-Contact Time for Opportunistic Networks with Pareto Inter-Contact Time: Two Nodes Case  
Juntao Gao, Minoru Ito  
Nara Institute of Science and Technology, Takayama,  
Ikoma City, Nara, Japan
- 04:06 - 04:23pm: Web of Wine Words: Hierarchy Visualization of Wine Speak by Restricted Bootstrap  
Brendan Flanagan, Sachio Hirokawa  
Graduate School of Information Science and Electrical Engineering, Kyushu University, Nishi-Ku, Fukuoka, Japan
- 04:23 - 04:39pm: Visualization of Sensory Weight for Shouldering Randoseru  
Hitomi Oigawa, Yu Ishikawa, Masami Takata, Kazuki Joe  
Department of Advanced Information and Computer Science,  
Nara Women's University, Kitauoya Nishimachi, Nara, Japan
- 04:39 - 04:56pm: Recipe Clustering based on Japanese Food Guide Spinning Top  
Yasuhiro Tajima, Takahiro Suwa, Genichiro Kikui,  
Rikako Inoue, Megumi Kubota  
Department of Systems Engineering, Okayama Prefectural University, Soja, Okayama, Japan
- 04:56 - 05:13pm: Evaluating Elements of Communicative Stuffed-toy Device Describes Scripts on SNS  
Haruka Mase, Tomoko Yonezawa, Kazuki Joe  
Department of Advanced Information and Computer Science,  
Nara Women's University, Kitauoya Nishimachi, Nara, Japan
- 05:13 - 05:30pm: A Study on Non-Correspondence in Spread Between Objective Space and Design Variable Space and Application to Genetic Search  
Tomohiro Yoshikawa, Toru Yoshida, Toshihiro Kishigami  
Department of Computational Science and Engineering,  
Nagoya University, Chikusa-ku, Nagoya, Japan

**05:30 - 05:47pm:** Quantitative Evaluation of Reconstructed Image with Filtered  
Back Projection Bayes Method  
Nodoka Iida, Hayaru Shouno, Muneyuki Sakata, Yuichi Kimura  
Graduate School of Informatics and Engineering,  
University of Electro-Communications, Chofu, Tokyo, Japan

**05:47 - 06:00pm:** FREE SLOT

**06:00 - 09:00pm:** TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
(Please see the lists at the beginning of the program book for details)

**09:00 - 11:45pm:** CONFERENCE RECEPTION DINNER / SOCIAL  
July 27 - Monday; 09:00pm - 11:45pm  
(LOCATION: Ballrooms 1-5)

**SESSION 2-PDPTA: INFORMATION SHARING NETWORK SYSTEMS AND SERVICES ACHIEVING HIGH DEPENDABILITY, EFFICIENCY AND USABILITY**

**Chair: Prof. Hiroaki Nishikawa, University of Tsukuba, Japan  
July 28, 2015 (Tuesday); 08:00am - 10:20am  
(LOCATION: Ballroom 4)**

- 08:00 - 08:20am: A Concept of Community Care System and Community Information Network  
Ayami Manaka, Akio Ogata, Hirohide Matsuzaka, Hayato Taniguchi,  
Masaya Nomoto, Yasuhiro Nozawa, Minoru Fukuzaki, Hiroshi Ishii,  
Keisuke Utsu  
School of Information and Telecommunication Engineering,  
Tokai University, Minato, Tokyo, Japan
- 08:20 - 08:40am: Performance Evaluation of a Community Information Network for a  
Daily Life Support System  
Ayami Manaka, Tomomi Itoh, Yasuhiro Nozawa, Chee Onn Chow,  
Minoru Fukuzaki, Hiroshi Ishii, Keisuke Utsu  
School of Information and Telecommunication Engineering,  
Tokai University, Minato, Tokyo, Japan
- 08:40 - 09:00am: A Study on Secure Communication Method Using Secret Sharing  
Schemes over MANET  
Kei Kobayashi, Yosuke Totani, Keisuke Utsu, Hiroshi Ishii  
School of Information and Telecommunication Engineering,  
Tokai University, Minato, Tokyo, Japan
- 09:00 - 09:20am: Efficient Location-aided Route Discovery Mechanism for Ad-hoc  
Networks  
Phonepadith Phounmmavong, Keisuke Utsu, Hiroaki Nishikawa,  
Hiroshi Ishii  
School of Information and Telecommunication Engineering,  
Tokai University, Minato, Tokyo, Japan
- 09:20 - 09:40am: Highly-Dependable and Long-Lifetime Data-Driven Networking  
Processor with Energy Assurance Capability  
Shuji Sannomiya, Hiroaki Nishikawa  
Graduate School of Systems and Information Engineering,  
University of Tsukuba, Ibaraki, Japan
- 09:40 - 10:00am: Data-Driven Sensor Networking System Simulator  
Kazuhiro Aoki, Shuji Sannomiya, Hiroaki Nishikawa  
Information Infrastructure Laboratory, Inc., Ibaraki, Japan
- 10:00 - 10:20am: Self-Timed MM-FFT Circuit and its Performance Evaluation  
Norifumi Uno, Makoto Iwata  
Graduate School of Engineering, Kochi University of Technology,  
Tosayamada-cho, Kochi, Japan
- 10:20 - 10:40am: BREAK**

**SESSION 3-PDPTA: RESOURCE MANAGEMENT, RESOURCE ALLOCATION, SCHEDULING, AND DATA MANAGEMENT****Chair: Dr. Satish Penmatsa****Framingham State University, Massachusetts, USA****July 28, 2015 (Tuesday); 10:40am - 12:20pm****(LOCATION: Ballroom 4)**

- 10:40 - 11:00am: GetLB++: Improving Transaction Load Balancing on the Electronic Funds Transfer Landscape  
Felipe Rabuske, Cristiano Andre da Costa, Rodrigo da Rosa Righi, Gustavo Rostirolla, Antonio Alberti, Anselm Busse, Hans-Ulrich Heiss  
Applied Computing Graduate Program, University Vale do Rio dos Sinos, Sao Leopoldo, RS, Brazil;  
Instituto Nacional de Telecomunicacoes - INATEL, Santa Rita do Sapucaí, MG, Brazil;  
Technical University Berlin - TU Berlin, Berlin, Germany
- 11:00 - 11:20am: Comparison of Energy-Constrained Resource Allocation Heuristics Under Different Task Management Environments  
Bhavesh Khemka, Ryan Friese, Sudeep Pasricha, Anthony A. Maciejewski, Howard Jay Siegel, Gregory A. Koenig, Sarah Powers, Marcia Hilton, Rajendra Rambharos, Mike Wright, Steve Poole  
Colorado State University, Fort Collins, Colorado, USA;  
Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA;  
Department of Defense, Washington, DC, USA
- 11:20 - 11:40am: Scheduling Methods for OpenVX Programs on Heterogeneous Multi-Core Systems  
Tzu-Hsiang Lin, Cheng-Yen Lin, Jenq-Kuen Lee  
Department of CS, National Tsing-Hua University, Taiwan
- 11:40 - 12:00pm: Shareable, Persistent, In-Memory, Read-Only Data  
Ralph Butler, Chrisila Pettey  
Middle Tennessee State University, Murfreesboro, Tennessee, USA
- 12:00 - 12:20pm: Container-Based Cluster Management Platform for Distributed Computing  
Ju-Won Park, Jaegyeon Hahm  
Division of Supercomputing, KISTI, Daehak-ro, Yuseong-gu, Daejeon, Republic of Korea
- 12:20 - 01:20pm: **LUNCH (On Your Own)**

**SESSION 4-PDPTA: HPC, COMPUTATIONAL SCIENCE, DISTRIBUTED PROCESSING, AND APPLICATIONS****Co-Chairs: Dr. Gennady Veselovsky\* and Dr. Yingwei Wang\*\*****\*Assumption University, Thailand****\*\*University of Prince Edward Island, Canada****July 28, 2015 (Tuesday); 01:20pm - 03:00pm****(LOCATION: Ballroom 4)**

- 01:20 - 01:40pm: GRALT: A Multi-Thread Tool For Text Versions Analysis  
Katia Mayfield  
Athens State University, Alabama, USA
- 01:40 - 02:00pm: OpenCL-based Design of an FPGA Accelerator for Phase-Based Correspondence Matching  
Shunsuke Tatsumi, Masanori Hariyama, Mamoru Miura, Koichi Ito, Takafumi Aoki  
Graduate School of Information Sciences, Tohoku University, Japan

- 02:00 - 02:20pm: Cloud-dew Architecture: Realizing the Potential of Distributed Database Systems in Unreliable Networks  
Yingwei Wang  
Department of Computer Science and Information Technology,  
University of Prince Edward Island, Prince Edward Island, Canada
- 02:20 - 02:40pm: Developing NAND-Memory SSD Based Hybrid Filesystem  
Jaechun No  
College of Electronics and Information Engineering,  
Sejong University, South Korea
- 02:40 - 03:00pm: An FPGA Architecture for Text Search Using a Wavelet-Tree-Based Succinct-Data-Structure  
Hasitha Muthumala Waidyasooriya, Daisuke Ono, Masanori Hariyama,  
Michitaka Kameyama  
Tohoku University, Japan
- 03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-PDPTA  
July 28, 2015 (Tuesday)  
(LOCATION: Hallways of Ballrooms 1-5)**
0. A CPU and GPU Heterogeneous Processing of Multimedia Data by Using OpenCL  
Heegon Kim, Sungju Lee, Yongwha Chung, Daihee Park  
Department of Computer and Information Science,  
Korea University, Sejong City, Republic of Korea
0. Structural Dynamic Response Analysis With GPU-Based Parallel Computation  
Dong-Keun Kang, Seung-Hyun Cho, Sang-Jin Ma, Hyun-Ik Yang,  
Chang-Wan Kim  
Department of Mechanical Design and Mechatronics, Hanyang University,  
Seoul, Korea; Mechanical Design and Production Engineering, Konkuk  
University, Seoul, Korea; Department of Mechanical Engineering,  
Hanyang University, Kyeonggi-do, Korea
- SESSION 5-PDPTA: RESOURCE MANAGEMENT, SCHEDULING, AND DATA MANAGEMENT +  
GPGPU + EXASCALE COMPUTING  
Co-Chairs: Dr. Bhavesh Khemka\* and Prof. Refik Samet\*\*  
\*ECE, Colorado State University, Fort Collins, Colorado, USA  
\*\*Ankara University, Turkey  
July 28, 2015 (Tuesday); 03:40pm - 05:40pm  
(LOCATION: Ballroom 4)**
- 03:40 - 04:00pm: Intelligent Usage Management of Shared Resources in Simultaneous Multi-Threading Processors  
Yilin Zhang, Wei-Ming Lin  
Advanced Micro Devices, Inc., USA;  
The University of Texas at San Antonio, San Antonio, Texas, USA
- 04:00 - 04:20pm: Distributed Two-Dimensional Guided Loop Self-Scheduling for Heterogeneous Computer Systems  
Satish Penmatsa, Akash Laddha  
Department of Computer Science, Framingham State University,  
Framingham, MA, USA; Staples Inc., Framingham, MA, USA
- 04:20 - 04:40pm: Locality Aware Work-Stealing Based Scheduling in Hybrid CPU-GPU Clusters  
Tarun Beri, Sorav Bansal, Subodh Kumar  
Indian Institute of Technology Delhi, New Delhi, India
- 04:40 - 05:00pm: Real Time Image Processing Applications on Multicore CPU and GPGPU  
Semra Aydyn, Refik Samet, Serhat Tural, Anar Bayram  
Ankara University, Ankara, Turkey; Gazi University, Ankara, Turkey



05:00 - 05:20pm: The Path to Exascale Computing: Survey  
Reem Alshahrani  
Kent State University, Kent, Ohio, USA

05:20 - 05:40pm: Associative Operations From MASC To GPU  
Mingxian Jin  
Fayetteville State University, Fayetteville, North Carolina, USA

**05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the beginning of the program book for details)**

- SESSION 6-PDPTA: SOFTWARE TOOLS AND SYSTEMS, PARALLELIZING COMPILERS, PROGRAMMING LANGUAGES, OS, AND MIDDLEWARE**  
**Chair: Prof. Jenq-Kuen Lee**  
 Department of CS, National Tsing Hua University, Taiwan  
 July 29, 2015 (Wednesday); 08:00am - 09:40am  
 (LOCATION: Ballroom 4)
- 08:00 - 08:20am: The Support of an Experimental OpenCL Compiler on HSA Environments  
 Chun-Chieh Yang, Shao-Chung Wang, Chou-Chuan Chen, Jenq-Kuen Lee  
 Department of Computer Science, National Tsing Hua University,  
 Hsinchu, Taiwan
- 08:20 - 08:40am: Modeling Parallel Applications for Scalability Analysis: An  
 approach to predict the communication pattern  
 Javier Panadero, Alvaro Wong, Dolores Rexachs, Emilio Luque  
 Department of Computer Architecture and Operating System (CAOS),  
 University Autonoma of Barcelona, Spain
- 08:40 - 09:00am: Reusability of DDS Information-Model for Distributed VRE  
 Hassan Haidar, Ali Kalakech, Ali Hamie, Ronan Querrec  
 Lab-STICC-CERV ENIB, Brest, France;  
 Lebanese University, Beirut, Lebanon;  
 Lab-CRITC AUL, Beirut, Lebanon
- 09:00 - 09:20am: Empirical Study of Time Efficiency and Accuracy of Support Vector  
 Machines Using an Improved Version Of PSVM  
 Shirin Tavara, Hakan Sundell, Anders Dahlbom  
 University of Boras, Boras, Sweden;  
 University of Skovde, Skovde, Sweden
- 09:20 - 09:40am: Hotspot: a Framework to Support Performance Optimization on  
 Multiprocessors  
 Fernando G. Tinetti, Andres More  
 III-LIDI, Facultad de Informatica, UNLP, Argentina;  
 Intel Corp., Argentina Software Design Center, Cordoba, Argentina
- SESSION 7-PDPTA: CSTAW 2015 - 7TH HIGH PERFORMANCE COMPUTING FOR COMPLEX SYSTEMS,  
 THEORY AND APPLICATIONS WORKSHOP**  
**Co-Chairs: Dr. Lou D'Alotto\*, Dr. Georgios Sirakoulis\*\*,  
 Dr. William Spataro\*\*\*, Dr. Giuseppe A. Trunfio\*\*\*\***  
 \*York College, CUNY, New York, USA;  
 \*\*Democritus University of Thrace, Greece;  
 \*\*\*University of Calabria, Italy;  
 \*\*\*\*University of Sassari, Italy  
 July 29, 2015 (Wednesday); 09:40am - 12:20pm  
 (LOCATION: Ballroom 4)
- 09:40 - 10:00am: A Novel Distributed Arithmetic Multiplierless Approach for Computing  
 Complex Inner Products  
 Kevin Bowlyn, Nazeih Botros  
 Southern Illinois University, Carbondale, Illinois, USA
- 10:00 - 10:20am: A Scalable Parallel Bisection Algorithm for Symmetric Tridiagonal  
 Eigenvalue Problem  
 Barok Imana, Peter Yoon  
 Department of Computer Science, Trinity College, Hartford, CT, USA
- 10:20 - 10:40am: BREAK**

- 10:40 - 11:00am: Use of the SCIDDICA-SS3 model for Predictive Mapping of Debris Flow Hazard: An Example of Application in the Peloritani Mountains Area  
V. Lupiano, D. J. Peres, M. V. Avolio, A. Cancelliere, E. Foti,  
W. Spataro, L. M. Stancanelli, S. Di Gregorio  
Department of Biology, Ecology and Earth Sciences,  
University of Calabria, Rende, Italy
- 11:00 - 11:20am: A Tool for Automatically Suggesting Source-Code Optimizations for Complex GPU Kernels  
Saeed Taheri, Apan Qasem, Martin Burtscher  
Department of Computer Science, University of Utah, Utah, USA;  
Department of Computer Science, Texas State University, Texas, USA
- 11:20 - 11:40am: Accelerating Lava Flows Simulations with GPGPU and OpenCL  
A. De Rango, M. Macri, D. D'Ambrosio, W. Spataro  
Department of Mathematics and Computer Science,  
University of Calabria, Italy
- 11:40 - 12:00pm: Evaluation of an FPGA-Based Shortest-Path-Search Accelerator  
Yasuhiro Takei, Masanori Hariyama, Michitaka Kameyama  
Graduate School of Information Sciences, Tohoku University, Japan
- 12:00 - 12:20pm: Proposal and Implementation of Mixed Finite Automata Optimization by Balancing Active States and Transitions  
Kosuke Nishimura, Kenichi Takagiwa, Hiroaki Nishi  
Keio University, Japan
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 8-PDPTA: PARALLEL PROCESSING ALGORITHMS, SYSTEMS, APPLICATIONS, AND RELATED ISSUES**  
**Co-Chairs: Prof. William Spataro\* and Dr. Satish Penmatsa\*\***  
\*University of Calabria, Italy  
\*\*Framingham State University, Massachusetts, USA  
**July 29, 2015 (Wednesday); 01:20pm - 03:00pm**  
**(LOCATION: Ballroom 4)**
- 01:20 - 01:40pm: Scalability of Parallel Applications: an Approach to Predict the Computational Behavior  
Javier Panadero, Alvaro Wong, Dolores Rexachs, Emilio Luque  
Computer Architecture and Operating Systems Department,  
University Autònoma of Barcelona, Barcelona, Spain
- 01:40 - 02:00pm: Distributed Caching Using the HTCondor Cached  
Derek Weitzel, Brian Bockelman, David Swanson  
University of Nebraska - Lincoln, Lincoln, Nebraska, USA
- 02:00 - 02:20pm: A Queueing Model of Hybrid Parallel Pipelines  
Fahad Khalid, Lena Herscheid, Andreas Polze  
Hasso Plattner Institute for Software Systems Engineering, Potsdam,  
Germany
- 02:20 - 02:40pm: Parallel Processing of Breadth First Search by Tightly Coupled Accelerator  
Takahiro Kaneda, Takuji Mitsuishi, Yuki Katsuta, Takuya Kuhara,  
Toshihiro Hanawa, Hidehasru Amano, Taisuke Boku  
Keio University, Yokohama; The University of Tokyo, Kashiwa;  
University of Tsukuba, Tsukuba, Japan

- 02:40 - 03:00pm: Butterflies Solve Bidiagonal Toeplitz Systems  
Brian J. Murphy, Aron Wolinetz, Joshua Rogers  
Lehman College & The Graduate Center of the City University of  
New York, Bronx, New York, USA;  
The Graduate Center of the City University of New York, USA
- 03:00 - 03:40pm: **POSTER/DISCUSSION SESSION B-PDPTA**  
**July 29, 2015 (Wednesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**
- O. On the Scalability of Parallel Quicksort: A Case Study on  
Distributed vs. Shared-Memory Models  
David Paulius, Marc Boumedine  
Department of Computer Science and Engineering, University of  
South Florida, Tampa, Florida, USA;  
Computational and Computer Sciences Department, University of the  
Virgin Islands, St. Thomas, US Virgin Islands
- O. ...
- SESSION 9-PDPTA: DISTRIBUTED PROCESSING, ALGORITHMS AND APPLICATIONS + GPU AND FPGA**  
**Co-Chairs: Prof. Jennifer Walter\* and Hassan Haidar\*\***  
**\*Vassar College, USA**  
**\*\*LAB-STICC, ENIB, France**  
**July 29, 2015 (Wednesday); 03:40pm - 05:40pm**  
**(LOCATION: Ballroom 4)**
- 03:40 - 04:00pm: BSPonP2P: Towards Running Bulk-Synchronous Parallel Applications  
on P2P Desktop Grids  
Rodrigo Da Rosa Righi, Gustavo Rostirolla, Vinicius Facco Rodrigues,  
Alexandre Veith, Cristiano Andre Da Costa  
Universidade do Vale do Rio dos Sinos (Unisinos), Applied Computing  
Graduate Program, Rio Grande do Sul, Brazil
- 04:00 - 04:20pm: FPGA-Oriented Design of an FDTD Accelerator Based on Overlapped  
Tiling  
Yasuhiro Takei, Hasitha Muthumala Waidyasooriya, Masanori Hariyama,  
Michitaka Kameyama  
Graduate School of Information Sciences, Tohoku University, Japan
- 04:20 - 04:40pm: Unpacking a Cluster of Modular Robots  
Stanton Wong, Stephanie Zhu, Jennifer Walter  
Vassar College, Poughkeepsie, New York, USA
- 04:40 - 05:00pm: Analysis of Fault Injection Approaches in Apache Hadoop  
P. P. Barcelos, A. S. Charao  
Department of Languages and Computing Systems, Universidade  
Federal de Santa Maria, RS, Brazil
- 05:00 - 05:20pm: SyncSmartv: A Framework for Synchronizing Smart TV Applications  
with TV Programs  
Cedrick Bamba Nsimba, Cesar A.C. Teixeira  
Federal University of Sao Carlos, Brazil
- 05:20 - 05:40pm: An Environment-Aware Anomaly Detection Framework of Cloud  
Datacenter for Improving its Dependability  
Guiping Wang, Shuyu Chen, Jun Liu  
College of Computer Science, Chongqing University, Chongqing,  
P. R. China; School of Software Engineering, Chongqing University,  
Chongqing, P. R. China; Department of Electrical and Computer  
Engineering, McGill University, Montreal, Canada
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the beginning of the program book for details)**

**SESSION 10-PDPTA: COMMUNICATION TOPOLOGIES, INTERCONNECTION NETWORKS, AND RELATED ALGORITHMS****Chair: Prof. Yung-Ting Chuang****National Chung Cheng University, Taiwan****July 30, 2015 (Thursday); 08:00am - 10:00am****(LOCATION: Ballroom 4)**

- 08:00 - 08:20am: A New Efficient Distributed Load Balancing Algorithm for OTIS-Star Networks  
Ahmad M. Awwad, Jehad Al-Sadi  
University of Petra, Amman, Jordan;  
Arab Open University, Amman, Jordan
- 08:20 - 08:40am: Decomposing BPC Permutations for Crosstalk Avoidance in Multistage Optical Interconnection Networks  
Gennady Veselovsky, Ritu Jain  
Assumption University of Thailand, Bangkok, Thailand
- 08:40 - 09:00am: An Algorithm for Node-to-Node Disjoint Paths Problem in a Mobius Cube  
David Kocik, Yuki Hirai, Keiichi Kaneko  
Faculty of Information Technology, Czech Technical University in Prague, Czech Republic; Institute of Engineering, Tokyo University of Agriculture and Technology, Tokyo, Japan
- 09:00 - 09:20am: Parallel Packet Processing on Multi-Core and Many-Core Processors  
Andy Harvath, Hiroaki Nishi  
Graduate School of Science & Technology, Keio University, Japan
- 09:20 - 09:40am: A Data Communication Reliability and Trustability Study for Cluster Computing  
Eduardo Colmenares, Per Andersen  
Texas Tech University, Lubbock, Texas, USA; High Performance Computing Center (HPCC), Texas Tech University, Texas, USA
- 09:40 - 10:00am: Application-Aware Routing Policy Based on Application Pattern Traffic  
Joe Carrion, Daniel Franco, Emilio Luque  
Universitat Autònoma de Barcelona, Computer Architecture and Operative Systems Department, Bellaterra, Spain

**SESSION 11-PDPTA: CLOUD COMPUTING AND APPLICATIONS + HARDWARE AND SOFTWARE RECONFIGURABILITY + NETWORK ON CHIP (NOC) AND EMBEDDED SYSTEMS****Chair: TBA****July 30, 2015 (Thursday); 10:00am - 12:20am****(LOCATION: Ballroom 4)**

- 10:00 - 10:20am: DISCO: Unified Provisioning of Distributed Computing Platforms in the Cloud  
Piyush Harsh, Thomas Michael Bohnert  
Zurich University of Applied Sciences, Winterthur, Switzerland; InIT, ZHAW, Winterthur, Switzerland
- 10:20 - 10:40am: I/O Performance Evaluation of Parallel Scientific Applications in a Cloud Environment  
Pilar Gomez-Sanchez, Sandra Mendez, Dolores Rexachs, Emilio Luque  
Computer Architecture and OS Department, Universitat Autònoma de Barcelona (UAB), Bellaterra (Barcelona), Spain;  
High Performance Systems Division, Leibniz Supercomputing Centre (LRZ), Garching (Munich), Germany

- 10:40 - 11:00am: Crowdsourcing The Cloud: Energy-Aware Computational Offloading for Pervasive Community-Based Cloud Computing  
Kassahun Adem, Caspar Ryan, Ermyas Abebe  
RMIT University, Melbourne, Australia;  
IBM Melbourne Research Lab, Melbourne, Australia
- 11:00 - 11:20am: MPI Communications Management in Cloud  
Laura Espinola, Daniel Franco, Emilio Luque  
Computer Architecture and Operating System Department,  
Universidad Autonoma de Barcelona (UAB), Spain
- 11:20 - 11:40am: A More Efficient Use of Separable Allocator with Bypass Buffer  
Chung-Da Wu, Yarsun Hsu, Kuo-Feng Liao  
Department of Electrical Engineering, National Tsing Hua  
University, Hsinchu, Taiwan
- 11:40 - 12:00pm: Dynamic Interrupt Controller and Conflict Management for Transactional Memory in Embedded System  
Jun Young Moon, Jun Gil Ahn, Jong Tae Kim  
Sungkyunkwan University, Suwon, South Korea
- 12:00 - 12:20pm: Hardware Reconfigurability: from concept to implementation  
Igor Schagaev, Victor Castano, Thomas Kaegi  
London Metropolitan University, London, UK;  
ITACS Ltd, UK
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 12-PDPTA: BIG DATA ANALYTICS, DATA WAREHOUSES, AND RELATED METHODS AND SYSTEMS**  
**Chair: TBA**  
**July 30, 2015 (Thursday); 01:20pm - 03:20pm**  
**(LOCATION: Ballroom 4)**
- 01:20 - 01:40pm: Big Data Analytics and Spatial Common Data Model Role  
Ayman Ahmed Sami  
Kuwait Oil Company, Kuwait; Openware ESRI Kuwait, Kuwait
- 01:40 - 02:00pm: Towards Adaptive Execution Strategies for Large-Scale and Real-Time Data Analytics  
Martin Kohler, Yuriy Kaniovskyi, Siegfried Benkner  
IT Austrian Institute of Technology GmbH, Vienna, Austria;  
University of Vienna, Research Group Scientific Computing,  
Vienna, Austria
- 02:00 - 02:20pm: A Data Pre-partitioning and Distribution Optimization Approach for Distributed Data Warehouses  
Billel Arres, Nadia Kabachi, Omar Boussaid  
Universite Lumiere Lyon 2, Bron, France;  
Universite Lyon 1, Villeurbanne, France
- 02:20 - 02:40pm: Big-ETL: Extracting-Transforming-Loading Approach for Big Data  
Mahfoud Bala, Omar Boussaid, Zaia Alimazighi  
LRDSI, Saad Dahleb University, Blida, Algeria;  
LSI, USTHB, Algiers, Algeria;  
ERIC, Lumiere University, Lyon 2, France
- 02:40 - 03:00pm: Using the Column Oriented NoSQL Model for Implementing Big Data Warehouses  
Khaled Dehdouh, Fadila Bentayab, Omar Boussaid, Nadia Kabachi  
ERIC Laboratory, University of Lyon 2 Bron, France

03:00 - 03:20pm: Hadoop Scalability and Performance Testing in Heterogeneous Clusters  
 Fernando G. Tinetti, Ignacio Real, Rodrigo Jaramillo, Damian Barry  
 III-LIDI, Facultad de Informatica, UNLP, Argentina;  
 LINVI, Departamento de Informatica, Facultad de Ingenieria, UNPSJB,  
 Puerto Madryn, Argentina

**SESSION 13-PDPTA: PARALLEL PROCESSING ALGORITHMS, SYSTEMS, APPLICATIONS, AND RELATED ISSUES**

**Co-Chairs: Dr. Arres Billel\* and Prof. Jennifer Walter\*\***

**\*ERIC Laboratory, University of Lyon, France**

**\*\*Vassar College, Poughkeepsie, New York, USA**

**July 30, 2015 (Thursday); 03:20pm - 05:40pm**

**(LOCATION: Ballroom 4)**

03:20 - 03:40pm: Architecture of a Java-Based Simulation System  
 Ray Kresman  
 Department of Computer Science, Bowling Green State University,  
 Bowling Green, Ohio, USA

03:40 - 04:00pm: NDN-Based Relational Query Processing in Ad-Hoc Networks  
 Zhuhua Liao, Aiping Yi, Yizhi Liu, Guoqing Zhang  
 School of Computer Science and Engineering, Hunan University of  
 Science and Technology, Xiangtan, Hunan, P. R. China;  
 School of Foreign Studies, Hunan University of Science and  
 Technology, Xiangtan, Hunan, P. R. China; Institute of Computing  
 Technology, Chinese Academy of Sciences, Beijing, P. R. China

04:00 - 04:20pm: FREE SLOT

04:20 - 04:40pm: A Message Efficient Group Membership Algorithm in Mobile Ad Hoc  
 Distributed Systems  
 Yong Hwan Cho, Sung Hoon Park, Seon-Hyong Lee, Byeong Sun Hwang  
 School of Electrical and Computer Engineering, Chungbuk National  
 University, ChungBuk, South Korea

04:40 - 05:00pm: FREE SLOT

05:00 - 05:20pm: Parallelized Implementation of Binary Decision Diagram Manipulation  
 on Multicore Processors  
 Myoung Ha Kim, Jong Kang Park, Jong Tae Kim  
 Sungkyunkwan University, Suwon, South Korea

05:20 - 05:40pm: FREE SLOT

# SAM'15 CONFERENCE SCHEDULE

## The 2015 International Conference on Security and Management

*There are a number of other sessions (not listed as part of SAM'15 in this schedule) that are of potential interest to SAM'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, some sessions in PDPTA'15, FECS'15, ABDA'15, ICWN'15, ICOMP'15, and HIMS'15 conferences discuss topics that are within the scope of SAM'15; these have been scheduled so that selected SAM'15 groups/attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

- 08:30 - 08:45am:** CONGRESS OPENING REMARKS - July 27, Monday:  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am:** KEYNOTE LECTURE 1 - July 27, Monday:  
COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am:** KEYNOTE LECTURE 2 - July 27, Monday:  
LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am:** A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE  
AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)



- 10:40 - 11:20am: KEYNOTE LECTURE 3 - July 27, Monday:  
ARTIFICIAL NEUROGENESIS  
Dr. James A. Crowder  
Chief Engineer, Raytheon Intelligence, Information, and Services;  
Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
Robotics and Artificial Intelligence Research Lab - Alexandria  
School of Innovation, Douglas County, Colorado, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 11:20a - 12:00p: KEYNOTE LECTURE 4 - July 27, Monday:  
The Infinity Computer and Numerical Computations with Infinities  
and Infinitesimals  
Prof. Yaroslav D. Sergeev, Ph.D., D.Sc., D.H.C.  
Inventor of the Infinity Computer; Distinguished Professor, Head  
of Numerical Calculus Laboratory, University of Calabria, Rende,  
Italy; and Professor (part-time), Lobachevsky State University,  
Nizhni Novgorod, Russia  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:00 - 12:15pm: KEYNOTE LECTURE 5 - July 27, Monday:  
World of IoT and Connected Cars  
Dr. Akash Singh, PhD  
IBM Corporation, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:15 - 01:00pm: LUNCH (On Your Own)**
- SESSION 1-SAM: BIOMETRICS + FORENSICS + SECURITY EDUCATION  
Co-Chairs: Prof. Kathy Liszka, Akron University, USA  
July 27, 2015 (Monday); 01:00pm - 03:00pm  
(LOCATION: Ballroom 2)**
- 01:00 - 01:20pm: Analysis of Evidence in Cloud Storage Client Applications  
on the Windows Platform  
Rakesh Malik, Narasimha Shashidhar, Lei Chen  
Sam Houston State University, Huntsville, Texas, USA**
- 01:20 - 01:40pm: Biometric Authentication and Data Security in Cloud Computing  
G. L. Masala, P. Ruiu, A. Brunetti, O. Terzo, E. Grosso  
University of Sassari, Italy;  
Istituto Superiore Mario Boella (ISMB), Italy**
- 01:40 - 02:00pm: Using Third Party Cookies for Forensic Identification  
Tobias Eggendorfer  
Hochschule Ravensburg-Weingarten, Germany**
- 02:00 - 02:20pm: Emptying the Malicious Suitcase: Unpacking Malware in a  
Lab Setting  
Tyler Hudak, Kathy J. Liszka  
Korelogic Security, Annapolis, Maryland, USA;  
Department of Computer Science, University of Akron, USA**
- 02:20 - 02:40pm: Analysis of Feasibility and Security Measures on Dynamic  
Authentication  
Jing-Chiou Liou  
Department of CS, Kean University, New Jersey, USA**
- 02:40 - 03:00pm: Split Manufacturing in Radio-Frequency Designs  
Yu Bi, Jiann-Shiun Yuan, Yier Jin  
University of Central Florida, Florida, USA**

- SESSION 2-SAM: SPECIAL TRACK ON CYBERSECURITY EDUCATION**  
**Co-Chairs: Prof. George Markowsky\* and Dr. Linda Markowsky**  
**Professor and Associate Director, School of Computing and**  
**Information Science, University of Maine, Orono, Maine, USA**  
**July 27, 2015 (Monday); 03:00pm - 05:40pm**  
**(LOCATION: Ballroom 2)**
- 03:00 - 03:20pm: The Benefits of Hosting the NECCDC at Your Institution  
 G. Markowsky, P. Lutz, D. Johnson, B. Stackpole, R. Soucy,  
 and B. Attaie  
 University of Maine, USA; Rochester Institute of Technology,  
 Rochester, New York, USA; Syracuse University, New York, USA
- 03:20 - 03:40pm: Experiences with Establishment of a Multi-University Center  
 of Academic Excellence in Information Assurance/Cyber Defense  
 R. T. Albert, C. Bennett, D. Briggs, M. Ebben, H. Felch,  
 D. Kokoska, L. Lovewell, C. MacDonald, G. Markowsky,  
 L. Markowsky, J. Murphy, E. Sihler, G. Wilson  
 University of Maine at Fort Kent, Fort Kent, Maine, USA;  
 University of Maine at Farmington, Farmington, Maine, USA;  
 University of Southern Maine, Portland, Maine, USA;  
 University of Maine at Augusta, Augusta, Maine, USA;  
 University of Maine, Orono, Maine, USA
- 03:40 - 04:00pm: Covert Channel over Apple iBeacon  
 Joseph Priest, Daryl Johnson  
 Rochester Institute of Technology, Rochester, New York, USA
- 04:00 - 04:20pm: The Security Implications of IMSI Catchers  
 Bryan Harmat, Jared Stroud, Daryl Johnson, Bill Stackpole,  
 Sylvia Perez-Hardy, Rick Mislán, Tae Oh  
 Rochester Institute of Technology, Rochester, New York, USA
- 04:20 - 04:40pm: Covert Channel Using ICMPv6 and IPv6 Addressing  
 Geoffrey Ackerman, Daryl Johnson, Bill Stackpole  
 Rochester Institute of Technology, Rochester, New York, USA
- 04:40 - 05:00pm: Covert Channels in SSL Session Negotiation Headers  
 Justin Merrill, Daryl Johnson  
 Rochester Institute of Technology, Rochester, New York, USA
- 05:00 - 05:20pm: Promela: Introducing Proof into Cybersecurity Education  
 George Markowsky, Linda Markowsky  
 University of Maine, Orono, Maine, USA
- 05:20 - 05:40pm: FREE SLOT
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**
- 09:00 - 11:45pm: CONFERENCE RECEPTION DINNER / SOCIAL**  
**July 27 - Monday; 09:00pm - 11:45pm**  
**(LOCATION: Ballrooms 1-5)**

- SESSION 3-SAM: COMPUTER SECURITY + SECURITY APPLICATIONS + CYBER DEFENSE**  
**Co-Chairs: Dr. Jing-Chiou Liou, Kean University, USA**  
**Dr. Giovanni Masala, University of Sassari, Italy**  
**July 28, 2015 (Tuesday); 08:00am - 10:20am**  
**(LOCATION: Ballroom 2)**
- 08:00 - 08:20am: FREE SLOT
- 08:20 - 08:40am: Cyber Defense Training and the HSI Learning Dynamic  
 William Quintana  
 General Dynamics Bath Iron Works, Bath, Maine, USA
- 08:40 - 09:00am: Intrusion Detection in the Cloud Environment Using Multi-Level  
 Fuzzy Neural Networks  
 Hamid Aramifard, Leyli Mohammad Khanli  
 Computer Science, University of Tabriz, Iran
- 09:00 - 09:20am: An Overview of the Current Classification Techniques in  
 Intrusion Detection  
 Buthina Al-Dhafian  
 Software Engineering Department, King Saud University, Riyadh,  
 Saudi Arabia
- 09:20 - 09:40am: Evaluation on Malware Classification by Combining Traffic  
 Analysis and Fuzzy Hashing of Malware Binary  
 Shohei Hiruta, Yukiko Yamaguchi, Hajime Shimada, Hiroki Takakura  
 Graduate School of Information Science, Nagoya University, Japan;  
 Information Technology Center, Nagoya University, Japan
- 09:40 - 10:00am: A Multifractal Based Autonomous Sliding Window Algorithm for  
 Cognitive Machine Classification Of Malicious Internet Traffic  
 Muhammad Salman Khan, Ken Ferens, Witold Kinsner  
 Department of ECE, University of Manitoba, Winnipeg, MB, Canada
- 10:00 - 10:20am: Deception in Dynamic Web Application Honeypots: Case of Glastopf  
 Banyatsang Mphago, Bagwasi Ontiretse, Phofuetsile Baboloki,  
 and Hlomani Hlomani  
 College of Information Communication and Technology, Botswana  
 International University of Science and Technology, Botswana
- 10:20 - 10:40am: **BREAK**
- SESSION 4-SAM: PANEL DISCUSSION**  
**Moderator: Prof. George Markowsky**  
**Professor and Associate Director, School of Computing and**  
**Information Science, University of Maine, Orono, Maine, USA**  
**July 28, 2015 (Tuesday); 10:40am - 11:40am**  
**(LOCATION: Ballroom 2)**
- 10:40 - 11:40am: **SECURITY PANEL DISCUSSION**
- 11:40 - 12:00pm: FREE SLOT
- 12:00 - 12:20pm: FREE SLOT
- 12:20 - 01:20pm: **LUNCH (On Your Own)**

- SESSION 5-SAM: SECURITY APPLICATIONS**  
**Chair: Dr. Levent Ertaul**  
**California State University East Bay, California, USA**  
**July 28, 2015 (Tuesday); 01:20pm - 03:00pm**  
**(LOCATION: Ballroom 2)**
- 01:20 - 01:40pm: Cloud Storage Client Applications Evidence Analysis on UNIX/Linux  
Rakesh Malik, Narasimha Shashidhar  
Department of CS, Sam Houston State University, Huntsville,  
Texas, USA
- 01:40 - 02:00pm: Storing Credit Card Information Securely Using Shamir Secret  
Sharing on a Multi-Provider Cloud Architecture  
Levent Ertaul, William M. A. Marques Baptista, Rishi Pal Maram  
California State University East Bay, Department of  
Mathematics and Computer Science, Hayward, California, USA
- 02:00 - 02:20pm: 802.11 Tracking and Surveillance - A Forensic Perspective  
Maxim Chernyshev, Craig Valli, Peter Hannay  
School of Computer and Security Science & Security Research  
Institute, Edith Cowan University, Perth, Western Australia
- 02:20 - 02:40pm: Security Overlay for Distributed Encrypted Containers  
Florian Patzer, Andreas Jakoby, Thomas Kresken, Wilmut Muller  
Fraunhofer Institute of Optronics, System Technologies and  
Image Exploitation, Karlsruhe, Germany;  
Bauhaus Universitat, Weimar, Germany
- 02:40 - 03:00pm: A Study of Basic Architecture for Big-Data Security Analysis  
in SDN Environment  
Seong-Ho Choi, Jun-Sub Kim, Jin Kwak  
ISAA Lab., Department of Computer Engineering, Ajou University,  
Suwon, Korea; IT Convergence Research Institute, Sungkyunkwan  
University, Suwon, Korea; Department of Information and  
Computer Engineering, Ajou University, Suwon, Korea
- 03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-SAM**  
**July 28, 2015 (Tuesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**
0. A Synthetic Provable Security Evaluation Of Cryptographic  
Applications With Entropy Sources  
Nayoung Kim, Ju-Sung Kang, Yongjin Yeom  
Department of Mathematics and Graduate School of Financial  
Information Security, Kookmin University, Seoul, Korea
0. ...
- SESSION 6-SAM: CRYPTOGRAPHIC TECHNOLOGIES + HARDWARE SECURITY**  
**Co-chairs: Dr. Levent Ertaul\* and Dr. Jiann-Shiun Yuan\*\***  
**\*California State University East Bay, California, USA**  
**\*\*University of Central Florida, Florida, USA**  
**July 28, 2015 (Tuesday); 03:40pm - 05:40pm**  
**(LOCATION: Ballroom 2)**
- 03:40 - 04:00pm: A Comparison of HMAC and AES-based FFX Mode of Operation for  
Format-Preserving Encryption  
Levent Ertaul, J. N. Shah  
California State University East Bay, Department of Mathematics  
and Computer Science, Hayward, California, USA

- 04:00 - 04:20pm: Block-DCT Based Secret Image Sharing over GF(28)  
Rosemary Koikara, Mausumi Goswami, Dae-Soo Kim, Gil-Je Lee,  
and Kee-Young Yoo  
CSE, Christ University Faculty of Engineering, Bangalore, India;  
School of CSE, Kyungpook National University, Daegu, Korea
- 04:20 - 04:40pm: Logic Design and Comparison of Arithmetic Structures for  
AES Cryptographic Systems  
Mostafa Abd-El-Barr, Aisha Al-Noori  
Department of Information Science, College of Computing  
Sciences and Engineering, Kuwait University, Kuwait;  
Department of CE, College of CSE, Kuwait University, Kuwait
- 04:40 - 05:00pm: An Authentication Scheme Based on Elliptic Curve  
Cryptosystem and OpenID in the Internet of Things  
Jong Jin Lee, Youn-Sik Hong, Ki Young Le  
Department of Information and Telecommunications Engineering,  
Incheon National University, Incheon, Korea; Department of CSE,  
Incheon National University, Incheon, Korea
- 05:00 - 05:20pm: An Improved NTRU Cryptosystem via Commutative Quaternions Algebra  
Nadia M. G. Al-Saidi, Mustafa Saed, Ahmad Tariq Sadiq, and  
Ali A. Majeed  
Department of Applied Sciences, University of Technology, Iraq;  
Hyundai-Kia America Technical Center, USA; Department of CS,  
University of Technology, Iraq
- 05:20 - 05:40pm: Robust PUF Circuit Design against Temperature Variations  
and Aging Effect  
Georgiy Brussenskiy, Jiann-Shiun Yuan  
School of Electrical Engineering and Computer Science,  
University of Central Florida, Orlando, Florida, USA
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the begining of the program book for details)

**SESSION 7-SAM: SECURITY MANAGEMENT**  
**Co-Chairs: Dr. Rob Byrd\* and Dr. Mohammed Misbahuddin\*\***  
**\*Abilene Christian University, USA**  
**\*\*Centre for Development of Advanced Computing, India**  
**July 29, 2015 (Wednesday); 08:00am - 10:20am**  
**(LOCATION: Ballroom 2)**

08:00 - 08:20am: FREE SLOT

08:20 - 08:40am: Securing Organizations: A Framework For Implementing  
 Optimized Security Measures  
 Alani Peters, Rob Byrd  
 Abilene Christian University, Abilene, Texas, USA

08:40 - 09:00am: Securing the Internet of Things: Developing a Security  
 Standard  
 Alicia Clark, Rob Byrd  
 Abilene Christian University, Abilene, Texas, USA

09:00 - 09:20am: Device-based Secure Data Management Scheme in a Smart Home  
 Ho-Seok Ryu, Jin Kwak  
 ISAA Lab., Department of CE, Ajou University, Korea;  
 Department of Information and CE, Ajou University, Korea

09:20 - 09:40am: Group Management and Security Management on an Open  
 Horizontal Integration Model for IoE  
 Yunchan Jung, Enrique Festijo  
 School of Information, Communications & EE, Catholic  
 University of Korea, Gyeonggi-do, Korea

09:40 - 10:00am: IoT Cloud-Sensor Secure Architecture for Smart Home  
 Syed Abdul Muqtader Razvi, Abdullah Al-Dhelaan,  
 Mznah Al-Rodhaan, Riman A. Bin Sulaiman  
 Department of CS, King Saud University, Saudi Arabia

10:00 - 10:20am: Key Management for Secure Multicast Communication in  
 Sensor Cloud  
 Shoroq Odah Al Beladi, Firdous Kausar  
 Department of CS, Imam Mohammad bin Saud University,  
 Riyadh, Saudi Arabia

10:20 - 10:40am: BREAK

**SESSION 8-SAM: NETWORK SECURITY + CYBERSECURITY EDUCATION**  
**Co-chairs: Dr. Xinli Wang\* and Dr. Rob Byrd\*\***  
**\*Michigan Tech University, USA**  
**\*\*Abilene Christian University, USA**  
**July 29, 2015 (Wednesday); 10:40am - 12:20pm**  
**(LOCATION: Ballroom 2)**

10:40 - 11:00am: Abnormal VoLTE Call Setup Between UEs  
 Sekwon Kim, Bonmin Koo, Hwankuk Kim  
 Mobile Security R&D Team, Korea Internet & Security Agency,  
 IT Venture Tower, Songpa, Seoul, Korea

11:00 - 11:20am: An Improvement of Efficient Dynamic ID-based User Authentication  
 Scheme Using Smart Cards without Verifier Tables  
 Jongho Mun, Jiye Kim, Donghoon Lee, Jaewook Jung,  
 Younsung Choi, Dongho Won  
 College of Information and Communication Engineering,  
 Sungkyunkwan University, Korea

- 11:20 - 11:40am: Vehicle Communication and Infrastructure Security:  
Initial Thoughts  
Mustafa Saed, Muhammad Rizwan  
Hyundai-Kia America Technical Center, Inc.,  
Superior Township, Michigan, USA
- 11:40 - 12:00pm: Recon 2 and the Adversarial Mindset: A Cybersecurity  
Exercise for Undergraduates  
Kian Lutu, Jeanie Mullins, Molly Kiefer, Jens Mache,  
and Richard Weiss  
The Evergreen State College, Olympia, Washington, USA;  
Lewis & Clark College, Portland, Oregon, USA
- 12:00 - 12:20pm: Development of an Intelligent Audit Trail as a Watch Dog to  
Monitor Academic Activities in Nigerian Universities  
Aru Okereke Eze, Ihekweaba Gozie, Ihekweaba Linda Ogechi  
Department of CE, Michael Okpara University of Agriculture,  
Umudike, Abia State, Nigeria
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 9A-SAM: NETWORK SECURITY + SECURITY MANAGEMENT**  
**Co-Chairs: Dr. Yunchan Jung\* and Dr. Xinli Wang\*\***  
\*The Catholic University of Korea, Korea  
\*\*Michigan Technological University, USA  
**July 29, 2015 (Wednesday); 01:20am - 03:00pm**  
**(LOCATION: Ballroom 2)**
- 01:20 - 01:40pm: Prevention of Toll Frauds Against IP-PBX  
James Yu  
DePaul University, Chicago, Illinois, USA
- 01:40 - 02:00pm: An Examination of Recent Network Security Failures  
Sean Maples, Weifeng Chen  
Southern New Hampshire University, Manchester, NH, USA;  
Department of Math & CS, California University of  
Pennsylvania, California, PA, USA
- 02:00 - 02:20pm: Domain Based Certification and Revocation  
Xinli Wang, Yan Bai, Lihui Hu  
School of Technology, Michigan Technological University,  
Houghton, Michigan, USA; Institute of Technology,  
University of Washington Tacoma, Washington, USA
- 02:20 - 02:40pm: Calculation Model of the Status and Staffing for Security  
Management - A case study  
Lilian Nassif, Daniel Carnevalli  
Information Technology Department, Public Ministry of  
Minas Gerais, Belo Horizonte, Brazil
- 02:40 - 03:00pm: Organizational Information Security Culture Assessment  
Areej AlHogail, Abdulrahman Mirza  
Department of IS, College of Computing and Information  
Sciences, King Saud University, Riyadh, Saudi Arabia

**03:00 - 03:40pm: BREAK & POSTER/DISCUSSION SESSION B-SAM**  
**July 29, 2015 (Wednesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**

- O. Multimodal Biometric Methods for Temporary Reception Centers  
 G. L. Masala, M. L. Ganadu  
 University of Sassari, Italy
- O. A Provably Secure Authenticated Encryption Scheme Based On  
 Block Ciphers With Large Input Lengths  
 Wangho Ju, Hojoong Park, Ju-Sung Kang, Yongjin Yeom  
 Department of Mathematics and Graduate School of Financial  
 Information Security, Kookmin University, Seoul, Korea
- O. ...

**SESSION 9B-SAM: EMBEDDED WEARABLE SECURITY + COVERT COMMUNICATION AND  
 INFORMATION ASSURANCE**  
**Co-Chairs: TBA**  
**July 29, 2015 (Wednesday); 03:40pm - 05:00pm**  
**(LOCATION: Ballroom 2)**

- 03:40 - 04:00pm: Towards Embedded Wearable Security  
 M. Bouaoud, A. Bouras  
 Ministry of Information and Communications Technology MICT,  
 Doha, Qatar; Department of CSE, College of Engineering,  
 Qatar University, Doha, Qatar
- 04:00 - 04:20pm: Exploring Covert Communication on Google+ Hangouts  
 Subash Kumar Saladi, Frank Liu  
 CIS, Sam Houston State University, Huntsville, Texas, USA
- 04:20 - 04:40pm: Mirror Network: A Holistic Approach for Assuring  
 Information Systems  
 Mahalingam Ramkumar  
 Department of CSE, Mississippi State University, Mississippi, USA
- 04:40 - 05:00pm: Exploring Covert Communication in Text Message on Android  
 Smartphones  
 Damacharla Pavan, Sai Chowdary, Frank Liu  
 CIS, Sam Houston State University, Huntsville, Texas, USA
- 05:00 - 05:40pm: **During this period, SAM'15 attendees are encouraged to participate  
 in sessions belonging to PDPTA'15, FECS'15, ABDA'15, ICWN'15,  
 ICOMP'15, and HIMS'15 conferences. These sessions discuss topics  
 that significantly overlap the scope of SAM'15.**
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**



- SESSION 10-SAM: SECURITY APPLICATIONS + CRYPTOLOGY + BIOMETRICS**  
**Co-Chairs: Dr. Luis Hernandez Encinas\* & Dr. Agustin Martin Munoz\*\***  
**\*Institute of Physical & Information Technologies, Spain**  
**\*\*Institute of Physical & IT, Spain**  
**July 30, 2015 (Thursday); 08:00am - 10:40am**  
**(LOCATION: Ballroom 2)**
- 08:00 - 08:20am: A Unique-ID based Usable Multi-factor Authentication Scheme for e-Services  
 Mohammed Misbahuddin, Roshni V. S. Kumari, Anna Thomas, and Uttam Kumar  
 Centre for Development of Advanced Computing, Electronics City, Bangalore, India
- 08:20 - 08:40am: A Strong Single Sign on User Authentication Scheme Without Verifier Table for Cloud Based Services  
 Sumitra Binu, Mohammed Misbahuddin, Pethuru Raj  
 Christ University, India; C-DAC, Electronic City, Bangalore, India; IBM India Pvt. Ltd., Bangalore, India
- 08:40 - 09:00am: Color Image Steganalysis Method for LSB Matching  
 Jesus Olguin-Garcia, Ulises Juarez-Sandoval, Mariko Nakano-Miyatake, Hector Perez-Meana  
 SEPI, ESIME Culhuacan, Instituto Politecnico Nacional, Mexico
- 09:00 - 09:20am: Privacy Risk Metrics for Internal and External Threat Analysis - An Enterprise Perspective  
 Swaminathan S, Anoop Dobhal, Ankit Kumar, Karthik Sundararaman, G Subrahmanya Venkata, Radha Krishna Rao, Ganesh Srinivasan, and Rajkumar Umakantham  
 Global Technology Office, Cognizant Technology Solutions, India
- 09:20 - 09:40am: Cloud-based Identity and Access Control for Diagnostic Imaging Systems  
 Weina Ma, Kamran Sartipi  
 Department of Electrical, Computer and Software Engineering, University of Ontario Institute of Technology, ON, Canada
- 09:40 - 10:00am: A New Edit Distance for Fuzzy Hashing Applications  
 V. Gayoso Martinez, F. Hernandez Alvarez, L. Hernandez Encinas, C. Sanchez Avila  
 Information Processing and Cryptography (TIC), Institute of Physical and Information Technologies (ITEFI), Spanish National Research Council (CSIC), Madrid, Spain; Telecommunication Engineering School (ETSIT), Polytechnic University of Madrid (UPM), Madrid, Spain
- 10:00 - 10:20am: A Java Implementation of a Multi-signature Scheme  
 V. Gayoso Martinez, L. Hernandez Encinas, A. Martin Munoz  
 Information Processing and Cryptography (TIC), Institute of Physical and Information Technologies (ITEFI), Spanish National Research Council (CSIC), Madrid, Spain
- 10:20 - 10:40am: A Hybrid Approach to Improving Cloud Data Security  
 Ebelechukwu Nwafor, Legand Burge  
 Howard University, Washington, DC, USA
- 10:40a - 05:00p: During this period, SAM'15 attendees are encouraged to participate in sessions belonging to PDPTA'15, FECS'15, ABDA'15, ICWN'15, and HIMS'15 conferences. These sessions discuss topics that significantly overlap the scope of SAM'15.**

# **BIOCOMP'15 & BIOENG'15 & HIMS'15 CONFERENCE** **SCHEDULES**

**The 2015 International Conference on Bioinformatics  
and Computational Biology (BIOCOMP'15)**

+

**The 2015 International Conference on Biomedical  
Engineering and Sciences (BIOENG'15)**

+

**The 2015 International Conference on Health  
Informatics and Medical Systems (HIMS'15)**

*Because of partial topical and technical overlap between BIOCOMP'15, BIOENG'15, and HIMS'15, the schedule of these tracks are merged into one comprehensive schedule. It is hoped that this would encourage the participants of the three conferences to explore cross-fertilization of ideas. There are also a number of other sessions (not listed as part of these three conferences) that are of potential interest to BIOCOMP'15, BIOENG'15, and HIMS'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in PDPTA'15, IPCV'15, ICAI'15, ABDA'15, DMIN'15, and IKE'15 conferences discuss topics that are within the scope of BIOCOMP'15, BIOENG'15, and HIMS'15; these have been scheduled so that selected BIOCOMP'15, BIOENG'15, and HIMS'15 attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

**08:30 - 08:45am: CONGRESS OPENING REMARKS - July 27, Monday:**  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

**08:45 - 09:35am: KEYNOTE LECTURE 1 - July 27, Monday:**  
**COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA**  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 09:40 - 10:20am: **KEYNOTE LECTURE 2 - July 27, Monday:**  
**LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST DO TO BE SUCCESSFUL**  
**Dr. Sandeep Chatterjee**  
**EVx Global (www.evxglobal.com); Named Young Global Leader by the World Economic Forum for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world.**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 10:25 - 10:35am: **A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS**  
**Ms. Mary E. James**  
**Senior Editor Applied Sciences, Publisher: Springer &**  
**Mr. Todd Green**  
**Publisher of Computer Science and Digital Security, Elsevier**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 10:40 - 11:20am: **KEYNOTE LECTURE 3 - July 27, Monday:**  
**ARTIFICIAL NEUROGENESIS**  
**Dr. James A. Crowder**  
**Chief Engineer, Raytheon Intelligence, Information, and Services; Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation, Robotics and Artificial Intelligence Research Lab - Alexandria School of Innovation, Douglas County, Colorado, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 11:20a - 12:00p: **KEYNOTE LECTURE 4 - July 27, Monday:**  
**The Infinity Computer and Numerical Computations with Infinities and Infinitesimals**  
**Prof. Yaroslav D. Sergeev, Ph.D., D.Sc., D.H.C.**  
**Inventor of the Infinity Computer; Distinguished Professor, Head of Numerical Calculus Laboratory, University of Calabria, Rende, Italy; and Professor (part-time), Lobachevsky State University, Nizhni Novgorod, Russia**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:00 - 12:15pm: **KEYNOTE LECTURE 5 - July 27, Monday:**  
**World of IoT and Connected Cars**  
**Dr. Akash Singh, PhD**  
**IBM Corporation, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:15 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 1-HIMS: DIAGNOSTIC PROCESSES & TOOLS, HEALTH INFORMATICS, MEDICAL TOOLS**  
**Co-Chairs: Prof. Arvind K. Bansal\* and Miloslava Plachkina\*\***  
**\*Kent State University, Kent, Ohio, USA**  
**\*\*Claremont Graduate University, California, USA**  
**July 27, 2015 (Monday); 01:20pm - 03:20pm**  
**(LOCATION: Gold Room)**
- 01:20 - 01:40pm: **ECG Analysis for Automated Diagnosis of Subclasses of Supraventricular Arrhythmia**  
**Purva R. Gawde, Arvind K. Bansal, Jeffrey A. Nielson**  
**Department of CS, Kent State University, Kent, Ohio, USA;**  
**Emergency Division, Summa Health Systems, Akron, Ohio, USA**

- 01:40 - 02:00pm: Modelling of Clinical Practice Guidelines for Interactive Assistance in Diagnostic Processes  
Patrick Philipp, Yvonne Fischer, Dirk Hempel, Juergen Beyerer  
Fraunhofer Institute of Optronics, System Technologies and Image Exploitation, Karlsruhe, Germany; Steinbeis-Transfer-Institut Klinische Hamatoonkologie, Donauworth, Germany
- 02:00 - 02:20pm: Health Records on the Cloud - A Security Framework  
Miloslava Plachkinova, Ala Alluhaidan, Samir Chatterjee  
Center for Information Systems and Technology,  
Claremont Graduate University, Claremont, California, USA
- 02:20 - 02:40pm: Application of Procedural Generation as a Medical Training Tool  
James Duffy, Zizhong J. Wang  
Virginia Wesleyan College, Borfolk, Virginia, USA
- 02:40 - 03:00pm: Socially Mediated Health Information for Dengue Surveillance and Education in Sri Lanka  
Schubert Foo, May O. Lwin, Vajira S. Rathnayake  
Centre of Social Media Innovations for Communities (COSMIC),  
Nanyang Technological University, Singapore
- 03:00 - 03:20pm: Building a Smart Homecare Supporting System for Elderly People Base on xBeacon Sensors  
Lun-Ping Hung, Tzu-An Pan  
Department of Information Management, National Taipei University of Nursing and Health Sciences, Taipei, Taiwan
- 03:20 - 05:40pm: **During this period, BIOCOMP'15, BIOENG'15, and HIMS'15 attendees are encouraged to participate in sessions belonging to IKE'15, PDPTA'15, IPCV'15, ICAI'15, ABDA'15, and DMIN'15 conferences. These sessions discuss topics that significantly overlap the scopes of BIOCOMP'15, BIOENG'15, and HIMS'15.**
- 06:00 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
(Please see the lists at the begining of the program book for details)**
- 09:00 - 11:45pm: **CONFERENCE RECEPTION DINNER / SOCIAL  
July 27 - Monday; 09:00pm - 11:45pm  
(LOCATION: Ballrooms 1-5)**

- SESSION 2-BIOCOMP: PROTEIN CLASSIFICATION, STRUCTURE PREDICTION, COMPUTATIONAL STRUCTURAL BIOLOGY + GENE EXPRESSION STUDIES & GENETIC REGULATORY NETWORKS, SEQUENCING METHODS**  
**Chair: Dr. Amir Manzour**  
**National Center for Biotechnology Information (NCBI),  
National Institutes of Health (NIH), Bethesda, Maryland, USA**  
**July 28, 2015 (Tuesday); 08:00am - 10:20am**  
**(LOCATION: Gold Room)**
- 08:00 - 08:20am: FREE SLOT
- 08:20 - 08:40am: An Improved Stochastic Proximity Embedding to Protein Structure Determination  
Ivan S. Sendin, Indiara B. Vale, Marcos A. Batista  
FACOM, Federal University of Uberlandia, MG, Brazil;  
IBiotec, Federal University of Goias, Catalao, GO, Brazil
- 08:40 - 09:00am: Chinese Whispers for Protein-Protein Interaction Network Analysis to Discover Overlapping Functional Modules  
Ying Liu  
Division of Computer Science, Mathematics and Science,  
College of Professional Studies, St. John's University,  
Queens, New York, USA
- 09:00 - 09:20am: An Investigation of Minimum Data Requirement for Successful Structure Determination Of Pf2048.1 with REDCRAFT  
Casey A. Cole, Daniela Ishimaru, Mirko Hennig, Homayoun Valafar  
Department of CSE, University of South Carolina, Columbia,  
South Carolina, USA; Department of Biochemistry and Molecular  
Biology, Medical University of South Carolina, Charleston,  
South Carolina, USA; Nutrition Research Institute, University  
of North Carolina at Chapel Hill, Kannapolis, North Carolina
- 09:20 - 09:40am: A Bitwise Encoding Scheme Designed to Improve the Speed of Large Scale Gene Set Comparison  
Tham Hoang, Pujan Joshi, Seung-Hyun Hong, Dong-Guk Shin  
Department of CSE, University of Connecticut, Storrs,  
Connecticut, USA
- 09:40 - 10:00am: A Novel Algorithm for Finding Long Term Influence and Sensitivity of Genes in Probabilistic Genetic Regulatory Networks  
Quoc-Nam Tran  
The University of South Dakota, South Dakota, USA
- 10:00 - 10:20am: De Novo Assembly of Uca Minax Transcriptome from Next Generation Sequencing  
Hanin Omar, Casey A. Cole, Arjang Fahim, Giuliana Gusmaroli,  
Stephen Borgianini, Homayoun Valafar  
Department of CSE, University of South Carolina, Columbia,  
South Carolina, USA; Department of Natural Sciences,  
University of South Carolina, Beaufort, South Carolina, USA
- 10:20 - 10:40am: **BREAK**

**SESSION 3-BIOCOMP: MICROARRAY DATA PROCESSING, GENE REGULATORY NETWORKS, KNOWLEDGE EXTRACTION, DATA QUALITY ENHANCEMENT, SIGNAL PROCESSING, AND PATH ANALYSIS**

**Chair: Dr. Amir Manzour**

**National Center for Biotechnology Information (NCBI),  
National Institutes of Health (NIH), Bethesda, Maryland, USA**

**July 28, 2015 (Tuesday); 10:40am - 12:40pm**

**(LOCATION: Gold Room)**

10:40 - 11:00am: Exploring Effects of Various Data Preprocessing Methods on the Classification of DNA Microarray Data  
Samuel Dong  
Western Kentucky University, Louisville, Kentucky, USA

11:00 - 11:20am: A Simplified Linear Model for Reconstruction of Gene Regulatory Networks  
Xi Wu, Bei Yang, Wonryull Koh, Ping Gong, Chaoyang Zhang  
School of Computing, University of Southern Mississippi, Hattiesburg, Mississippi, USA; Environmental Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi, USA

11:20 - 11:40am: The Stacked Frame Display for Optimizing the Display and Interpretation of Analog Data  
Robert A. Warner  
Tigard Research Institute, Tigard, Oregon, USA

11:40 - 12:00pm: Refinement BRATUMASS' Data of Breast Phantom Processing Based on Compressive Sensing  
Luxi Li, Yizhou Yao, Meng Yao, Blair Fleet, Erik D. Goodman, Huiyan Wang, John R. Deller  
East China Normal University, Shanghai, P. R. China;  
Central Michigan University, Mount Pleasant, Michigan, USA;  
Zhejiang Gongshang University, Hangzhou, P. R. China;  
Michigan State University, East Lansing, Michigan, USA

12:00 - 12:20pm: A Proposed Warped Modified-B Time Frequency Distribution Applied to Doppler Blood Flow Measurement  
F. Garcia Nocetti, J. Solano Gonzalez, E. Rubio Acosta  
Instituto de Investigaciones en Matematicas Aplicadas y en Sistemas, Universidad Nacional Autonoma de Mexico, Mexico

12:20 - 12:40pm: An Exploration of the Relationship Between Resilience and Quality of Life  
Xiaodong Wang, Jun Tian  
Fujian University of Technology, P. R. China;  
School of Public Health, Fujian Medical University, China

**12:40 - 01:00pm: LUNCH (On Your Own)**

**SESSION 4-BIOENG-HIMS: MEDICAL DEVICES AND SUPPORTING SYSTEMS**

**Co-Chairs: Dr. Tanvi Banerjee\* and Noha Hazzazi\*\***

**\*Wright State University, Ohio, USA**

**\*\*George Mason University, Fairfax, Virginia, USA**

**July 28, 2015 (Tuesday); 01:20pm - 03:00pm**

**(LOCATION: Gold Room)**

01:20 - 01:40pm: Evaluation of Embedded ISAs for Smart Cardiac Pacemaker Workloads  
Safwat Mostafa Noor, Eugene John  
Department of ECE, University of Texas at San Antonio, San Antonio, Texas, USA

- 01:40 - 02:00pm: A System to Eavesdrop on Marmosets  
 Christopher Casebeer, Emery Newlon, Kyler Callahan,  
 Cory Miller, Ross Snider  
 ECE, Montana State University, Bozeman, Montana, USA;  
 Department of Psychology, University of California,  
 San Diego, California, USA
- 02:00 - 02:20pm: Real Heart Valve Model for Different Severity Level of  
 Mitral Regurgitation  
 Carolina Rosas-Huerta, Jorge Fco. Martinez-Carballido  
 Electronics Department, National Institute of Astrophysics,  
 Optics and Electronics, Santa Maria Tonantzintla, Mexico
- 02:20 - 02:40pm: State of the Art Mock Circulation Loop and a Proposed  
 Novel Design  
 T. Batuhan Baturalp, A. Ertas  
 Department of Mechanical Engineering, Texas Tech University,  
 Lubbock, Texas, USA
- 02:40 - 03:00pm: Immediate Lead Positioning Feedback for ML Based Wearable ECG  
 Rahul Krishnan, Maneesha Vinodini Ramesh  
 Amrita Center for Wireless Networks and Applications,  
 Amrita Vishwa Vidyapeetham, Kollam, Kerala, India
- 03:00 - 03:40pm: **POSTER/DISCUSSION SESSION A-BIOCOMP-BIOENG-HIMS**  
**July 28, 2015 (Tuesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**
- 0. Advances in Bioinformatics and Computational Biology:  
 Don't take them too seriously anyway  
 Emanuel Diamant  
 VIDIA-mant, Kiriat Ono, Israel
  - 0. Feedback and Coupled Feedback Loop Identification Within  
 KEGG and Reactome Pathway Database  
 Chen-Lung Liu, Yin-Jie Liu, Tun-Wen Pai, Chin-Hwa Hu, and  
 Margaret Dah-Tsyr Chang  
 National Taiwan Ocean University, Taiwan, R.O.C.;  
 National Tsing Hua University, Taiwan, R.O.C.
  - 0. Comparative Analysis of two Bacterial Binding Lectins  
 Sim-Kun Ng, Yi-En Chen, Sheng-Hao Chou, Jiun-Hau Fu,  
 Tse-Kai Fu, Tung-Kung Wu, Margaret Dah-Tsyr Chang  
 Institute of Molecular and Cellular Biology & Department of  
 Medical Science, National Tsing Hua University, Hsinchu,  
 Taiwan, R.O.C; Department of Biological Science & Technology,  
 National Chiao Tung University, Hsinchu, Taiwan, R.O.C.
  - 0. Posture Tracking Study with Custom Wireless 3-D Gait Analysis  
 Sensor (WGAS) and Commercial Posture Sensor  
 Paul E. Lie, B. T. Nukala, Donald Y. C. Lie, J. Lopez, and  
 Tam Q. Nguyen  
 Texas Tech University Health Sciences Center (TTUHSC), Lubbock,  
 Texas, USA; Lubbock High School, Lubbock, Texas, USA; Texas  
 Tech University (TTU), Lubbock, Texas, USA; NoiseFigure  
 Research Inc., Lubbock, Texas, USA
  - 0. Classification of Alzheimer's Disease Using Combination of  
 Each Recognition Method in MR Scans  
 Saruar Alam, Moonsoo Kang, Seokjoo Shin, Jae-Young Pyun,  
 and Goo-Rak Kwon  
 Chosun University, Gwangju, South Korea
  - 0. ...

- SESSION 5-HIMS: ASSISTIVE TECHNOLOGIES, DATA VISUALIZATION, MEDICAL ERROR PREVENTION METHODS AND MINING METHODS**  
**Co-Chairs: Dr. Wayne Zachary\* and Prof. Guoray Cai\*\***  
**\*Starship Health Technologies, LLC, USA**  
**\*\*Penn State University, USA**  
**July 28, 2015 (Tuesday); 03:40pm - 06:00pm**  
**(LOCATION: Gold Room)**
- 03:40 - 04:00pm: Autonomous Wheelchair Navigation Prototype with an Arduino Robot  
 Anna Shafer, Michael Turney, Francisco Ruiz, Justin Mabon, Michael Nooner, Yu Sun, Vamsi Paruchuri  
 Department of CS, University of Central Arkansas, Conway, Arkansas, USA
- 04:00 - 04:20pm: Perception of Motion-lag Compared with Actual Phase-lag for a Powered Wheelchair System  
 D. A. Sanders, M. Langner, A. Gegov  
 Royal Academy of Engineering, UK; Chailey Heritage, Anglesea, Portsmouth, UK; University of Portsmouth, Portsmouth, UK
- 04:20 - 04:40pm: A Web-Based System for EEG Data Visualization and Analysis  
 Jonathan Garza, Sishir Subedi, Yuntian Zhang, Hong Lin  
 Department of CSE Technology, University of Houston-Downtown, Houston, Texas, USA
- 04:40 - 05:00pm: A Diagrammatic Notation for Care Coordination  
 Wayne Zachary, Russell Maulitz  
 Starship Health Technologies, Plymouth Meeting, PA, USA
- 05:00 - 05:20pm: Improving Drug Discovery Process by Identifying Frequent Toxic Substructures in Chemical Compounds - A Graph Mining Approach  
 B. Chandra, Shalini Bhaskar  
 Indian Institute of Technology, New Delhi, India
- 05:20 - 05:40pm: Changes to User Learning Behaviour of Powered Wheelchair Drivers Depending on the Level of Sensor Support  
 D. A. Sanders, N. Bausch, S. Chester, D. Ndzi  
 Royal Academy of Engineering, UK;  
 University of Portsmouth, Anglesea, Portsmouth, UK
- 05:40 - 06:00pm: Mining Frequent Embedded Sub Trees  
 B. Chandra  
 Indian Institute of Technology, New Delhi, India
- 06:00 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**



**SESSION 6-BIOENG: COMPUTATIONAL BIOLOGY: NOVEL ALGORITHMS AND APPLICATIONS**

**Co-Chairs: Prof. Hyo Jong Lee\* and Dr. Ying Liu\*\***

**\*Chonbuk National University, South Korea**

**\*\*St. John's University, Queens, New York, USA**

**July 29, 2015 (Wednesday); 08:00am - 09:20am**

**(LOCATION: Gold Room)**

- 08:00 - 08:20am: In Silico Prediction of 3D Structure of Anopheles Gambiae CYP6Z3 Protein  
Marion Adebisi, Adaobi Okafor  
Department of CIS and Covenant University Bioinformatics Research  
(CUBRe), Covenant University, Ota, Nigeria; Department of Biological  
Sciences, Covenant University, Ota, Nigeria
- 08:20 - 08:40am: Cardiovascular Authentication: Fusion of Electrocardiogram  
and Ejection Fraction  
Rabita Alamgir, Obaidul Malek  
Center for Biometrics and Biomedical Research, Virginia, USA
- 08:40 - 09:00am: Algorithm Detecting Point Microcalcifications Using Matlab  
for Breast Cancer  
Md. Shafiul Islam  
Department of EE, University of North Dakota, Grand Forks,  
North Dakota, USA
- 09:00 - 09:20am: ERP Analysis of Emotional Stimuli from Brain EEG Signal  
Raja Majid Mehmood, Hyo Jong Lee  
Division of CSE, Center for Advanced Image and Information  
Technology, Chonbuk National University, Jeonju, South Korea

**SESSION 7-HIMS: NOVEL METHODS AND SYSTEMS TO ENHANCE DIAGNOSIS + TOOLS FOR HOSPITAL EMERGENCY ROOMS AND GOOD PRACTICES**

**Chair: Prof. Karl Andersson**

**Lulea University of Technology, Sweden**

**July 29, 2015 (Wednesday); 09:20am - 11:20am**

**(LOCATION: Gold Room)**

- 09:20 - 09:40am: A Belief Rule Based Expert System to Diagnose Measles  
Under Uncertainty  
Mohammad Shahadat Hossain, Karl Andersson, Samina Nanznin  
Department of CSE, University of Chittagong, Chittagong,  
Bangladesh; Pervasive and Mobile Computing Laboratory,  
Lulea University of Technology, Skelleftea, Sweden
- 09:40 - 10:00am: Enhancing Informative Frame Filtering by Water and Bubble  
Detection in Colonoscopy Videos  
Ashok Dahal, Junghwan Oh, Wallapak Tavanapong, Johnny Wong,  
and Piet C. De Groen  
Department of CSE, University of North Texas, Denton, Texas;  
CS Department, Iowa State University, Ames, Iowa;  
Mayo Clinic College of Medicine, Rochester, MN, USA
- 10:00 - 10:20am: Non-Invasive Heart Murmur Detection via a Force Sensing-Based  
System and SVM Classification  
Jiann-Shiou Yang  
Department of EE, University of Minnesota, Duluth, Minnesota, USA
- 10:20 - 10:40am: BREAK**

- 10:40 - 11:00am: Moebius Strip Like Pathology: Mechanisms, Diagnosis, Treatment Correction  
S. Kulishov, O. Iakovenko  
Internal Medicine No 1, HMEIU, Poltava, Ukraine;  
V.P. Komissarenko Institute of Endocrinology and Metabolism AMS  
Ukraine Kyiv, Ukraine
- 11:00 - 11:20am: Identifying Severe Trauma in the ED with a RIMER Methodology  
Guilan Kong, Jian-Bo Yang, Dong-Ling Xu, Richard Body,  
Xiaofeng Yin, Tianbing Wang, Baoguo Jiang, Jing Wang, Yonghua Hu  
Medical Informatics Center, Peking University, Beijing, China;  
Decision and Cognitive Sciences Research Centre, The University  
of Manchester, Manchester, UK; Traffic Medical Center, Peking  
University, Beijing, P. R. China; Emergency Department,  
Manchester Royal Infirmary, Oxford Road, Manchester, UK
- SESSION 8-HIMS: ELDERLY CARE: SYSTEMS, METHODS, AND NOVEL PRACTICES + ASSISTIVE TECHNOLOGIES**  
**Co-Chairs: Prof. Jiann-Shiou Yang\* and Prof. K. Ferens\*\***  
\*University of Minnesota Duluth, Minnesota, USA  
\*\*University of Manitoba, Winnipeg, Manitoba, Canada  
**July 29, 2015 (Wednesday); 11:20am - 12:20pm**  
**(LOCATION: Gold Room)**
- 11:20 - 11:40am: A Smart Shoe to Prevent and Manage Diabetic Foot Disease  
Olawale David Jegede, Ken Ferens, Bruce Griffith, Blake Podaima  
Department of ECE, University of Manitoba, Winnipeg, MB, Canada;  
Avriel International Inc., Winnipeg, MB, Canada;  
Internet Innovations Center, Winnipeg, MB, Canada
- 11:40 - 12:00pm: Utilizing 3D Printing to Assist the Blind  
Rabia Jafri, Syed Abid Ali  
Department of IT, King Saud University, Riyadh, Saudi Arabia;  
Araware LLC, Wilmington, Delaware, USA
- 12:00 - 12:20pm: Serious Game of Increase Cognitive Function for Elderly Using  
Arduino Based Coordinated Movement  
Jeong-Won Ko, Sung-Jun Park  
Department Game Engineering, Hoseo University, South Korea
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 9-BIOCOMP: BIOINFORMATICS AND RELATED ISSUES + PROTEIN CLASSIFICATION & STRUCTURE PREDICTION**  
**Co-Chairs: Dr. Norbert Seidler\* and Dr. Amir Manzour\*\***  
\*Chief, Division of Basic Sciences, Kansas City University of  
Medicine and Biosciences, Kansas City, MO, USA  
\*\*National Center for Biotechnology Information (NCBI),  
National Institutes of Health (NIH), Bethesda, Maryland, USA  
**July 29, 2015 (Wednesday); 01:20pm - 03:00pm**  
**(LOCATION: Gold Room)**
- 01:20 - 01:40pm: Shannon's Entropy of the Stochastic Context-Free Grammar and an  
Application to RNA Secondary Structure Modeling  
Amirhossein Manzourolajdad  
National Center for Biotechnology Information (NCBI),  
National Institutes of Health (NIH), Bethesda, Maryland, USA

01:40 - 02:00pm: Structure of the Intracellular Loop Domain in the GABA A Receptor Alpha-Subunit  
Julie L. Mustard, Jonathan B. Worley, Norbert W. Seidler  
Department of Biochemistry, Kansas City University of Medicine and Biosciences, Kansas City, Missouri, USA

02:00 - 02:20pm: Profrager Web Server: Fragment Libraries Generation for Protein Structure Prediction  
Karina B. Santos, Raphael Trevizani, Fabio L. Custodio, and Laurent E. Dardenne  
National Laboratory for Scientific Computing (LNCC), Petropolis, RJ; Oswaldo Cruz Foundation (Fiocruz), Fortaleza, CE, Brazil

02:20 - 02:40pm: Ant Colony Optimization for Construction Common Patterns of Protein Motifs  
Junior Altamiranda, Jose Aguilar, Christian Delamarche  
University of Los Andes, Venezuela;  
University of Rennes I, France

02:40 - 03:00pm: Revealing Protein-Ligand Interaction Patterns Through Frequent Subgraph Mining  
Sabrina Silveira, Alexandre Fassio, Carlos Silveira, and Raquel C. Melo-Minardi  
Department of Informatics, Universidade Federal de Vicosa, Vicosa, Minas Gerais, Brazil; Department of CS, Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil; Advanced Campus at Itabira, Universidade Federal de Itajuba, Itabira, Minas Gerais, Brazil

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-BIOCOMP-BIOENG-HIMS  
July 29, 2015 (Wednesday)  
(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Development of Medical 3D Printing Software for Porous Scaffold Generation  
Sangbeom Lee, Eunchang Choi  
Electronics and Telecommunications Research Institute (ETRI), Korea
- 0. A Semantic Approach to Predict Symptomless Unprovoked VTE Through Risk Factors Analysis  
Susan Sabra, Khalid Mahmood  
Oakland University, Rochester, Michigan, USA
- 0. A Metaverse Client of an Assisted Living Support Service System for Extended Family  
Mi-Kyong Han, Jong-Hyun Jang  
Electronics and Telecommunications Research Institute (ETRI), Korea
- 0. Socio-Spatial Analysis of Florida Suicide Mortality  
Joseph M. Woodside, Asal Johnson, Jacqueline Pollack  
Stetson University, DeLand, Florida, USA
- 0. ...

- SESSION 10-HIMS: HEALTHCARE AND MEDICAL INFORMATION SYSTEMS, MONITORING SYSTEMS, DATABASES, BIG DATA, MEDICAL CODING**  
**Co-Chairs: Prof. Jiann-Shiou Yang\* and Prof. John Wang\*\***  
**\*University of Minnesota Duluth, Minnesota, USA**  
**\*\*Virginia Wesleyan College, Virginia, USA**  
**July 29, 2015 (Wednesday); 03:40pm - 05:40pm**  
**(LOCATION: Gold Room)**
- 03:40 - 04:00pm: Delivering Actionable Insights on Population Risk to Improve Health Outcomes and Reduce Healthcare Costs  
 Jing Zhou, Michael Shepherd, Faming Li, Lina Fu, Pai Liu, Linxia Liao, Xuejin Wen, Jinhui Yao, Dennis Quebe, Jennie Echols  
 Palo Alto Research Center (PARC), USA;  
 Xerox Corporation, USA
- 04:00 - 04:20pm: Evaluating a Potential Commercial Tool for Healthcare Application for People with Dementia  
 Tanvi Banerjee, Pramod Anantharam, William L. Romine, Larry Lawhorne, and Amit Sheth  
 Department of Computer Science and Engineering, Wright State University, USA; Boonshoft School of Medicine, Wright State University, USA; Department of Biological Sciences, Wright State University, USA
- 04:20 - 04:40pm: Conformance Testing of Healthcare Data Exchange Standards for EHR Certification  
 Robert D. Snelick  
 National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, USA
- 04:40 - 05:00pm: Context-Mediated Semantic Alignment of Heterogeneous Electronic Medical Record Systems for Integrated Healthcare Delivery  
 Guoray Cai  
 College of Information Sciences and Technology, Penn State University, University Park, PA, USA
- 05:00 - 05:20pm: Using Temporal Logic to Verify Blood Supply Chain Safety  
 Noha Hazzazi, Bo Yu, Duminda Wijesekera, Paulo Costa  
 George Mason University, Fairfax, Virginia, USA
- 05:20 - 05:40pm: Medical Image Dispersal Using Enhance Secret Sharing Threshold Scheme  
 Nelmiawati, Mazleena Salleh, Subariah Ibrahim  
 Faculty of Computing, Universiti Teknologi Malaysia, Johor Bahru, Malaysia
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

08:00 - 09:00am: FREE SLOTS

**SESSION 11-BIOCOMP: GENE EXPRESSION DATA PROCESSING, SOFTWARE TOOLS,  
CLUSTER ANALYSIS, AND MODELING**

**Co-Chairs: Prof. Quoc-Nam Tran\* and William Yang\*\***

**\*Professor and Chair, Department of Computer Science,  
University of South Dakota, USA**

**\*\*University of Texas at Austin, Texas, USA**

**July 30, 2015 (Thursday); 09:00am - 11:20am**

**(LOCATION: Gold Room)**

- 09:00 - 09:20am: Developing Meta-Analysis Method for Identifying Biomarker of Gastric Cancer  
Xiaoya Chen, Jinjun Li, William Yang, Lili Lu, Hongyan Jin, Zexiong Wei, Wei Gu, Mary Yang, Youping Deng  
Medical College of Wuhan University of Science and Technology, P. R. China; TACC, University of Texas at Austin, Texas, USA; Puren Hospital of Wuhan University of Science and Technology, P. R. China; Department of Respiratory Medicine, Nanjing First Hospital & Third Clinical College of Nanjing Medical University, P. R. China; MidSouth Bioinformatics Center, and Joint Bioinformatics Ph.D. Program, University of Arkansas, Little Rock George W. Donaghey College of Engineering & Information Technology, and University of Arkansas for Medical Sciences, Arkansas, USA; Department of Internal Medicine and Rush University Cancer Center, Rush University Medical Center, Chicago, Illinois, USA
- 09:20 - 09:40am: Kernel Weighted Group Sparse Representation for Classification of Tumors Using Gene Expression Data  
Xiyi Hang  
Department of ECE, California State University, Northridge, California, USA
- 09:40 - 10:00am: KLAST: Fast and Sensitive Software to Compare Large Genomic Databanks on Cloud  
I. Petrov, S. Brillet, E. Drezen, S. Quiniou, L. Antin, P. Durand, D. Lavenier  
INRIA/IRISA/GenScale, Campus de Beaulieu, Rennes cedex, France; Korilog, Questembert, France
- 10:00 - 10:20am: Model-Driven Analysis of Gene Expression Data: Application to Metabolic Reprogramming During T-Cell Activation  
Alyaa M. Abdel-Haleem, Ayman F. Abuelela, Victor Solovyev, Neema Jamshidi, Nathan E. Lewis  
King Abdullah University of Science and Technology, Thuwal, Saudi Arabia; University of California San Diego, La Jolla, California, USA; Novo Nordisk Foundation Center for Biosustainability at the University of California, San Diego School of Medicine, La Jolla, California, USA
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Improved and Novel Cluster Analysis for Bioinformatics, Computational Biology and All Other Data  
Ruming Li, Xiu-Qing Li  
Molecular Genetics Laboratory, Potato Research Centre, Agriculture and Agri-Food Canada, Canada
- 11:00 - 11:20am: Epidemic Analysis Using Traditional Model Checking and Stochastic Simulation  
Kanishka Chauhan, Mh. Moiez Gohar, M. V. Panduranga Rao  
Indian Institute of Technology Hyderabad, India

**SESSION 12-BIOENG: BIOMEDICAL ENGINEERING + IMAGING SCIENCE**

**Co-Chairs: Dr. Marion Adebiji\* and Prof. Quoc-Nam Tran\*\***

**\*Covenant University, Nigeria**

**\*\*Professor and Chair, Department of Computer Science,  
University of South Dakota, USA**

**July 30, 2015 (Thursday); 11:20am - 12:20pm**

**(LOCATION: Gold Room)**

**11:20 - 11:40am: A System for Estimating Spatio-Temporal Gait Parameters and Pelvis Kinematics**

M. V. Avolio, S. Mammolito, G. Spingola

TD Group S.p.a., Palermo, Italy;

E.I. Solutions S.r.l, Palermo, Italy

**11:40 - 12:00pm: Spatial Fuzzy C-Means Algorithm for Bias Correction and Segmentation of Brain MRI Data**

Wedad S. Salem, Hesham F. Ali, Ahmed F. Seddik

Electronics Research Institute, Giza, Egypt;

Helwan University, Cairo, Egypt

**12:00 - 12:20pm: V.I.S System Revolutionary Technique of Medical Diagnosis**

Boucherit Taieb, Yagoubi Abdelkader, Djoudi Lamia

BOUCHERIT Laboratory, Oran, Algeria

**12:20 - 01:00pm: LUNCH (On Your Own)**

**SESSION 13- HIMS: HEALTHCARE AND CLOUD INFRASTRUCTURE, MOBILE SYSTEMS, WEARABLES, MONITORING TOOLS, NLP, AND APPLICATIONS**

**Co-Chairs: \*Dr. Marcelo Romero and Dr. Kwangman Ko\*\***

**\*Autonomous University of the State of Mexico, Mexico**

**\*\*Sangji University, South Korea**

**July 30, 2015 (Thursday); 01:00pm - 04:20pm**

**(LOCATION: Gold Room)**

**01:00 - 01:20pm: A Cloud-Based Infrastructure for Caloric Intake Estimation from Pre-Meal Videos and Post-Meal Plate Waste Pictures**

Vladimir Kulyukin, Vikas Reddy Sundini, Heidi Wengreen, and Jennifer Day

Department of CS, Utah State University, Logan, Utah, USA;

Department of Nutrition, Dietetics, & Food Sciences,

Utah State University, Logan, Utah, USA

**01:20 - 01:40pm: Evaluation of Mobile Learning System for Healthcare Support**

Toshiyuki Maeda, Yae Fukushige, Takeshi Matsuda

Faculty of Management Information, Hannan University, Japan;

Faculty of Comprehensive Informatics, Shizuoka Institute of

Science and Technology, Japan

**01:40 - 02:00pm: An Integrated Healthcare System and Services for Empowering Patients**

Ah-Lian Kor, Colin Pattinson, Richard Pope, Axel Schulte

Leeds Beckett University, Leeds, UK;

Dynamic Health Systems, Bradford, UK

**02:00 - 02:20pm: A Pilot Study on the Web-based Health Promotion Program Combined with a Wearable Device to Increase Physical Activity**

Ya-Ting Yang, Jeen-Shing Wang

Institute of Education, National Cheng Kung University,

Tainan, Taiwan, R.O.C.; Department of EE, National Cheng Kung

University, Tainan, Taiwan, R.O.C.

- 02:20 - 02:40pm: An Energy Expenditure Estimation Algorithm for a Wearable System  
 Jeen-Shing Wang, Fang-Chen Chuang, Ya-Ting Yang  
 Department of EE, National Cheng Kung University, Tainan, Taiwan, R.O.C.; Institute of Education, National Cheng Kung University, Tainan, Taiwan, R.O.C.
- 02:40 - 03:00pm: ECG Analysis Tool for Heart Failure Management and Cardiovascular Risk Assessment  
 J. Henriques, T. Rocha, S. Paredes, R. Cabiddu, D. Mendes, R. Couceiro, P. Carvalho  
 CISUC, Universidade de Coimbra, Coimbra, Portugal; Instituto Politecnico de Coimbra, Departamento de Engenharia Informatica e de Sistemas, Coimbra, Portugal; DEIB, Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano, Milano, Italy
- 03:00 - 03:20pm: Open Healthcare Platform Using Health Information of Remote Measuring Device  
 Kyoungyoung So, Kwangman Ko  
 Divisional of IT Information Engineering, Chonbuk National University, Jeonju City, South Korea; School of Computer and Information Engineering, Sangji University, Wonju City, South Korea
- 03:20 - 03:40pm: Understanding Medical Named Entity Extraction in Clinical Notes  
 Aman Kumar, Hassan Alam, Rahul Kumar, Shweta Sheel  
 BCL Technologies, San Jose, California, USA
- 03:40 - 04:00pm: Detection Of Cardiac Events in the Context of a Rehabilitation Platform  
 T. Rocha, S. Paredes, J. Henriques, P. De Carvalho  
 Instituto Superior de Engenharia de Coimbra, Portugal; Centro de Informatica e Sistemas, Universidade de Coimbra, Portugal
- 04:00 - 04:20pm: Automatic Cephalometric Landmark Detection: A Literature Review  
 Jose De Jesus Montufar, Marcelo Romero, Brissa Jimenez  
 Autonomous University of the State of Mexico, Mexico

# **FECS'15 & FCS'15 CONFERENCE SCHEDULES**

## **The 2015 International Conference on Frontiers in Education: Computer Science and Computer Engineering (FECS'15)**

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## **The 2015 International Conference on Foundations of Computer Science (FCS'15)**

*Because of partial topical and technical overlap between FECS'15 & FCS'15 tracks, the schedule of FCS'15 is merged with the schedule of FECS'15, resulting in a more comprehensive schedule. It is hoped that this would encourage the participants of the two conferences to explore cross-fertilization of ideas. There are also a number of other sessions (not listed as part of these two conferences) that are of potential interest to FECS'15 and FCS'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ICAI'15, BIOCOMP'15, ABDA'15, SERP'15, EEE'15, and ICOMP'15 conferences discuss topics that are within the scope of FECS'15 and FCS'15; these have been scheduled so that selected FECS'15 and FCS'15 attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

**08:30 - 08:45am: CONGRESS OPENING REMARKS - July 27, Monday:**  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

**08:45 - 09:35am: KEYNOTE LECTURE 1 - July 27, Monday:**  
**COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA**  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

**09:40 - 10:20am: KEYNOTE LECTURE 2 - July 27, Monday:**  
**LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL**  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)



- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:40 - 11:20am: KEYNOTE LECTURE 3 - July 27, Monday:  
ARTIFICIAL NEUROGENESIS  
Dr. James A. Crowder  
Chief Engineer, Raytheon Intelligence, Information, and Services;  
Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
Robotics and Artificial Intelligence Research Lab - Alexandria  
School of Innovation, Douglas County, Colorado, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 11:20a - 12:00p: KEYNOTE LECTURE 4 - July 27, Monday:  
The Infinity Computer and Numerical Computations with Infinities  
and Infinitesimals  
Prof. Yaroslav D. Sergeyev, Ph.D., D.Sc., D.H.C.  
Inventor of the Infinity Computer; Distinguished Professor, Head  
of Numerical Calculus Laboratory, University of Calabria, Rende,  
Italy; and Professor (part-time), Lobachevsky State University,  
Nizhni Novgorod, Russia  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:00 - 12:15pm: KEYNOTE LECTURE 5 - July 27, Monday:  
World of IoT and Connected Cars  
Dr. Akash Singh, PhD  
IBM Corporation, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:15 - 01:20pm: LUNCH (On Your Own)
- SESSION 1-FECS: USE OF ROBOTS, GAMIFICATION, AND OTHER TECHNOLOGIES IN EDUCATION +  
ONLINE COURSES  
Co-Chairs: Dr. Afrand Agah\* and Dr. Randy Kaplan\*\*  
\*Department of CS, West Chester University of Pennsylvania, USA  
\*\*Kutztown University of Pennsylvania, USA  
July 27, 2015 (Monday); 01:20pm - 04:00pm  
(LOCATION: Platinum Room)
- 01:20 - 01:40pm: An Initial Study Of BILOID Humanoid Robot and Beyond  
Hiberto Ayala, Yujian Fu, Jian Fu  
Department of EE & CS, Alabama A&M University, Alabama, USA
- 01:40 - 02:00pm: Exploring Finite State Automata with Junun Robots: A Case  
Study in Computability Theory  
Vladimir Kulyukin, Sarat Kiran Andhavarapu, Melodi Oliver,  
Christopher Heaps, Soren Rasmussen, Wesley Rawlins  
Department of CS, Utah State University, Logan, Utah, USA
- 02:00 - 02:20pm: Meaningful Gamification of Computer Science Departments:  
Considerations and Challenges  
Marlon Mejias, Ketly Jean-Pierre, Qi'Anne Knox, Elizabeth Ricks,  
Legand Burge, III, A. Nicki Washington  
Howard university, Washington, D.C., USA

- 02:20 - 02:40pm: Learning Hardware Design by Implementing Student's Video-Game on a FPGA  
 Marcos Sanchez-Elez, Sara Roman  
 Dpt. Arquitectura de Computadores y Automatica, Universidad Complutense de Madrid, Spain
- 02:40 - 03:00pm: Video Games to Motivate a Multi-disciplinary Capstone Experience  
 Daniela Rosca, Jessica Kostiou, Cortney Locke  
 Computer Science and Software Engineering Department,  
 Monmouth University, West Long Branch, New Jersey, USA
- 03:00 - 03:20pm: BREAK
- 03:20 - 03:40pm: A Simplified Sudoku 4x4 Game  
 Simon H. Lin  
 Department of Engineering and Computer Science, Azusa Pacific University, Azusa, California, USA
- 03:40 - 04:00pm: Improving a Computer Science 1 Course with Flipped Instruction and Faculty Guides  
 Joel Hollingsworth, David J. Powell  
 Elon University, Elon, North Carolina, USA
- SESSION 2-FCS: GRAPH AND NETWORK BASED ALGORITHMS + FORMAL METHODS AND APPLICATIONS + QUANTUM COMPUTING AND RELATED ISSUES**  
**Chair: Prof. H.M. (Mark) Hubey**  
**Montclair State University, New Jersey, USA**  
**July 27, 2015 (Monday); 04:00pm - 05:40pm**  
**(LOCATION: Platinum Room)**
- 04:00 - 04:20pm: Feature Based Cryptanalytic Technique for Digital Forensics  
 Analysis of Visual Cryptographic Digital Image Data Based on Formal Concept Analysis  
 Quist-Aphetsi Kester, Laurent Nana, Anca Christine Pascu, Sophie Gire, Jojo Moses Eghan, Nii Narku Quaynor  
 Lab-STICC, European University of Brittany, University of Brest, France; Faculty of Informatics, Ghana Technology University College, Ghana; Department of CS & IT, University of Cape Coast, Ghana
- 04:20 - 04:40pm: Beyond the Solution to 2-CSC:  $O(N^2)$  Algorithm to Discover Corresponding Chain Sub-graph Covers  
 Wei-Da Hao, Lin-Yu Tseng  
 Department of EE and CS, Texas A&M University - Kingsville, Texas, USA; Computer Science and Communication Engineering, Providence University, Taichung, Taiwan, R.O.C.
- 04:40 - 05:00pm: Measures, Models For Hierarchical Objects: of Quality, Quantity, Teaching and Rubrics  
 H. M. Hubey  
 Department of CS & IT, Montclair State University, New Jersey, USA
- 05:00 - 05:20pm: An Algorithm for Counting the Number of Edge Covers on Acyclic Graphs  
 J. Raymundo Marcial-Romero, Guillermo De Ita, Jose A. Hernandez, Vianney Munoz  
 Universidad Autonoma del Estado de Mexico, Mexico; Benemerita Universidad Autonoma de Puebla, Mexico
- 05:20 - 05:40pm: FREE SLOT

**05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the beginning of the program book for details)

**09:00 - 11:45pm: CONFERENCE RECEPTION DINNER / SOCIAL**  
July 27 - Monday; 09:00pm - 11:45pm  
(LOCATION: Ballrooms 1-5)

**SESSION 3-FECS: RECRUITING STUDENTS TO COMPUTER SCIENCE, RETENTION METHODS AND STRATEGIES + ADDRESSING DIVERSITY ISSUES**

**Co-Chairs: Dr. Mitchell L. Neilsen\* and Dr. Randy Kaplan\*\***  
 \*Kansas State University, Manhattan, Kansas, USA  
 \*\*Kutztown University of Pennsylvania, USA

**July 28, 2015 (Tuesday); 08:00am - 10:20am**  
**(LOCATION: Platinum Room)**

08:00 - 08:20am: FREE SLOT

08:20 - 08:40am: FREE SLOT

08:40 - 09:00am: Time-Lapse Photography for K-12 Education  
 Mitchell L. Neilsen, James Shaffer, Nicholas Johnson  
 Kansas State University, Manhattan, Kansas, USA

09:00 - 09:20am: Bridging The Gap: A Virtual Pre-College Program for Incoming  
 Computer Science Students  
 Rachel Hallie Lomax, Lena Alston, A. Nicki Washington  
 Howard University, Washington, D.C., USA

09:20 - 09:40am: Retaining Women in Computing  
 Ruth E. Davis, Angela Arndt  
 Santa Clara University, Santa Clara, California, USA;  
 National Center for Women in IT (NCWIT), USA

09:40 - 10:00am: Identifying and Addressing the Challenges of Industry-Academic  
 Partnerships at Minority-Serving Institutions  
 Qi'Anne Knox, A. Nicki Washington  
 Howard University, Washington, D.C., USA

10:00 - 10:20am: Framework to Identify At-risk Students in E-learning Environment  
 Alpa Reshamwala, Sunita Mahajan  
 Computer Engineering Department, MPSTME, SVKM's NMIMS  
 University, Mumbai, India;  
 Institute of Computer Science, M.E.T, Bandra, Mumbai, India

**10:20 - 10:40am: BREAK**

**SESSION 4-FCS: MODELING, SIMULATION, & RELATED ALGORITHMS + DATA STRUCTURES + OS + FOUNDATION OF CS, COMPUTATIONAL SCIENCE & EDUCATION**

**Chair: Dr. Michael Scherger**  
 Department of CS, Texas Christian University, Texas, USA

**July 28, 2015 (Tuesday); 10:40am - 12:20pm**  
**(LOCATION: Platinum Room)**

10:40 - 11:00am: Data Structures and Algorithms for Partitioning a Set into  
 Sets of Non-Descending Cardinality  
 Oshani Titti, Yijie Han  
 School of Computing and Engineering, University of Missouri  
 at Kansas City, Kansas City, Missouri, USA

11:00 - 11:20am: On Modeling Inhibitor Nets with Interval Processes and  
 Interval Traces  
 Mohammed Alqarni, Ryszard Janicki  
 Computing and Software Department, McMaster University,  
 Hamilton, Ontario, Canada

11:20 - 11:40am: Sieving Interior Collinear Points for Convex Hull Algorithms  
 Michael Scherger, Esteban Kleckner  
 Department of Computer Science, Texas Christian University,  
 Fort Worth, Texas, USA

11:40 - 12:00pm: A Short Survey on Statistical Network Analysis  
 Matthias Dehmer, Stefan Pickl, Zhonglin Wang  
 Department of Computer Science, Universitat der Bundeswehr  
 Munchen, Neubiberg, Germany

12:00 - 12:20pm: FREE SLOT

12:20 - 01:20pm: LUNCH (On Your Own)

**SESSION 5-FECS: TEACHING METHODOLOGIES, CURRICULUM AND COURSE DEVELOPMENT + ADAPTIVE LEARNING SYSTEMS + EXPERIENTIAL LEARNING + ONLINE AND MASSIVE OPEN ONLINE COURSES**

**Chair: Dr. Antonio Sanchez**  
 Texas Christian University, Texas, USA  
 July 28, 2015 (Tuesday); 01:20pm - 03:00pm  
 (LOCATION: Platinum Room)

01:20 - 01:40pm: A Study of Kinesthetic Learning Activities Effectiveness in Teaching Parallel Algorithms Within an Academic Term  
 Matthew Lai, Danny Luong, G. Young  
 Computer Science Department, Cal Poly Pomona, Pomona, California, USA

01:40 - 02:00pm: A Strategy for Teaching "Real" Computer Science through Wearables  
 Michael Eisenberg, Swamy Ananthanarayan, Katie Siek  
 University of Colorado, Boulder, Colorado, USA;  
 Indiana University, Bloomington, Indiana, USA

02:00 - 02:20pm: Animation in an Introductory Computer Science Course  
 Mehdi Zargham  
 Department Head, Department of Computer Science,  
 University of Dayton, Ohio, USA

02:20 - 02:40pm: Implementation of Best Practices Using a MOOC at a Historically Black University  
 Velma C. Latson, Courtney Lamar, Lethia S. Jackson, Monika Gross  
 Bowie State University, Bowie, Maryland, USA

02:40 - 03:00pm: Software Architectures for Teaching Induction Heating Principles  
 Alistair A. McEwan, Glen Mason  
 Department of Engineering, University of Leicester, Leicester, UK;  
 Faculty of Technology. University Centre Peterborough,  
 Peterborough, UK

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-FECS-FCS**  
**July 28, 2015 (Tuesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Virtual-C: A Programming Environment for Learning C on Mobile Devices  
 David SchmuDde, Dieter Pawelczak  
 Faculty of Electrical Engineering and Computer Science,  
 Universitaet der Bundeswehr Muenchen, Neubiberg, Germany
- 0. A Dependable Language for Low Power Embedded Systems  
 Yuan-Ming Chang, Chia-Chen Hsu, Jenq-Kuen Lee  
 Department of CS, National Tsing-Hua University, Taiwan
- 0. ...

- SESSION 6-FECS: TEACHING METHODOLOGIES + DATABASES + CS FOUNDATION + STEM + CASE STUDIES**  
**Co-Chairs: Dr. Antonio Sanchez\* and Prof. H.M. (Mark) Hubey\*\***  
**\*Texas Christian University, Texas, USA**  
**\*\*Montclair State University, New Jersey, USA**  
**July 28, 2015 (Tuesday); 03:40pm - 05:40pm**  
**(LOCATION: Platinum Room)**
- 03:40 - 04:00pm: From Big Data to Smart Data: Teaching Data Mining and Visualization  
Antonio Sanchez, Lisa Burnell Ball  
Texas Christian University, Fort Worth, Texas, USA
- 04:00 - 04:20pm: Improvement of Researcher Database System  
Tetsuya Oishi, Noriko Kuwano, Masao Mori, Eiichi Takata, Shigeru Kusakabe  
Office of Institutional Research, Kyushu University, Fukuoka-shi, Fukuoka-ken, Japan; Office of Contents Utilization and Institutional Research, Center of University Management, Tokyo Institute of Technology, Tokyo-to, Japan; Faculty of Information Science and Electrical Engineering, Kyushu University, Fukuoka-ken, Japan
- 04:20 - 04:40pm: Computer Science: Not About Computers, Not Science  
Kurt D. Krebsbach  
Department of Mathematics and Computer Science, Lawrence University, Appleton, Wisconsin, USA
- 04:40 - 05:00pm: Increasing the Number of Under-served High School Students in STEM Through the Information Technology Early College (ITEC) Program: Evaluating and Establishing Best Practices for a Model Approach  
Sherry Kinslow, Lethia Jackson, Christine Barrow, Mara Doss  
Prince George's Community College, Largo, Maryland, USA; Bowie State University, Bowie, Maryland, USA
- 05:00 - 05:20pm: Smart Chair: An Internet of Things Case Study for a Capstone Research Project  
Jing (Selena) He, Amir Atabekov, Edward Mwangi, Donald Toler  
Department of CS, Kennesaw State University, Georgia, USA
- 05:20 - 05:40pm: FREE SLOT
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the beginning of the program book for details)**

- SESSION 7-FCS: OPTIMIZATION METHODS + SEARCH AND INDEXING ALGORITHMS + REAL-TIME SYSTEMS AND HPC + OS + APPLICATIONS**  
**Chair: Prof. Alpa Reshamwala**  
**NMIMS University, India**  
**July 29, 2015 (Wednesday); 08:00am - 09:40am**  
**(LOCATION: Platinum Room)**
- 08:00 - 08:20am: Multiprocessor MMIO Tracing via Memory Protection and a Shadow Page Table  
 Myoungjae Kim, Hyunmin Yoon, Minkwan Choi, Shakaiba Majeed, and Minsoo Ryu  
 Department of CSE, Hanyang University, Seoul, Korea;  
 Department of ECE, Hanyang University, Seoul, Korea
- 08:20 - 08:40am: Absolute Bandwidth Scheduling via Group-Based Partitioned Proportional Share Scheduling and Dynamic Weight Management on Varying-Speed Multiprocessors  
 Sangwon Shin, Shakaiba Majeed, Minsoo Ryu  
 Department of CSE, Hanyang University, Seoul, Korea
- 08:40 - 09:00am: On the Set Intersection Operations over Inverted Lists  
 Yangjun Chen, Weixinjg Shen  
 Department of Applied CS, University of Winnipeg, Canada
- 09:00 - 09:20am: Warehouse Pick Path Optimization Algorithm Analysis  
 Ryan Key, Anurag Dasgupta  
 Edinboro University of Pennsylvania, USA
- 09:20 - 09:40am: Proportional Share Scheduling Employing Performance-aware Virtual Time in Multiprocessor Systems  
 Munseok Kim, Hyunmin Yoon, Minsoo Ryu  
 Department of CSE, Hanyang University, Seoul, Korea
- SESSION 8-FCS: FOUNDATION OF COMPUTER SCIENCE, COMPUTATIONAL SCIENCE AND NOVEL CONCEPTS + EDUCATION**  
**Chair: Prof. Alpa Reshamwala**  
**NMIMS University, India**  
**July 29, 2015 (Wednesday); 09:40am - 11:20am**  
**(LOCATION: Platinum Room)**
- 09:40 - 10:00am: Peircean Semiotics: Perspectives in Computer Science  
 Ricardo Maciel Gazoni  
 TIDD - Technologies of Intelligence and Digital Design,  
 PUC - Pontificia Universidade Catolica, Sao Paulo, Brazil
- 10:00 - 10:20am: Construct a Perfect Hash Function in Time Independent of the Size of Integers  
 Yijie Han  
 School of Computing and Engineering, University of Missouri at Kansas City, Kansas City, Missouri, USA
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Applying Mobile and Pervasive Computing Security Project in CS Courses  
 Yujian Fu, Di Ma  
 Department of EE & CS, Alabama A&M University, Huntsville, Alabama, USA;  
 University Of Michigan at Dearborn, Dearborn, Michigan, USA

- 11:00 - 11:20am: Developing of Virtual Tools to Improve Classroom Performance in Physics  
Rosete F. Juan C., Guzman R. Miguel A., Estrada R. Felipe  
Mechanical Engineering Department, Technological Institute of Queretaro, Queretaro, Mexico;  
CE Department, Technological Institute of Queretaro, Mexico
- SESSION 9-FECS: SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS - STEM EDUCATION**  
**Co-Chairs: Dr. Ching-yu Huang\* and Dr. Sadegh Davari\*\***  
\*Department of CS, Kean University, USA  
\*\*University of Houston-Clear Lake, USA  
**July 29, 2015 (Wednesday); 11:20am - 12:20pm**  
**(LOCATION: Platinum Room)**
- 11:20 - 11:40am: Pathway From Learning Multimedia Software to Computer Science Education  
Ching-Yu Huang, Jing-Chiou Liou, Grace Huang  
Kean University, Union, New Jersey, USA;  
University of Pennsylvania, USA
- 11:40 - 12:00pm: Improving Technical Writing Through Professional Expression Exercises in a Computer Science Graduate Program  
Meline Kevorkian, Gregory Simco  
Office of Academic Affairs, Nova Southeastern University; Graduate School of Computer and Information Sciences, Nova Southeastern University, Fort Lauderdale, Florida, USA
- 12:00 - 12:20pm: Bridges to STEM Career: A Collaborative Approach  
Sadegh Davari, Sharon Perkins-Hall, Krishani Abeysekera, Jim Meeks, Nathaniel Wiggins, Norm Liebling  
University of Houston-Clear Lake, Texas, USA;  
San Jacinto College District, Pasadena, Texas, USA
- 12:20 - 01:20pm: LUNCH (On Your Own)**
- SESSION 10-FECS: TEACHING METHODOLOGIES, CURRICULUM AND COURSE DEVELOPMENT + ADAPTIVE LEARNING SYSTEMS + EXPERIENTIAL LEARNING + ONLINE AND MOOC**  
**Co-Chairs: Dr. Nicki Washington\*, Prof. Manuel Estabrooks\*\*, and Chair Professor Abdelaziz Bouras\*\*\***  
\*Howard university, Washington, D.C., USA  
\*\*Chair Applied Sciences, Red Deer College, Alberta Canada  
\*\*Department of CSE, Qatar University, Doha, Qatar  
**July 29, 2015 (Wednesday); 01:20pm - 03:00pm**  
**(LOCATION: Platinum Room)**
- 01:20 - 01:40pm: Development of an Automated Information System: A Students' Learning Perspective  
Sandip C. Patel  
Morgan State University, Baltimore, Maryland, USA
- 01:40 - 02:00pm: Implementing Elliptic Curve Cryptography  
Leonidas Deligiannidis  
Department of Computer Science and Networking,  
Wentworth Institute of Technology, Boston, MA, USA
- 02:00 - 02:20pm: Using Bottom-Up Techniques in a Digital Hardware Design Laboratory to Better Facilitate Experiential Learning  
B. Earl Wells  
University of Alabama in Huntsville, Alabama, USA



- 02:20 - 02:40pm: Toward Smart Content in Adaptive Learning Systems: Potential, Challenges, and Solutions  
Ketly Jean-Pierre, Marlon Mejias, Legand Burge,  
Kyndra Middleton, Harry Keeling  
Howard University, Washington, DC, USA
- 02:40 - 03:00pm: Bridging the Education/ICT-Business Competency Gaps: Ontology Based Solutions  
A. Zainal, A. Bouras  
Qatar University, Doha, Qatar; IctQATAR Chair, Ministry of Information and Communications Technology, Doha, Qatar
- 03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-FECS-FCS  
July 29, 2015 (Wednesday)  
(LOCATION: Hallways of Ballrooms 1-5)**
- O. Comparing Graphs Representing Chronologically Ordered Events  
Katia Mayfield  
Athens State University, Alabama, USA
- O. ...
- SESSION 11-FECS: ASSESSMENT STRATEGIES + ACCREDITATION + SOFTWARE ENGINEERING + PROBLEM-BASED LEARNING  
Co-Chairs: Dr. Leigh Ann DeLyser\* and Dr. Daniela Rosca\*\*  
\*NYC Foundation for Computer Science Education, New York, USA  
\*\*Monmouth University, USA  
July 29, 2015 (Wednesday); 03:40pm - 05:40pm  
(LOCATION: Platinum Room)**
- 03:40 - 04:00pm: How to Develop Competencies and Abilities Professional in Software Engineering in Undergraduate Students?  
Carlos S. Portela, Alexandre M. L. Vasconcelos, and Sandro R. B. Oliveira  
Informatics Center (CIn) of Federal University of Pernambuco (UFPE), Brazil; Postgraduate Program (PPGCC) of Federal University of Para (UFPA), Belem, Brazil
- 04:00 - 04:20pm: Using Problem-Based Learning in a CS1 Course  
Randy M. Kaplan  
Kutztown University of Pennsylvania, Kutztown, PA, USA
- 04:20 - 04:40pm: FREE SLOT
- 04:40 - 05:00pm: Assessing Student Outcomes with Comprehensive Examinations: A Case Study  
Jacob P. Somervell  
Department of Mathematics & Computer Science, The University of Virginia's College at Wise, Wise, Virginia, USA
- 05:00 - 05:20pm: Assessment Methodologies for Abet Accreditation: Success Factors and Challenges  
Nabil El Kadhi\*, Minerva M. Bunagan  
Deputy Vice Chancellor For Academic Affairs, University of BuRaimi, Oman
- 05:20 - 05:40pm: FREE SLOT
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
(Please see the lists at the begining of the program book for details)**

- SESSION 12-FECS: CASE STUDIES, GENERAL AND CAPSTONE PROJECTS TO ENHANCE LEARNING + BRIEF SURVEYS**  
**Co-Chairs: Dr. Donald R. Schwartz\* and Dr. Daniela Rosca\*\***  
**\*School of CS & Math, Marist College, New York, USA**  
**\*\*Monmouth University, USA**  
**July 30, 2015 (Thursday); 08:00am - 10:20am**  
**(LOCATION: Platinum Room)**
- 08:00 - 08:20am: FREE SLOT
- 08:20 - 08:40am: FREE SLOT
- 08:40 - 09:00am: When the Professor Joins the Student Team: A Service-Learning Project That was More Complex Than I Had Expected!  
Donald R. Schwartz  
School of Computer Science and Mathematics, Marist College,  
Poughkeepsie, New York, USA
- 09:00 - 09:20am: Project-Based Learning in Introductory Biostatistics Using Excel  
Xiaohui Zhong  
University of Detroit Mercy, Detroit, Michigan, USA
- 09:20 - 09:40am: A Multi-Disciplinary Mobile Applications Project Course at the Graduate Level  
Jonathan Rose, Braiden Brousseau, Alexandra Makos  
Department of ECE, University of Toronto, Ontario, Canada;  
Ontario Institute for Studies in Education,  
University of Toronto, Ontario, Canada
- 09:40 - 10:00am: Agile Systems Integration Process  
Jason D. Winningham, David J. Coe, Jeffrey H. Kulick  
University of Alabama in Huntsville, Huntsville, Alabama, USA
- 10:00 - 10:20am: Creating Synergy Between Undergraduate Senior Computing Research and Applied Capstone Courses  
Mike Estep, Kenneth David Smith, Chao Zhao, Abbas Johari, and William Carney  
Computing and Technology Department, Cameron University, Lawton, Oklahoma, USA;  
English Department, Cameron University, Lawton, Oklahoma, USA
- 10:20 - 10:40am: **BREAK**
- SESSION 13-FECS: FLIPPED CLASSROOM + ATTENDANCE TRACKING + E-TEXTBOOKS + TESTING FRAMEWORKS**  
**Chair: Dr. Leigh Ann DeLyser**  
**NYC Foundation for Computer Science Education, New York, USA**  
**July 30, 2015 (Thursday); 10:40am - 12:20pm**  
**(LOCATION: Platinum Room)**
- 10:40 - 11:00am: The Coaching Role in the Flipped Classroom - Results of a Study: First Year College Statistics  
M. Estabrooks  
Red Deer College, Red Deer, Alberta, Canada
- 11:00 - 11:20am: Integrating Flipped Classroom Approach and Work in Pairs into Workshops in Programming Course  
Marina Lepp, Eno Tonisson  
Institute of Computer Science, University of Tartu, Estonia

- 11:20 - 11:40am: Using QR-Codes for Attendance Tracking  
Dwight Deugo  
Carleton University, Ottawa, Ontario, Canada
- 11:40 - 12:00pm: Gakuzai: Editable Electronic Textbook Education System  
Atsuya Takedani, Kousei Ueta, Takumi Yamaguchi, Takahiko Mendori,  
Yusuke Nishiuchi, Masanobu Yoshida, Hironobu Satoh, Haruya Shiba  
Department of EE and Information Science, National Institute of  
Technology, Kochi College, Nankoku-city, Kochi, Japan;  
School of Information, Kochi University of Technology, Japan
- 12:00 - 12:20pm: A New Testing Framework for C-Programming Exercises and  
Online-Assessments  
Dieter Pawelczak, Andrea Baumann, David Schmudde  
Faculty of EE and CS, Universitaet der Bundeswehr Muenchen,  
Neubiberg, Germany
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 14-FECS: TEACHING MATHEMATICS AND COMPUTER SCIENCE + TESTING  
METHODS + EDUCATIONAL SUPPORT**  
**Co-Chairs: Prof. Mike Eisenberg\* and Prof. Hiroshi Dozono\*\***  
\*University of Colorado, Boulder, Colorado, USA  
\*\*Saga University, Japan  
**July 30, 2015 (Thursday); 01:20pm - 03:00pm**  
**(LOCATION: Platinum Room)**
- 01:20 - 01:40pm: Generation of Complexity-Controlled Mathematics Problems for  
Colleges  
Yuki Mori, Shuichi Yukita  
Graduate School of Computer and Information Sciences, Hosei  
University, Tokyo, Japan; Faculty of Computer and Information  
Sciences, Hosei University, Tokyo, Japan
- 01:40 - 02:00pm: Cognitive Prior-Knowledge Testing Method for Core Development  
of Higher Education of Computing in Academia  
Mohit Satoskar  
Ramrao Adik Institute of Technology, Navi Mumbai, India
- 02:00 - 02:20pm: Visualization of Learning Situation of C Language Using  
Self-Organizing Maps  
Tomohiro Enda, Hiroshi Dozono, Masanori Nakakun  
Saga University, Honjyo Saga, Japan;  
Fukuoka University, Jonan-ku, Fukuoka, Japan
- 02:20 - 02:40pm: **FREE SLOT**
- 02:40 - 03:00pm: A Public School Model of CS Education  
Leigh Ann DeLyser, Michael Preston  
NYC Foundation for Computer Science Education, New York, USA
- 03:00 - 03:20pm: **BREAK**
- 03:20 - 05:20pm: **During this period, FECS'15 and FCS'15 attendees are encouraged  
to participate in sessions belonging to ICAI'15, BIOCOMP'15,  
ABDA'15, SERP'15, EEE'15, or ICOMP'15 conferences. These  
sessions discuss topics that significantly overlap the scopes  
of FECS'15 and FCS'15.**

# ICAI'15 CONFERENCE SCHEDULE

## The 2015 International Conference on Artificial Intelligence

*There are a number of other sessions (not listed as part of ICAI'15 in this schedule) that are of potential interest to ICAI'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, some sessions in DMIN'15, IPCV'15, ABDA'15, EEE'15, ICOMP'15, and IKE'15 conferences discuss topics that are within the scope of ICAI'15; these have been scheduled so that selected ICAI'15 groups/attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

- 08:30 - 08:45am:** CONGRESS OPENING REMARKS - July 27, Monday:  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am:** KEYNOTE LECTURE 1 - July 27, Monday:  
COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am:** KEYNOTE LECTURE 2 - July 27, Monday:  
LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am:** A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE  
AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 10:40 - 11:20am: **KEYNOTE LECTURE 3 - July 27, Monday:**  
**ARTIFICIAL NEUROGENESIS**  
 Dr. James A. Crowder  
 Chief Engineer, Raytheon Intelligence, Information, and Services;  
 Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
 Robotics and Artificial Intelligence Research Lab - Alexandria  
 School of Innovation, Douglas County, Colorado, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 11:20a - 12:00p: **KEYNOTE LECTURE 4 - July 27, Monday:**  
**The Infinity Computer and Numerical Computations with Infinities  
 and Infinitesimals**  
 Prof. Yaroslav D. Sergeev, Ph.D., D.Sc., D.H.C.  
 Inventor of the Infinity Computer; Distinguished Professor, Head  
 of Numerical Calculus Laboratory, University of Calabria, Rende,  
 Italy; and Professor (part-time), Lobachevsky State University,  
 Nizhni Novgorod, Russia  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:00 - 12:15pm: **KEYNOTE LECTURE 5 - July 27, Monday:**  
**World of IoT and Connected Cars**  
 Dr. Akash Singh, PhD  
 IBM Corporation, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:15 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 1-ICAI: FUZZY LOGIC AND SETS, FUZZY CONTROL AND APPLICATIONS**  
 Co-Chairs: **Dr. Mehran Asadi\*** and **Dr. Tom Portegys\*\***  
               \*The Lincoln University, PA, USA  
               \*\*DigiPen Institute of Technology, USA  
**July 27, 2015 (Monday); 01:20pm - 03:00pm**  
 (LOCATION: Ballroom 3)
- 01:20 - 01:40pm: **Optimizing Cost with Intelligent Energy Management System Based  
 on Fuzzy Logic**  
 Musbah Abdulgader, Cheng Yang, Devinder Kaur  
 Department of EECS, University of Toledo, Toledo, Ohio, USA
- 01:40 - 02:00pm: **Fuzzy Methodologies for Multi-Sensor Information Fusion With  
 Applications to Precision PNT**  
 James A. Crowder, John N. Carbone  
 Raytheon Intelligence, Information and Services, Aurora,  
 Colorado, USA
- 02:00 - 02:20pm: **Fuzzy Evaluation of Job Satisfaction of Hotel Employees**  
 Rahib H. Abiyev, Gunay Sadikoglu, Esmira Abiyeva  
 Applied Artificial Intelligence Research Centre,  
 Near East University, North Cyprus, Mersin, Turkey
- 02:20 - 02:40pm: **Identifying Opinion Mining Elements Based on De-Dependency  
 Relations and Fuzzy Logic**  
 Haiqing Zhang, Aicha Sekhari, Yacine Ouzrout, Abdelaziz Bouras  
 DISP Laboratory, University Lumiere Lyon 2, France;  
 Computer Science Department, Qatar University, Doha, Qatar
- 02:40 - 03:00pm: **An Adaptive PID Tuning for LFC System Using Neuro-Fuzzy  
 Inference System**  
 Heidar Ali Shayanfar, Ghasem Derakhshan, Mohammadreza  
 Alimohammadi, Amin Khodabakhshian  
 Center of Excellence for Power System Automation and  
 Operation, College of Electrical Engineering, Iran University  
 of Science and Technology, Iran; Electrical Engineering,  
 University of Isfahan, Iran

- 03:00 - 03:20pm: BREAK**
- SESSION 2-ICAI: HUMAN-COMPUTER INTERACTION + MACHINE TRANSLATION, NATURAL LANGUAGE PROCESSING AND RELATED METHODS**  
**Co-Chairs: Dr. James A. Crowder\* and Prof. Edgard Thomas Martins\*\***  
**\*Raytheon Intelligence, Information, and Services, USA**  
**\*\*Universidade Federal de Pernambuco, Brazil**  
**July 27, 2015 (Monday); 03:20pm - 05:40pm**  
**(LOCATION: Ballroom 3)**
- 03:20 - 03:40pm:** The Logic Fuzzy in the Operation of the Knowledge of the Interaction Human-Computer Tasks in Complex Machines: Learning in Significance Sets  
 Edgard Thomas Martins, Isnard Thomas Martins  
 Department of Design Pos-graduation, Federal University of Pernambuco, Recife, Pernambuco, Brazil; E-learning Department, Univ. Estacio de Sa, Rio de Janeiro, RJ, Brazil
- 03:40 - 04:00pm:** Information Extraction Of Icartt Data Using Natural Language Processing  
 Elliot Rieflin, Dali Wang, John Kusterer, Gao Chen  
 Christopher Newport University, Newport News, Virginia, USA; Science Directorate, NASA Langley, Hampton, Virginia, USA
- 04:00 - 04:20pm:** Evaluation of a Standalone Language-Independent Dialogue Framework  
 Arnaud Jordan, Kenji Araki  
 Graduate School of Information Science and Technology, Hokkaido University, Sapporo, Japan
- 04:20 - 04:40pm:** Automated Scoring of Levels of Integrative Complexity Using Machine Learning and Natural Language Processing  
 Aardra Kannan Ambili, Khaled Rasheed  
 Institute for Artificial Intelligence, University of Georgia, Georgia, USA
- 04:40 - 05:00pm:** Semantic Characterization of Academic and Occupational Profiles Based on Competencies  
 Alexandra Gonzalez, Jose Aguilar  
 CS Department, Universidad Tecnica Particular de Loja, Ecuador; Universidad de los Andes Venezuela, Venezuela
- 05:00 - 05:20pm:** Comparative Study Of Verse Similarity For Multi-Lingual Representations Of The Qur'An  
 Amna Basharat, Delaram Yasdansepas, Khaled Rasheed  
 Department of Computer Science, University of Georgia, Georgia, USA
- 05:20 - 05:40pm:** KNN Based Word Categorization Considering Feature Similarity  
 Taeho Jo  
 Department of Computer and Information Engineering, Inha University, Incheon, South Korea
- 06:00 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**
- 09:00 - 11:45pm: CONFERENCE RECEPTION DINNER / SOCIAL**  
**July 27 - Monday; 09:00pm - 11:45pm**  
**(LOCATION: Ballrooms 1-5)**

**SESSION 3-ICAI: KNOWLEDGE-BASED SYSTEMS, REPRESENTATION, DISCOVERY + INFORMATION ENGINEERING METHODS AND RELATED ISSUES**  
**Co-Chairs: Dr. Mehran Asadi\* and Wendell Satney\*\***  
**\*The Lincoln University, PA, USA**  
**\*\*University of the West Indies Cave Hill Campus, Barbados**  
**July 28, 2015 (Tuesday); 08:00am - 09:40am**  
**(LOCATION: Ballroom 3)**

08:00 - 08:20am: Epistemology Under Schematization: Defining Knowledge  
 Sabah Al-Fedaghi  
 Department of CE, Kuwait University, Kuwait

08:20 - 08:40am: Automated Monitoring and Validation of Synthetic Intelligent Behavior  
 Randolph M. Jones, Ben Bachelor, Webb Stacy,  
 John Colonna-Romano, Robert E. Wray  
 Soar Technology, Ann Arbor, Michigan, USA;  
 Aptima, Woburn, MA, USA

08:40 - 09:00am: Classification of Debate Threading Models for Representing Decentralized Debates  
 Abdulrahman Alqahtani, Marius Silaghi  
 Department of CS, Najran University, Najran, Saudi Arabia;  
 Department of CS, Florida Institute of Technology,  
 Melbourne, Florida, USA

09:00 - 09:20am: Automatic Concept-Base Creation Method Using Document Groups  
 Misako Imono, Eriko Yoshimura, Seiji Tsuchiya, and Hirokazu Watabe  
 Organization for Advanced Research and Education, Faculty of Science and Engineering, Doshisha University, Japan;  
 Department of Intelligent Information Engineering and Sciences, Faculty of Science and Engineering, Doshisha University, Kyoto, Japan

09:20 - 09:40am: Network-Based Relevance Relationship Generating for Empirical Engineering Knowledge  
 Xinyu Li, Zuhua Jiang, Bo Song, Lijun Liu  
 Department of Industrial Engineering and Management,  
 Shanghai Jiao Tong University, Shanghai, P. R. China

**SESSION 4-ICAI: ROBOTICS AND APPLICATIONS**  
**Co-Chairs: Dr. Ying Bai\* and Wendell Satney\*\***  
**\*Johnson C. Smith University, Charlotte, North Carolina, USA**  
**\*\*University of the West Indies Cave Hill Campus, Barbados**  
**July 28, 2015 (Tuesday); 09:40am - 12:20pm**  
**(LOCATION: Ballroom 3)**

09:40 - 10:00am: Place Recognition and Topological Map Learning in a Virtual Cognitive Robot  
 Paul Smart, Katia Sycara  
 ECS, University of Southampton, Southampton, UK;  
 Carnegie Mellon University, Pittsburgh, PA, USA

10:00 - 10:20am: A Novel Offline Path Planning Method  
 Pejman Kamkarian, Henry Hexmoor  
 Southern Illinois University, Carbondale, Illinois, USA

**10:20 - 10:40am: BREAK**

- 10:40 - 11:00am: Realization of Task Intelligence Based on the iOA for Assistive Robots  
Bum-Soo Yoo, Yong-Ho Yoo, Woo-Ri Ko, Seung-Jae Lee, Seung-Hwan Baek, Jong-Hwan Kim  
Department of EE, KAIST, Daejeon, Republic of Korea
- 11:00 - 11:20am: Improve Robots Calibration Accuracy Using a Dynamic Online Interval Type-2 Fuzzy Interpolation System  
Ying Bai, Dali Wang  
Department of CSE, Johnson C. Smith University, North Carolina, USA; Department of Physics and CS, Christopher Newport University, Newport News, USA
- 11:20 - 11:40am: A Dynamic Hierarchical Task Transfer in Multiple Robot Explorations  
Mehran Asadi, Manfred Huber  
The Lincoln University, PA, USA;  
University of Texas at Arlington, Texas, USA
- 11:40 - 12:00pm: Inferring Robot Actions from Verbal Commands Using Shallow Semantic Parsing  
Alexander Sutherland, Suna Bensch, Thomas Hellstrom  
Department of Computer Science, Umea University, Sweden
- 12:00 - 12:20pm: Efficiency Considerations of an Offline Mobile Robot Path Planner  
Pejman Kamkarian, Henry Hexmoor  
Southern Illinois University, Carbondale, Illinois, USA
- 12:20 - 01:00pm: **LUNCH (On Your Own)**

**SESSION 5-ICAI: ---> (CONCURRENT SESSION WITH SESSION 6-ICAI)  
GENETIC ALGORITHMS + EVOLUTIONARY STRATEGIES + NEURAL NETWORKS AND COMPUTATIONS + OPTIMIZATION METHODS  
Co-Chairs: Dr. Mehran Asadi\* and Dr. Bernard Hsieh\*\*  
\*The Lincoln University, PA, USA  
\*\*US Army Engineer Research and Development Center (USAF), USA  
July 28, 2015 (Tuesday); 01:00pm - 03:00pm  
(LOCATION: Ballroom 3)**

- 01:00 - 01:20pm: Solving Unit Commitment Problem Based on New Stochastic Search Algorithm  
H. A. Shayanfar, O. Abedinia, N. Amjady  
Islamic Azad University, South Tehran Branch, Tehran, Iran;  
Semnan University, Semnan, Iran
- 01:20 - 01:40pm: Parallelization of the Rosen-Suzuki Fist Function and Himmelblau Function Using a Two-Population Evolutionary Algorithm  
Michael Scherger, Roja Ramani Molupoju  
Department of CS, Texas Christian University, Fort Worth, Texas, USA; Department of Computing Sciences, Texas A&M University - Corpus Christi, Corpus Christi, Texas, USA
- 01:40 - 02:00pm: Application of Self-Organizing Feature Maps to Water Resources Projects  
Bernard Hsieh, Jay Ratcliff  
US Army Engineer Research and Development Center (USAF), Vicksburg, Mississippi, USA



- 02:00 - 02:20pm: Two Repair Schemes Applied to a Multiply-Constrained Harvest Scheduling Problem  
P. C. Geiger, W. D. Potter  
University of Georgia, Georgia, USA
- 02:20 - 02:40pm: Cooperative Games with Monte Carlo Tree Search  
Cheechian Cheng, Norman Carver  
Department of CS, Southern Illinois University,  
Carbondale, Illinois, USA
- 02:40 - 03:00pm: On the Evolutionary Model of Intelligence  
Igor Weisband  
Weisband Informatik, Neuss, Germany
- SESSION 6-ICAI: ---> (CONCURRENT SESSION WITH SESSION 5-ICAI)  
PATTERN RECOGNITION AND SUPPORTING ALGORITHMS + MACHINE  
LEARNING & APPLICATIONS + LEARNING METHODS (SUPERVISED  
AND UNSUPERVISED) & DATA MINING  
Co-Chairs: Prof. Henry Hexmoor\* and Dr. Thomas P. Way\*\*  
\*Southern Illinois University, Carbondale, Illinois, USA  
\*\*Villanova University, USA  
July 28, 2015 (Tuesday); 01:20pm - 03:00pm  
(LOCATION: Ballroom 1)**
- 01:20 - 01:40pm: Definition and Mining of Quasi-Cyclical Patterns in Agroclimatic Data  
Geise K. S. Santos, Tercio A. Santos Filho, Marcos A. Batista, Sergio F. Da Silva  
IBiotec, Federal University of Goias, Catalao, Brazil
- 01:40 - 02:00pm: Using Google Glass and Machine Learning to Assist People with Memory Deficiencies  
Thomas Way, Adam Bemiller, Raghavender Mysari, Corinne Reimers  
Applied Computing Technology Laboratory, Department of Computing Sciences, Villanova University, Villanova, PA, USA
- 02:00 - 02:20pm: A Novel Biologically Plausible Supervised Learning Method for Spiking Neurons  
Lilin Guo, Zhenzhong Wang, Malek Adjouadi  
Center for Advanced Technology and Education, Department of ECE, Florida International University, Miami, Florida, USA
- 02:20 - 02:40pm: Interpreting the Geochemistry of Southern California Granitic Rocks Using Machine Learning  
Jocksan Rodriguez, German H. Alferez, Lance R. Pompe, and Benjamin L. Clausen  
Global Software Lab, Facultad de Ingenieria y Tecnologia, Universidad de Montemorelos, Mexico; Geoscience Research Institute and Department of Earth and Biological Sciences, Loma Linda University, Loma Linda, California, USA
- 02:40 - 03:00pm: SentAMaL- A Sentiment Analysis Machine Learning Stock Predictive Model  
S. A. Bogle, W. D. Potter  
University of Georgia, Georgia, USA

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-ICAI**  
**July 28, 2015 (Tuesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Predicting Correctness of "Google Translate"  
 Yulia Rossikova, J. Jenny Li, Patricia Morreale  
 Computer Science, Kean University, Union, New Jersey, USA
- 0. Plural Object Recognition Using Image Similarity and  
 Word-Concept Association  
 Hirokazu Watabe, Misako Imono, Eriko Yoshimura, and  
 Seiji Tsuchiya  
 Department of Intelligent Information Engineering and  
 Science, Doshisha University, Kyoto, Japan
- 0. Robust Stability Criteria for Takagi-Sugeno Fuzzy Systems  
 with Sampled-Data  
 H. Y. Jung, Yajuan Liu, S. M. Lee  
 Department of Information and Communication Engineering,  
 Yeungnam University, Gyungsan, Republic of Korea;  
 School of EE, Daegu University, Gyungsan, Republic of Korea
- 0. **Automating Academic Advising and Course Schedule Planning**  
 with a CLIPS Expert System  
 Edwin Rudolph, Adel Abunawass  
 Department of CS, University of West Georgia, Carrollton,  
 Georgia, USA
- 0. A Verification Technique for Self-Adaptive Software by  
 Using Model-Checking  
 Euijong Lee, Doo-Kwon Baik  
 Department of Computer and Radio Communications Engineering,  
 Korea University, Seoul, Republic of Korea
- 0. Learning-Based Adaptation Determination Method for Problem  
 Recognition of Self-Adaptive Software  
 Kwangsoo Seol, Doo-Kwon Baik  
 Department of Computer and Radio Communications Engineering,  
 Korea University, Seoul, Republic of Korea
- 0. Training Artificial Neural Networks to Learn a  
 Nondeterministic Game  
 Thomas E. Portegys  
 DigiPen Institute of Technology, Redmond, Washington, USA
- 0. ...

**SESSION 7-ICAI: ARTIFICIAL INTELLIGENCE: THEORY, ALGORITHMS AND**  
**APPLICATIONS + COGNITIVE SCIENCE + MODELING**  
**Co-Chairs: Dr. James A. Crowder\* and Dr. Tom Portegys\*\***  
**\*Raytheon Intelligence, Information, and Services, USA**  
**\*\*DigiPen Institute of Technology, USA**  
**July 28, 2015 (Tuesday); 03:40pm - 05:40pm**  
**(LOCATION: Ballroom 3)**

**03:40 - 04:00pm: Visual Intelligence: Toward Machine Understanding of**  
**Video Content**  
 Michael C. Burl, Russel L. Knight, Anthony C. Barrett  
 Jet Propulsion Laboratory,  
 California Institute of Technology, Pasadena,  
 California, USA

**04:00 - 04:20pm: Applications of Mixed Pairwise Comparisons**  
 Abeer Mirdad, Ryszard Janicki  
 Department of Computing and Software, McMaster University,  
 Hamilton, Ontario, Canada

- 04:20 - 04:40pm: Artificial Psychology Revisited: Constructs for Artificial Emotions  
James A. Crowder  
Raytheon Intelligence, Information and Services, Aurora, Colorado, USA
- 04:40 - 05:00pm: SAM and the Chinese Room - Cognitive Science and Artificial Intelligence  
Roseli Gimenes  
Universidade Paulista UNIP and Pontificia Universidade Catolia PUCSP, Brazil
- 05:00 - 05:20pm: High-Density Pattern-Of-Life Modeling  
Randolph M. Jones, J. T. Folsom-Kovarik, Pat McLaughlin, Rich Frederiksen  
Soar Technology, Ann Arbor, Michigan, USA;  
Scientific Systems Company, California, USA
- 05:20 - 05:40pm: The Evolutional Portfolio Optimization System (EPOS)  
N. Loukeris, Y. Boutalis, I. Eleftheriadis, A. Arampatzis, and S. Livanis  
University of Macedonia, Thessaloniki, Greece;  
Democritus University of Thrace, Xanthi, Greece
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the beginning of the program book for details)

**SESSION 8-ICAI: KNOWLEDGE DISCOVERY AND MACHINE LEARNING**

**Co-Chairs: Dr. Raymond A. Liuzzi**  
 Raymond Technologies, New York, USA;  
**Dr. Roger Dziegiel**  
 US Air Force Research Lab, AFRL/RIEA, USA  
**Dr. Todd Waskiewicz**  
 US Air Force Research Lab, AFRL/RIEA, USA  
**Dr. Peter M. LaMonica**  
 US Air Force Research Lab, AFRL/RIEBB, USA  
**July 29, 2015 (Wednesday); 08:00am - 10:20am**  
**(LOCATION: Ballroom 3)**

**08:00 - 08:20am: Opening Remarks (Introduction)**  
**Session Co-Chairs: Raymond A. Liuzzi, Roger Dziegiel,**  
**Todd Waskiewicz, Peter M. LaMonica**  
 Raymond Technologies, New York, USA; US Air Force Research  
 Lab, AFRL/RIEA, USA; AFRL/RIEBB, USA

08:20 - 08:40am: Cognitive RF Systems and EM Fratricide - Part III  
 Gerard T. Capraro  
 Capraro Technologies, Inc., Utica, New York, USA

08:40 - 09:00am: Predicting Locations of Interest with Biased Levy Flights  
 Aaron Wheeler  
 3-Sigma Research, Inc., Indialantic, Florida, USA

09:00 - 09:20am: Potentially Explaining Literature Based Discoveries in  
 Non-Medical Domains  
 M. Heidi McClure  
 Intelligent Software Solutions, Inc., Colorado Springs,  
 Colorado, USA

09:20 - 09:40am: Analyzing Foreign-Language Social-Media Reaction to  
 Televised Speeches: Lessons Learned  
 Matthew Michelson, Brian Amanatullah, Steve Minton,  
 Greg Barish, and Kane See  
 InferLink Corporation, El Segundo, California, USA

09:40 - 10:00am: Distributed Dynamic Graph Analytic Framework: Scalable  
 Layered Multi-Modal Network Analysis  
 Michael Margitus, William Tagliaferri Jr.  
 Information Fusion Group CUBRC Inc., Buffalo, New York, USA

10:00 - 10:20am: Determining Formal and Informal Organizational Hierarchy  
 Joanna M. Brown, Elizabeth A. Benagh, Connie G. Fournelle  
 Boston Fusion, Corp., Burlington, MA, USA

**10:20 - 10:40am: BREAK**

**SESSION 9-ICAI: ARTIFICIAL INTELLIGENCE: THEORY, ALGORITHMS AND  
 APPLICATIONS + COGNITIVE SCIENCE + MODELING**

**Co-Chairs: Dr. Dallas H. Snider\* and Dr. Nabil Nassif\*\***  
 \*University of West Florida, Pensacola, Florida, USA  
 \*\*North Carolina A&T State University, USA  
**July 29, 2015 (Wednesday); 10:40am - 12:20pm**  
**(LOCATION: Ballroom 3)**

10:40 - 11:00am: A Comparative Study of Metaheuristics Techniques for  
 Portfolio Selection Problem  
 Adebisi Ayodele A, Ayo Charles K.  
 Department of Computer and Information Sciences,  
 Covenant University, Ota, Ogun, Nigeria

- 11:00 - 11:20am: Turing Test Does Not Work in Theory But Only in Practice  
Pertti Saariluoma, Matthias Rauterberg  
Cognitive Science, University of Jyvaskyla, Finland;  
Designed Intelligence Group, Industrial Design (ID)  
Department, Eindhoven University of Technology,  
Eindhoven, The Netherlands
- 11:20 - 11:40am: An Intelligent System Framework for Measuring Attention  
Levels of Students in Online Course Environments  
Omer Useche, Eman El-Sheikh  
Department of Computer Science, University of West  
Florida, Pensacola, Florida, USA
- 11:40 - 12:00pm: Verification of the Position Estimation Method of the  
Smartphone by Using Visible Light Communication and its  
Application to Intelligent Lighting System  
Kohei Yamaguchi, Mitsunori Miki, Sho Kuwajima,  
Ryohei Jonan, and Hiroto Aida  
Graduate School of Science and Engineering, Doshisha  
University, Kyoto, Japan; Department of Science and  
Engineering, Doshisha University, Kyoto, Japan
- 12:00 - 12:20pm: Complex DNA and Good Genes for Snakes  
Md. Shahnawaz Khan, Walter D. Potter  
Institute of Artificial Intelligence, University of  
Georgia, Georgia, USA
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 10-ICAI-A: ---> (CONCURRENT SESSION WITH SESSION 11-ICAI)**  
**WORKSHOP: INTELLIGENT LINGUISTIC TECHNOLOGIES, ILINTEC'15 (I)**  
**Chair: Dr. Elena B. Kozerenko**  
**Institute of Informatics Problems, Federal Research Center,**  
**The Russian Academy of Sciences, Moscow, Russia**  
**July 29, 2015 (Wednesday); 01:20pm - 03:00pm**  
**(LOCATION: Ballroom 3)**
- 01:20 - 01:40pm: Parametrizing Verb Second and Clitic Second Languages  
Anton V. Zimmerling  
Institute for Modern Linguistic Research SMSUH Moscow,  
Institute of Linguistics, Russian Academy of Sciences, Russia
- 01:40 - 02:00pm: Method for Generating Subject Area Associative Portraits:  
Different Examples  
Irina V. Galina, Michael M. Charnine, Nikolai V. Somin,  
Vladimir G. Nikolaev, Yulia I. Morozova, Oleg V. Zolotarev  
Institute of Informatics Problems, Federal Research Center,  
Russian Academy of Sciences, Moscow, Russia;  
Russian New University, Moscow, Russia
- 02:00 - 02:20pm: Linguistic Approach to Scientometrics  
Nikolai V. Somin, Stanislav V. Klimenko, Vladimir V. Ezhela,  
and Michael M. Charnine  
Institute of Informatics Problems, Federal Research Center,  
Russian Academy of Sciences, Moscow, Russia
- 02:20 - 02:40pm: Business Intelligence Processing on the Base of Unstructured  
Information Analysis from Different Sources Including Mass  
Media and Internet  
Oleg V. Zolotarev, Michael M. Charnine, Andrei G. Matskevich,  
and Konstantin I. Kuznetsov  
Russian New University, Moscow, Russia; Institute of  
Informatics Problems, Federal Research Center, Russian  
Academy of Sciences, Moscow, Russia

02:40 - 03:00pm: RU-EVAL - New Initiative on NLP Tasks for Russian  
Svetlana Yu. Tolodova  
Higher School of Economics, Russia

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-ICAI**  
**July 29, 2015 (Wednesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Heat Exchanger Network (HENET) - A Parallel GA/SA Algorithm  
Gomez A., Toimil D., Rosillo R., Parreno J., and Garcia N. De la Fuente D.  
Escuela Politecnica de Ingenieria de Gijon, Spain
- 0. Judging Emotion From EEGs Using SVM and EEG Features  
Seiji Tsuchiya, Mayo Morimoto, Misako Imono, Hirokazu Watabe  
Department of Intelligent Information Engineering and Science, Faculty of Science and Engineering, Doshisha University, Kyoto, Japan
- 0. Application of the "FTOPSIS" Ranking Method to an Industrial Facility Location Problem  
Puente J., Fernandez I., Lozano J., Ponte B., Priore P., and De la Fuente D.  
Escuela Politecnica de Ingenieria de Gijon, Spain
- 0. An Intelligent Robotic System for Localization and Path Planning Using Depth First Search  
Andrea Doucette, Wei Lu  
Department of CS, Keene State College, USNH, Keene, New Hampshire, USA; Department of ECE, University of Victoria, Victoria, BC, Canada
- 0. Design and Implementation of a Simulator for the Operational Control of Creative 3D Assembly  
Sanguk Noh  
School of Computer Science and Information Engineering, The Catholic University of Korea, South Korea
- 0. ...

**SESSION 10-ICAI-B: ---> (CONCURRENT SESSION WITH SESSION 12-ICAI)**  
**WORKSHOP: INTELLIGENT LINGUISTIC TECHNOLOGIES, ILINTEC'15 (II)**  
**Chair: Dr. Elena B. Kozerenko**  
**Institute of Informatics Problems, Federal Research Center, The Russian Academy of Sciences, Moscow, Russia**  
**July 29, 2015 (Wednesday); 03:40pm - 05:40pm**  
**(LOCATION: Ballroom 3)**

03:40 - 04:00pm: Grammar Formalisms Testbed in the Integrator Linguistic Environment  
Elena B. Kozerenko, Konstantin I. Kuznetsov, and Yulia I. Morozova  
Institute of Informatics Problems, Federal Research Center, Russian Academy of Sciences, Moscow, Russia

04:00 - 04:20pm: Establishment of Cognitive Matches in Parallel Texts Corpora  
Elena B. Kozerenko  
Institute of Informatics Problems, Federal Research Center, Russian Academy of Sciences, Moscow

04:20 - 04:40pm: New Translation Directions Development Technologies in the MetaPhrase Machine Translation System  
Yuri P. Kalinin, Elena B. Kozerenko, Alexander A. Khoroshilov, Alexei A. Khoroshilov  
Institute of Informatics Problems, Federal Research Center, Russian Academy of Sciences, Moscow, Russia

04:40 - 05:00pm: Comparative Semantic Study of Russian and English Constructions with Light Verbs  
J. Ignatova, I. M. Kobozeva  
Department of Theoretical and Applied Linguistics, Moscow State Lomonosov University, Moscow, Russia

05:00 - 05:20pm: A General Language Framework for General Intelligence  
Sudharsan Iyengar, Theron Rabe  
Winona State University, Winona, MN, USA

05:20 - 05:40pm: Example Based Machine Translation Using Fuzzy Logic from English to Hindi  
Manish Rana, Mohammad Atique  
Sant Gadge Baba Amravati University, Amravati, India;  
P.G. Department of Computer Science, Sant Gadge Baba Amravati University, Amravati, India

**SESSION 11-ICAI: ---> (CONCURRENT SESSION WITH SESSION 10-ICAI-A)  
ROBOTICS AND APPLICATIONS + NEURAL NETWORKS  
Chair: Dr. Dana Vrajitoru\* and Sherrene Bogle\*\*  
Indiana University South Bend, Indiana, USA  
\*\*University of Georgia, Georgia, USA  
July 29, 2015 (Wednesday); 01:20pm - 03:00pm  
(LOCATION: Copper Room)**

01:20 - 01:40pm: Architecture for Multi-Robot Systems with Emergent Behavior  
Angel Gil, Jose Aguilar, Rafael Rivas, Eladio Dapena, and Kevin Hernandez  
Universidad del Tachira, Labio de Prototipos. Tachira, Venezuela; Universidad de los Andes, Cemisid, Lasdai. Merida, Venezuela; Investigador Prometeo, Universidad Tecnica Particular de Loja, Ecuador

01:40 - 02:00pm: REM-ART: Reward-Based Electromagnetic Adaptive Resonance Theory  
Gyeong-Moon Park, Yong-Ho Yoo, Jong-Hwan Kim  
School of EE, KAIST, Daejeon, Republic of Korea

02:00 - 02:20pm: Singer Module with Singing Synthesis for Humanoid Robots Applications  
Areli Rojo Hernandez, Hector Manuel Perez Meana, Takayuki Nagai, Enrique Escamilla Hernandez, and Juan Carlos Sanchez Garcia  
SEPI, National Polytechnical Institute Mexico D.F., Mexico; Department of Mechanical Engineering and Intelligent Systems, The University of Electro-Communications, Tokyo, Japan

02:20 - 02:40pm: Pathfinder: An Autonomous Mobile Robot Guided by Computer Vision  
Andre R. De Geus, Marcelo H. Stoppa, Sergio F. Da Silva  
Institute of Biotechnology, Federal University of Goias, Catalao, Goias, Brazil; Industrial Mathematics, Federal University of Goias, Catalao, Goias, Brazil

02:40 - 03:00pm: Implementation of Hardware Model for Spiking Neural Network  
Jungmin Choi, Jong Tae Kim  
Department of ECE, Sungkyunkwan University, South Korea

- SESSION 12-ICAI: ---> (CONCURRENT SESSION WITH SESSION 10-ICAI-B)  
 GENETIC ALGORITHMS + EVOLUTIONARY STRATEGIES & COMPUTATIONS  
 + OPTIMIZATION METHODS AND PATTERN RECOGNITION  
 Chair: Prof. Dr. Oscar Castillo  
 Tijuana Institute of Technology, Mexico  
 July 29, 2015 (Wednesday); 03:40pm - 05:40pm  
 (LOCATION: Ballroom 1)**
- 03:40 - 04:00pm: Text Optimization Using Interactive Evolutionary  
 Computation Techniques  
 Quetzali Madera, Mario Garcia, Oscar Castillo  
 Tijuana Institute of Technology, Tijuana, Mexico
- 04:00 - 04:20pm: Mining Simultaneously Emerging and Decaying Patterns  
 from Temporal Quantitative Data Using Genetic Algorithm  
 Anelisa P. Da Silva, Dalton M. Tavares, Marcos A. Batista,  
 and Sergio F. Da Silva  
 Institute of Biotechnology, Federal University of Goias,  
 Catalao-GO, Brazil
- 04:20 - 04:40pm: Improving the Performance of Particle Swarm Optimization for  
 Iris Recognition System Using Independent Component Analysis  
 Omaira N. Ahmad Al-Allaf  
 Department of Basic Sciences, Faculty of Sciences and  
 Information Technology, AL-Zaytoonah University of Jordan,  
 Amman, Jordan
- 04:40 - 05:00pm: Optimal Design Of SVC and Thyristor-Controlled Series  
 Compensation Controller in Power System  
 O. Abedinia, N. Amjadi, and H. A. Shayanfar  
 EE Department, Semnan University, Semnan, Iran;  
 South Tehran Branch, Islamic Azad University, Tehran, Iran
- 05:00 - 05:20pm: Reconfiguration of Radial Distribution Networks by Applying  
 a Multi-objective Technique  
 R. Tapia-Juarez, E. Espinosa-Juarez  
 Faculty of EE, Universidad Michoacana de San Nicolas de  
 Hidalgo, Morelia, Mexico
- 05:20 - 05:40pm: Initial Pattern Library Algorithm Based on Mean, Variance  
 Hongsong Li and Fulin Cheng  
 School of Information and Communication, Guilin University  
 of Electronic Technology, Guilin, P. R. China
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
 (Please see the lists at the begining of the program book for details)**



- SESSION 13-ICAI: ---> (CONCURRENT SESSION WITH SESSION 14-ICAI)**  
**ARTIFICIAL INTELLIGENCE: THEORY, ALGORITHMS AND APPLICATIONS + COGNITIVE SCIENCE + MODELING**  
**Chair: Dr. John N. Carbone\* and Dr. Timur Keskinturk\*\***  
**\*Raytheon Intelligence, Information and Services, Aurora, Colorado, USA**  
**\*\*School of Business, Istanbul University, Istanbul, Turkey**  
**July 30, 2015 (Thursday); 08:00am - 11:20am**  
**(LOCATION: Ballroom 3)**
- 08:00 - 08:20am: A Novel Metaheuristic Approach for Travelling Tourist Problem with Time Windows: A Single Day in Istanbul  
Timur Keskinturk, Eyup Cetin, Bahadir Fatih Yildirim  
University of Istanbul, Turkey
- 08:20 - 08:40am: Parametric and Nonparametric Mixture Models Based on Interval Regression  
Roberta A. De A. Fagundes, Bruno A. Pimentel, Renata M. C. R. De Souza, Francisco Jose A. Cysneiros  
Universidade de Pernambuco, Campus Gov. Miguel Arraes de Alencar, Polo Comercial, Brazil; Universidade Federal de Pernambuco, Centro de Informatica, Cidade Universitaria, Recife (PE), Brazil; Universidade Federal de Pernambuco, Depto. de Estatistica, Cidade Universitaria, Recife (PE), Brazil
- 08:40 - 09:00am: Conceptual Design of a Smart Classroom Based on Multiagent Systems  
Jose Aguilar, Prisila Valdiviezo, Jorge Cordero, and Manuel Sanchez  
Universidad de los Andes, CEMISID, Merida, Venezuela; Universidad Tecnica Particular de Loja, Loja, Ecuador; Universidad del Tachira, San Cristobal, Venezuela
- 09:00 - 09:20am: Approaches and Strategies to Extract Relevant Terms: How Are They Being Applied?  
J. Valaski, S. Reinehr, A. Malucelli  
PPGIa, Pontificia Universidade Catolica do Parana, Curitiba, Parana, Brazil
- 09:20 - 09:40am: Construction of the EEG Emotion Judgment System Using Concept Base of EEG Features  
Mayo Morimoto, Misako Imono, Seiji Tsuchiya, Hirokazu Watabe  
Department of Information and CS, Graduate School of Science and Engineering, Doshisha University, Kyoto, Japan; Department of Intelligent Information Engineering and Science, Faculty of Science and Engineering, Doshisha University, Kyoto, Japan; Knowledge Discovery Research Laboratories, NEC Corporation, Kanagawa, Japan
- 09:40 - 10:00am: FREE SLOT
- 10:00 - 10:20am: The DNA of Snakes  
Md. Shahnawaz Khan, Walter D. Potter  
Institute of Artificial Intelligence, University of Georgia, Georgia, USA
- 10:20 - 10:40am: BREAK**

- 10:40 - 11:00am: Reducing the Number of Lighting Control Attempts Before Illuminance Convergence in the Intelligent Lighting System Using the Layout Map of Lightings and Illuminance Sensors  
Ryohei Jonan, Mitsunori Miki, Shohei Matsushita, Daichi Terai, and Hiroto Aida  
Graduate School of Science and Engineering, Doshisha University, Kyoto, Japan; Department of Science and Engineering, Doshisha University, Kyoto, Japan
- 11:00 - 11:20am: Insects Detection in Maize by Endoscopic Video Analysis  
Andre R. De Geus, Marcos A. Batista, Tercio A. Santos Filho, and Sergio F. Da Silva  
PGMO - Modeling and Optimisation Program, Federal University of Goias, Brazil
- SESSION 14-ICAI: ---> (CONCURRENT SESSION WITH SESSION 13-ICAI)  
NEURAL NETWORKS + OTHER ARTIFICIAL INTELLIGENCE ALGORITHMS AND APPLICATIONS  
Co-Chairs: Dr. Omaira N. Ahmad Al-Allaf\* and Dr. Ayodele Adebisi\*\*  
\*AlZaytoonah University of Jordan, Amman, Jordan  
\*\*Covenant University, Nigeria  
July 30, 2015 (Thursday); 08:00am - 10:20am  
(LOCATION: Ballroom 1)**
- 08:00 - 08:20pm: Building Energy Modeling Using Non-Linear Auto Regression Neural Networks  
Nabil Nassif  
Department of Civil, Architectural, Environmental Engineering, North Carolina A&T State University, Greensboro, NC, USA
- 08:20 - 08:40am: FREE SLOT
- 08:40 - 09:00am: Spiking Neuron Model for Wavelet Encoding of Temporal Signals  
Zhenzhong Wang, Lilin Guo, Malek Adjouadi  
Center for Advanced Technology and Education, Florida International University, Miami, Florida, USA
- 09:00 - 09:20am: Main Principles of the General Theory of Neural Network with Internal Feedback  
D. Pescianschi  
Progress Inc., West Bloomfield, Michigan, USA
- 09:20 - 09:40am: An Application of Neural Networks to an Autonomous Car Driver  
Kholah Albelihi, Dana Vrajitoru  
Indiana University South Bend, South Bend, Indiana, USA
- 09:40 - 10:00am: Analog and Digital Modeling of a Scalable Neural Network  
D. Pescianschi, A. Boudichevskaia, B. Zlotin, V. Proseanic  
Progress Inc., West Bloomfield, Michigan, USA; Darmstadt University of Technology, Applied Plant Science, Darmstadt, Germany
- 10:00 - 10:20am: FREE SLOT
- 10:20 - 10:40am: BREAK**

**SESSION 15-ICAI: KNOWLEDGE BASED-SYSTEMS, REPRESENTATION, DISCOVERY + INFORMATION ENGINEERING METHODS AND RELATED ISSUES**  
**Co-Chairs: Prof. Ryotaro Kamimura\* and Dr. Christina Schweikert\*\***  
**\*Tokai University, Japan**  
**\*\*St. John's University, Queens, New York, USA**  
**July 30, 2015 (Thursday); 11:20am - 12:20pm**  
**(LOCATION: Ballroom 3)**

11:20 - 11:40am: Moving Towards an Adaptive Enterprise Intrusion Detection and Prevention System  
 Thomas Cole Amick, Lem R. Soles, Dallas H. Snider  
 Department of CS, University of West Florida, Pensacola, Florida, USA

11:40 - 12:00pm: Controlled Information Maximization for SOM Knowledge Induced Learning  
 Ryotaro Kamimura  
 IT Education Center and School of Science and Technology, Tokai University, Japan

12:00 - 12:20pm: The Role of Planning in Object Oriented Programming for Beginners  
 Christina Schweikert  
 Division of CS, Mathematics and Science, St. John's University, Queens, New York, USA

12:20 - 01:20pm: LUNCH (On Your Own)

**SESSION 16-ICAI: ---> (CONCURRENT SESSION WITH SESSION 17-ICAI)**  
**ARTIFICIAL INTELLIGENCE: THEORY, ALGORITHMS AND APPLICATIONS + COGNITIVE SCIENCE + MODELING**  
**Chair: Dr. Dallas H. Snider**  
**University of West Florida, Pensacola, Florida, USA**  
**July 30, 2015 (Thursday); 01:20pm - 05:40pm**  
**(LOCATION: Ballroom 3)**

01:20 - 01:40pm: Optimal PID Controller Design Using Krill Herd Algorithm for Frequency Stabilizing in an Isolated Wind-Diesel System  
 H. A. Shayanfar, H. Shayeghi, A. Younesi  
 Center of Excellence for Power System Automation and Operation, EE Department, Iran University of Science & Technology, Tehran, Iran; EE Department, University of Mohaghegh Ardabili, Ardabil, Iran

01:40 - 02:00pm: Analysis of the Allocation of Surge Arresters in Distribution Lines Against Induced Voltages by Indirect Lightning  
 M. A. Araujo, R. A. Flauzino, O. E. Batista, L. A. Moraes  
 Department of ECE, University of Sao Paulo (USP), Brazil

02:00 - 02:20pm: Verification of a Seat Occupancy/Vacancy Detection Method Using High-Resolution Infrared Sensors and the Application to the Intelligent Lighting System  
 Daichi Terai, Mitsunori Miki, Katsuya Ito, Kohei Yamaguchi, and Hiroto Aida  
 Graduate School of Science and Engineering, Doshisha University, Kyoto, Japan; Department of Science and Engineering, Doshisha University, Kyoto, Japan

02:20 - 02:40pm: Indoor Floor Map Construction with Video Survey  
 Tsz-Lung Wong, Albert Kai-Sun Wong, Ka-Sing Lin, and Chin-Tau Lea  
 ECE Department, The Hong Kong University of Science and Technology, Hong Kong

- 02:40 - 03:00pm: An Approach for the Emerging Ontology Alignment Based on the Bees Colonies  
Carlos Rangel, Jose Aguilar, Mariela Cerrada, and Junior Altamiranda  
Universidad de Los Andes, Venezuela
- 03:00 - 03:20pm: BREAK**
- 03:20 - 03:40pm: Brain Based Control of Wheelchair  
Rahib H. Abiyev, Nurullah Akkaya, Ersin Aytac, Irfan Gonsel, and Ahmet Cagman  
Applied Artificial Intelligence Research Centre, Near East University, Lefkosa, North Cyprus, Turkey
- 03:40 - 04:00pm: eJADE-S: Encrypted JADE-S for Securing Multi-Agent Applications  
Basit Ali, Umar Manzoor, Bassam Zafar  
Faculty of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia; Department of CS, National University of Computer and Emerging Sciences, Islamabad, Pakistan
- 04:00 - 04:20pm: Effect of Demand-Side Management in Electricity Price, Load Forecasting in Smart Grids  
H. Shayeghi, A. Ghasemi, H. A. Shayanfar  
Department of EE, University of Mohaghegh Ardabili, Ardabi, Iran; Department of EE, Faculty of Engineering, South Tehran Branch, Tehran, Iran
- 04:20 - 04:40pm: Maximization of the Resource Production in RTS Games Using Planning and Scheduling  
Thiago Franca Naves, Carlos Roberto Lopes  
Federal Univ. of Uberlandia, Faculty of Computing, Brazil
- 04:40 - 05:00pm: A Semantic Repository Approach to Improve Health Information Management  
Jose Gracia-Maldonado, Francisco P. Romero, Jose A. Olivas  
Escuela Superior de Inf., Paseo de la Universidad 4, Spain
- 05:00 - 05:20pm: A Decision Support System for Risk Analysis and Diagnosis of Hereditary Cancer  
Cesar Calatrava, Mauro J. Oruezabal, Jose A. Olivas, Francisco P. Romero, and Jesus Serrano-Guerrero  
Instituto de Tec. y Sistemas de Inf. (SMILe), Spain
- 05:20 - 05:40pm: Determining Humanoid Soccer Player Position Based on Goal Detection  
V. Lomas-Barrie, M. Pena-Cabrera, J. Duran-Ortega  
Instituto de Investigaciones en Matematicas Aplicadas y Sistemas, Universidad Nacional Autonoma de Mexico, Mexico

- SESSION 17-ICAI: ---> (CONCURRENT SESSION WITH SESSION 16-ICAI)  
 PATTERN RECOGNITION AND SUPPORTING ALGORITHMS + MACHINE  
 LEARNING & APPLICATIONS + LEARNING METHODS (SUPERVISED &  
 UNSUPERVISED) + DATA MINING  
 Chair: Prof. Ryotaro Kamimura  
 Tokai University, Japan  
 July 30, 2015 (Thursday); 01:20pm - 05:40pm  
 (LOCATION: Ballroom 1)**
- 01:20 - 01:40pm: An Interval Expectation Maximization Algorithm for  
 Outlier Detection in Linear Regression  
 Daniel B. Barreiros, Marco A. O. Domingues,  
 Renata M. C. R. Souza, Francisco J. A. Cysneiros  
 Centro de Informatica, Universidade Federal de Pernambuco,  
 Recife, PE, Brazil; CTADS, Instituto Federal de Pernambuco,  
 Recife, PE, Brazil; Departamento de Estatistica,  
 Universidade Federal de Pernambuco, Recife, PE, Brazil
- 01:40 - 02:00pm: Proactive Control of Traffic in Smart Cities  
 Benjamin Zabala, German H. Alferez  
 Global Software Lab, Facultad de Ingenieria y Tecnologia,  
 Universidad de Montemorelos, Montemorelos, Mexico
- 02:00 - 02:20pm: A Model, Appearance-Based Approach for Gait Recognition  
 Using SVM  
 Weder Cabral Mendes, Gustavo Teodoro Laureano,  
 Anderson Soares Da Silva, Clarimar Jose Coelho  
 Instituto de Informatica - INF, Universidade Federal de  
 Goias - UFG, Brazil; Departamento de Computacao - CMP,  
 Pontificia Universidade Catolica de Goias - PUCGO, Brazil
- 02:20 - 02:40pm: Supervised Potentiality Actualization Learning for  
 Improving Generalization Performance  
 Ryotaro Kamimura  
 Tokai University, Kitakaname, Hiratsuka, Kanagawa, Japan
- 02:40 - 03:00pm: A Cluster-Based Algorithm for Anomaly Detection in Time  
 Series Using Mahalanobis Distance  
 Erick Giovanni Sperandio Nascimento, Orivaldo De Lira Tavares,  
 Alberto Ferreira De Souza  
 Department of Informatics, Federal University of Espirito  
 Santo, Vitoria, Brazil
- 03:00 - 03:20pm: BREAK**
- 03:20 - 03:40pm: Determining Signal Source Integrity Using a Semi-Supervised  
 Pattern Classification System  
 Wendell Satney, Angela Carrington, Thea Scantlebury-Manning,  
 and Adrian Als  
 University of the West Indies, Cave Hill Campus, West Indies
- 03:40 - 04:00pm: Adaptive Wifi Positioning System with Unsupervised Map  
 Construction  
 Ka-Sing Lin, Albert Kai-Sun Wong, Tsz-Lung Wong, and  
 Chin-Tau Lea  
 ECE Department, The Hong Kong University of Science and  
 Technology, Hong Kong

- 04:00 - 04:20pm: A Reconfigurable System Learning for Data Classification using Parallel Processing  
Eduardo Marmo Moreira, Carlos Dias Maciel, Edmilson Marmo Moreira, Felipe Sanches Zanoni  
Federal Institute of Education, Science and Technology of Sao Paulo, Brazil; Department of EE, University of Sao Paulo, Brazil; Systems Engineering and Info. Tech. Inst., Federal University of Itajuba, Brazil; Department of EE, University of Sao Paulo, Brazil
- 04:20 - 04:40pm: Synchronous Emotion Pattern Recognition with a Virtual Training Environment  
Bruno Senzio-Savino, M. R. Alsharif, C. E. Gutierrez, and K. Yamashita  
Department of Information Engineering, University of the Ryukyus, Nishihara-shi, Okinawa, Japan; Graduate School of Engineering, Osaka Prefecture University, Sakai-shi, Osaka, Japan
- 04:40 - 05:00pm: User Interfaces for Representing Knowledge Stemming from Debates: Evaluating the Impact of Threading Models (Reviews) on Online Products  
Abdulrahman Alqahtani, Marius Silaghi  
Department of CS, Najran University, Najran, Saudi Arabia; Department of CS, Florida Institute of Technology, Florida, USA
- 05:00 - 05:20pm: FREE SLOT
- 05:20 - 05:40pm: Toward a Short Text Classification Framework Based on Background Knowledge Discovery  
Isak Taksu  
Baruch College, City University of New York, New York, USA

# IPCV'15 & MSV'15 CONFERENCE SCHEDULES

## The 2015 International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV'15)

+

## The 2015 International Conference on Modeling, Simulation and Visualization Methods (MSV'15)

*Because of partial topical and technical overlap between IPCV'15 & MSV'15 tracks, the schedule of MSV'15 is merged with the schedule of IPCV'15, resulting in a more comprehensive schedule. It is hoped that this would encourage the participants of the two conferences to explore cross-fertilization of ideas. There are also a number of other sessions (not listed as part of these two conferences) that are of potential interest to IPCV'15 and MSV'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ICAI'15, FECS'15, HIMS'15, and CSC'15 conferences discuss topics that are within the scope of IPCV'15 and MSV'15; these have been scheduled so that selected IPCV'15 and MSV'15 attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

July 27

- 08:30 - 08:45am:** CONGRESS OPENING REMARKS - July 27, Monday:  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am:** KEYNOTE LECTURE 1 - July 27, Monday:  
COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am:** KEYNOTE LECTURE 2 - July 27, Monday:  
LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:40 - 11:20am: KEYNOTE LECTURE 3 - July 27, Monday:  
ARTIFICIAL NEUROGENESIS  
Dr. James A. Crowder  
Chief Engineer, Raytheon Intelligence, Information, and Services;  
Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
Robotics and Artificial Intelligence Research Lab - Alexandria  
School of Innovation, Douglas County, Colorado, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 11:20a - 12:00p: KEYNOTE LECTURE 4 - July 27, Monday:  
The Infinity Computer and Numerical Computations with Infinities  
and Infinitesimals  
Prof. Yaroslav D. Sergeyev, Ph.D., D.Sc., D.H.C.  
Inventor of the Infinity Computer; Distinguished Professor, Head  
of Numerical Calculus Laboratory, University of Calabria, Rende,  
Italy; and Professor (part-time), Lobachevsky State University,  
Nizhni Novgorod, Russia  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:00 - 12:15pm: KEYNOTE LECTURE 5 - July 27, Monday:  
World of IoT and Connected Cars  
Dr. Akash Singh, PhD  
IBM Corporation, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:15 - 01:20pm: LUNCH (On Your Own)
- SESSION 1-MSV: MODELING, VISUALIZATION, VIRTUAL ENVIRONMENTS, APPLICATIONS,  
TOOLS AND TECHNIQUES  
Co-Chairs: Dr. Doug Buettner\* and Prof. Hans-Peter Bischof\*\*  
\*The Aerospace Corporation, USA  
\*\*Rochester Institute of Technology, USA  
July 27, 2015 (Monday); 01:20pm - 03:00pm  
(LOCATION: Ballroom 5)
- 01:20 - 01:40pm: Usability Study of Leap Motion Controller  
Alberto Scicali, Hans-Peter Bischof  
Computer Science Department, Rochester Institute for Technology,  
Rochester, New York, USA; Center for Computational Relativity and  
Gravitation, Rochester Institute for Technology, Rochester,  
New York, USA
- 01:40 - 02:00pm: FREE SLOT
- 02:00 - 02:20pm: Visual Analytics of Complex Networks: A Review from the Computational  
Perspective  
Marian Sorin Nistor, Stefan Wolfgang Pickl, Martin Zsifkovits  
Computer Science Department, Bundeswehr University Munich,  
Neubiberg, Germany



02:20 - 02:40pm: Nonlinear Second-Order Dynamical Systems on Riemannian Manifolds:  
Damped oscillators  
Simone Fiori, Andrea Bonci  
Dipartimento di Ingegneria dell'Informazione, Universita  
Politecnica delle Marche, Italy

02:40 - 03:00pm: Development of a Tool for Semi-automatic Creation of Virtual  
Environments  
Veli-Matti Nurkkala, Jonna Kalermo  
Kajaani University of Applied Sciences, Kajaani, Finland

03:00 - 03:20pm: **BREAK**

**SESSION 2-IPCV: RECOGNITION AND DETECTION METHODS: FACE, GESTURE, OBJECT, AND CHARACTER**

**Co-Chairs: Prof. Abdel Belaid\* and Prof. Hyo Jong Lee\*\***

**\*University of Lorraine-LORIA, France**

**\*\*Chonbuk National University, South Korea**

**July 27, 2015 (Monday); 03:20pm - 05:40pm**

**(LOCATION: Ballroom 5)**

03:20 - 03:40pm: Gesture Recognition with the Leap Motion Controller  
Robert McCartney, Jie Yuan, Hans-Peter Bischof  
Rochester Institute of Technology, Rochester, New York, USA

03:40 - 04:00pm: Spectral Collaborative Representation Based Classification by  
Circulants and its Application to Hand Gesture and Posture  
Recognition from Electromyography Signals  
Ali Boyali, Naohisa Hashimoto, Osamu Matsumoto  
National Institute of Advanced Industrial Science and Technology,  
Robot Innovation Research Center - Smart Mobility Research Team,  
Tsukuba, Japan

04:00 - 04:20pm: Image Optimization Under APC Constraint  
Tiefeng Cai, Feng Zhu, Yingming Hao, Xiaopeng Fan  
Shenyang Institute of Automation, Chinese Academy of Sciences,  
Beijing, P. R. China; University of Chinese Academy of Sciences,  
Beijing, P. R. China; Key Laboratory Opto-Electronic Information  
Processing, Chinese Academy of Sciences, Shenyang, P. R. China

04:20 - 04:40pm: Deep Learning of Principal Component for Car Model Recognition  
Yongbin Gao, Hyo Jong Lee  
Division of Computer Science and Engineering, Chonbuk National  
University, Jeonju, Korea; Center for Advanced Image and  
Information Technology, Chonbuk National University, Jeonju, Korea

04:40 - 05:00pm: Off-Line Handwritten Arabic Character Recognition: A Survey  
Maad Shatnawi  
Higher Colleges of Technology, Abu Dhabi, United Arab Emirates

05:00 - 05:20pm: Toward Face Detection in 3D Data  
Juan Paduano, Marcelo Romero  
Autonomous University of the State of Mexico, Mexico

05:20 - 05:40pm: **FREE SLOT**

05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the beginning of the program book for details)**

09:00 - 11:45pm: **CONFERENCE RECEPTION DINNER / SOCIAL**  
**July 27 - Monday; 09:00pm - 11:45pm**  
**(LOCATION: Ballrooms 1-5)**

- SESSION 3-IPCV: IMAGE SEGMENTATION METHODS + LOW-LEVEL IMAGE PROCESSING AND PREPROCESSING + MOTION AND VIDEO PROCESSING + FUZZY LOGIC**  
**Co-Chairs: Prof. Abdel Belaid\* and Prof. Pallavi N Halarnkar\*\***  
**\*University of Lorraine-LORIA, France**  
**\*\*NMIMS University, India**  
**July 28, 2015 (Tuesday); 08:00am - 10:20am**  
**(LOCATION: Ballroom 5)**
- 08:00 - 08:20am: Voice and Unvoiced Classification Using Fuzzy Logic  
 Mohammed Algabri, Mansour Alsulaiman, Ghulam Muhammad,  
 Mohammed Zakariah, Mohamed Bencherif, Zulfiqar Ali  
 CS Department, King Saud University, Riyadh, Saudi Arabia;  
 CE Department, King Saud University, Riyadh, Saudi Arabia
- 08:20 - 08:40am: VHR Image Segmentation Using Meanshift Clustering and  
 Spatial Neighborhood  
 J. Lopez, J. W. Branch  
 Department of Engineering, Universidad del Tolima, Ibague,  
 Tolima, Colombia; Department of Computing and Decisions Sciences,  
 Universidad Nacional de Colombia, Medellin, Antioquia, Colombia
- 08:40 - 09:00am: Document Image Segmentation by a Cascade of Pseudo-Word  
 Contextual Labelings  
 A. Belaid, A. M. Awal, S. Kebairi, V. Poulain D'Andecy  
 University of Lorraine, LORIA, Campus scientifique, France;  
 ITESOFT, Parc d'Andron, Le Sequoia, Aimargues, France
- 09:00 - 09:20am: Automatic Tracking of Coronal Mass Ejection Using Stereo  
 Red-Colored RGB Coronagraph Images  
 Vladimir Kirnosov, Lin-Ching Chang, Antti Pulkkinen  
 Electrical Engineering and Computer Science Department, The  
 Catholic University of America, Washington, D.C., USA;  
 NASA Goddard Space Flight Center, Greenbelt, Maryland, USA
- 09:20 - 09:40am: Low Level Processing for Digital Images  
 Indiará B. Vale, Gessica T. Marchiori, Dalton M. Tavares,  
 Tercio A. Santos Filho, Antonio C. De Oliveira Jr., Ivan S. Sendin,  
 Sergio F. Da Silva, Marcos A. Batista  
 IBiotec, Federal University of Goias, Catalao, Brazil;  
 FACOM, Federal University of Uberlandia, Uberlandia, MG, Brazil
- 09:40 - 10:00am: Low-Complexity and Low-Delay Structure from Motion Approach for  
 Advanced Driver Assist Systems  
 Juan Andrade, Charan D. Prakash, Farshad Akhbari, Lina Karam  
 Arizona State University, Tempe, Arizona, USA;  
 Intel Corporations, Chandler, Arizona, USA
- 10:00 - 10:20am: Human Tracking Using Delphi ESR-Vision Fusion in Complex  
 Environments  
 Teng Wang, Raj Aggarwal, Arun. K. Somani  
 Electrical and Computer Engineering, Iowa State University,  
 Ames, Iowa, USA
- 10:20 - 10:40am: BREAK**

**SESSION 4-MSV: DIFFUSION MODELS + SIMULATION, NUMERICAL METHODS, AND APPLICATIONS**

**Chair: Marian Sorin Nistor, Ph.D. Fellow**  
**Universität der Bundeswehr, Germany**  
**July 28, 2015 (Tuesday); 10:40am - 12:20pm**  
**(LOCATION: Ballroom 5)**

- 10:40 - 11:00am: Maximizing the Speed of Influence in Social Networks  
 Yubo Wang, Robert Chun  
 San Jose State University, San Jose, California, USA
- 11:00 - 11:20am: Computational Modelling and Simulation of Core-Periphery Terrorist Network  
 A. Kiruthiga, S. Bose  
 Department of Computer Science and Engineering, College of Engineering Guindy, Anna University, Chennai, Tamilnadu, India
- 11:20 - 11:40am: Tactical Data Link Simulator with Cognitive Anti-Jamming Capability  
 Sangho Choe, Euny Ko, Seongwoun Jeon  
 The Catholic Univesity of Korea, Bucheon, Republic of Korea
- 11:40 - 12:00pm: The Research on the Wear Laws of the Grinding Wheel in Robot Polishing Process  
 Yujiao Liu, Yongwei Zhang, Xitao Zheng  
 Shanghai Moses Marine Engineering Corp., Shanghai, P. R. China;  
 Zhejiang Ocean University, Zhejiang, P. R. China
- 12:00 - 12:20pm: Mathematical Model of the Manufacturing Industry of the Republic Of Kazakhstan  
 Seilkhan Boranbayev, Askar Nurbekov  
 L.N. Gumilyov Eurasian National University, Kazakhstan

**12:20 - 01:20pm: LUNCH (On Your Own)**

**SESSION 5-IPCV: SIGNAL AND IMAGING SCIENCE, COMPUTER VISION, AND APPLICATIONS + MEDICAL IMAGING + ASSISTIVE TECHNOLOGIES (I)**

**Chair: Dr. Raghuvveer Kanneganti**  
**Data Recognition Corporation, CTB, Monterey, California, USA**  
**July 28, 2015 (Tuesday); 01:20pm - 03:00pm**  
**(LOCATION: Ballroom 5)**

- 01:20 - 01:40pm: A Smart "Virtual Eye" Mobile Prototype System for the Visually Impaired  
 David Zhou, Yonggao Yang, Hanbing Yan  
 Department of Computer Science, Prairie View A&M University, Prairie View, Texas, USA; Cypress Ranch HS, Cypress, Texas, USA
- 01:40 - 02:00pm: Cable Footprint History: Spatio-Temporal Technique for Instrument Detection in Gastrointestinal Endoscopic Procedures  
 Chuanhai Zhang, Wallapak Tavanapong, Johnny Wong, Junghwan Oh, Piet C. De Groen  
 Department of CS, Iowa State University, Ames, Iowa, USA;  
 Department of CSE, University of North Texas, Denton, Texas, USA;  
 Mayo Clinic College of Medicine, Mayo Clinic Rochester, MN, USA
- 02:00 - 02:20pm: Book Reader Optimization Using a Time of Flight Imaging Sensor  
 L. Galarza, Z. Wang, M. Adjouadi  
 Center for Advanced Technology and Education, College of Engineering and Computing, Florida International University, Miami, Florida, USA

02:20 - 02:40pm: Design and Implementation of Smart Vehicular Camera for Real-Time Visual Metadata Extraction and Sharing  
Sanghyun Son, Beomjun Kim, Yeonsu Jung, Yunju Baek  
School of Computer Science and Engineering, Pusan National University, Busan, Republic of Korea

02:40 - 03:00pm: Qualitative Image-Based Localization in a Large Building  
Christopher Card, William Hoff  
Colorado School of Mines, Golden, Colorado, USA

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-IPCV-MSV  
July 28, 2015 (Tuesday)  
(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Simulation of Depth Controllers for Underwater Glider  
Joonhyuk Yoo, Min-Ji Kim, Moon G. Joo  
Daegu Uiversity, Daegu, South Korea;  
Pukyong National Univiersity, Busan, South Korea
- 0. Influence of Soil Resistivity on the Cathodic Protection Systems - A numerical approach  
S.L.D.C. Brasil, J.C.F. Telles, J.A.F. Santiago  
Federal University, Rio de Janeiro, RJ, Brazil;  
COPPE, Federal University of Rio de Janeiro, RJ, Brazil
- 0. The Home Context Verification Module of the Metaverse Assisted Living Support System  
Eunjin Ko, Jonghyun Jang  
Electronics and Telecommunications Research Institute (ETRI), Daejeon, South Korea
- 0. Numerical Investigation and Optimization of Modern Composites for the Protection Against Different Threats  
Arash Ramezani, Hendrik Rothe  
University of the Federal Armed Forces, Hamburg, Germany

**SESSION 6-IPCV: SIGNAL AND IMAGING SCIENCE, COMPUTER VISION, AND APPLICATIONS  
+ MEDICAL IMAGING + ASSISTIVE TECHNOLOGIES (II)  
Chair: Dr. Hong Zhang  
Armstrong State University, USA  
July 28, 2015 (Tuesday); 03:40pm - 05:40pm  
(LOCATION: Ballroom 5)**

03:40 - 04:00pm: Motion Corrected PET Signals Compressing  
Krzysztof Malczewski  
Department of Electronics and Telecommunications, Poznan University of Technology, Poznan, Poland

04:00 - 04:20pm: FREE SLOT

04:20 - 04:40pm: Automated Distortion Defect Inspection of Curved Car Mirrors Using Computer Vision  
Hong-Dar Lin, Kuan-Shen Hsieh  
Department of Industrial Engineering and Management, Chaoyang University of Technology, Taiwan

04:40 - 05:00pm: Sparsely Sampled MRI Image Reconstruction Algorithm Meets Lipschitz Bounds  
Krzysztof Malczewski  
Department of Electronics and Telecommunications, Poznan University of Technology, Poznan, Poland

05:00 - 05:20pm: Improving Spatial Saliency Using Affinity Model and Temporal Motion  
Manbae Kim  
Department of Computer and Communications Engineering, Kangwon National University, Chunchon, Republic of Korea

05:20 - 05:40pm: A Hybrid Indoor Localization System Based On Infra-Red Imaging and Odometry  
Suat Karakaya, Hasan Ocak, Gurkan Kucukyldyz, Orkun Kylync  
Kocaeli University, Turkey

**05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

- SESSION 7-IPCV: IMAGING SCIENCE ALGORITHMS FOR 2D AND 3D + KNOWLEDGE AND INFORMATION ENGINEERING AND EXTRACTION**  
**Co-Chairs: Prof. Pallavi N Halarnkar\* and Prof. Leonidas Deligiannidis\*\***  
 \*NMIMS University, India  
 \*\*Department of Computer Science and Networking,  
 Wentworth Institute of Technology, Boston, MA, USA  
 July 29, 2015 (Wednesday); 08:00am - 09:00am  
 (LOCATION: Ballroom 5)
- 08:00 - 08:20am: A Multi-Sensor Information Fusion Approach for Efficient 3D Reconstruction in Smart Phone  
 Apurbaa Mallik, Brojeshwar Bhowmick, Shahnawaz Alam  
 TCS Innovation Lab, Kolkata, India
- 08:20 - 08:40am: Global Optimal and Minimal Solutions to K-Means Cluster Analysis  
 Ruming Li, Xiu-Qing Li, Guixue Wang  
 Chongqing University, P. R. China;  
 Agriculture and Agri-Food, Canada
- 08:40 - 09:00am: Text Line Extraction Using Seam Carving  
 Christopher Stoll, Yingcai Xiao, Zhong-Hui Duan  
 Department of CS, The University of Akron, Akron, Ohio, USA
- SESSION 8-IPCV: SIGNAL AND IMAGING SCIENCE, COMPUTER VISION, AND APPLICATIONS + MEDICAL IMAGING + ASSISTIVE TECHNOLOGIES (III)**  
**Co-Chairs: Prof. Mohamad Adnan Al-Alaoui\* and Dr. Zafer Iscan\*\***  
 \*American University of Beirut, Lebanon  
 \*\*Centre for Cognition & Decision Making,  
 National Research University Higher School of Economics,  
 Moscow, Russian Federation  
 July 29, 2015 (Wednesday); 09:00am - 10:20am  
 (LOCATION: Ballroom 5)
- 09:00 - 09:20am: 3D Closed Loop Boundary Detection and 6 DOF Pose Estimation  
 Huu Hung Nguyen, Jane Shi, Sukhan Lee  
 School of Information and Communication Engineering, Sungkyunkwan University, Suwon, Korea;  
 General Motors Global R&D Center, Warren, Michigan, USA
- 09:20 - 09:40am: Accurate Liver Extraction Using a Local-Thickness-Based Graph-Cut Approach  
 Yasuhiro Kobayashi, Masanori Hariyama, Mitsugi Shimoda, Keiichi Kubota  
 National Institute of Technology, Oyama College, Japan;  
 Graduate School of Information Sciences, Tohoku University, Japan;  
 Second Department of Surgery, Dokkyo Medical University, Japan
- 09:40 - 10:00am: Detection of Aberrant Responses in OMR Documents  
 Raghuvveer Kanneganti, Lalit Gupta, Randy Fry  
 McGraw-Hill Education, CTB, Monterey, California, USA;  
 Southern Illinois University, Carbondale, Illinois, USA
- 10:00 - 10:20am: Automatic Estimation of Optimal Resected Liver Regions Considering Practical Surgical Conditions  
 Masanori Hariyama, Takeaki Suzuki, Keisuke Maeda, Mitsugi Shimoda, Keiichi Kubota  
 Graduate School of Information Sciences, Tohoku University, Japan;  
 Second Department of Surgery, Dokkyo Medical University, Japan
- 10:20 - 10:40am: BREAK**

- SESSION 9-MSV: MODELING AND SIMULATION + VIRTUAL REALITY**  
**Chair: Prof. Leonidas Deligiannidis**  
**Department of Computer Science and Networking,**  
**Wentworth Institute of Technology, Boston, MA, USA**  
**July 29, 2015 (Wednesday); 10:40am - 12:40pm**  
**(LOCATION: Ballroom 5)**
- 10:40 - 11:00am: Development of Educational Virtual Reality Modules for Underground Fuel Pipeline Failure  
Litao Shen, John Moreland, Chandramouli Viswanathan, Chenn Zhou  
Purdue University Calumet, Hammond, Indiana, USA
- 11:00 - 11:20am: Perspectives of Modeling in Metallurgical Production  
Konstantin Aksyonov, Eugene Bykov, Eugene Sysoletin,  
Olga Aksyonova, Natalia Goncharova  
Ural Federal University, Russia
- 11:20 - 11:40am: A Calibration Framework of a Mixed-Traffic Signal Optimization Model by Multi-Objective Evolutionary Approach  
Hsun-Jung Cho, Ming-Chorng Hwang, Chia-Chun Hsu  
National Chiao Tung University, Department of Transportation and Logistics Management, Hsinchu, Taiwan, R.O.C.
- 11:40 - 12:00pm: Virtual Wind Turbine for Augmented Reality Gearbox Inspection  
Jichao Wang, John Moreland, Yihong Liu, Hao Zhang, Huizhong Pan,  
Yuxuan Li, Gengwei Zhang, Mengmeng Du, Chenn Zhou  
Center for Innovation through Visualization and Simulation,  
Purdue University Calumet, Hammond, Indiana, USA
- 12:00 - 12:20pm: Analysis of Simulation Modeling Systems Illustrated with the Problem of Model Design for Technological Logistics  
Konstantin Aksyonov, Eugene Bykov, Olga Aksyonova,  
Natalia Goncharova, Alena Nevolina  
Ural Federal University, Russia
- 12:20 - 12:40pm: Modeling and Simulation of the Continuous Time Discrete Space Korteweg-De Vries Equation  
Louiza Sellami, Robert W. Newcomb  
ECE Department, US Naval Academy, Annapolis, Maryland, USA  
ECE, The University of Maryland, College Park, Maryland, USA
- 12:40 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 10-IPCV: SIXTH WORKSHOP ON SOFT COMPUTING IN IMAGE PROCESSING AND COMPUTER VISION, SCIPCV + FUZZY LOGIC**  
**Co-Chairs: Dr. Gerald Schaefer\*, Dr. Pawan Lingras\*\*, and**  
**Dr. Kouki Nagamune\*\*\***  
**\*Loughborough University, UK; \*\*St. Mary's University, Canada;**  
**\*\*\*University of Fukui, Japan**  
**July 29, 2015 (Wednesday); 01:20pm - 03:00pm**  
**(LOCATION: Ballroom 5)**
- 01:20 - 01:40pm: Automatic Coronary Artery Segmentation Based on Matched Filters and Estimation of Distribution Algorithms  
Ivan Cruz-Aceves, Arturo Hernandez-Aguirre, Ivvan Valdez-Pena  
Centro de Investigacion en Matematicas, A.C., Mexico
- 01:40 - 02:00pm: Summarization of Traffic Webcam Images Based on Weather, Traffic, and Lighting Attributes  
Mathew Kallada, Pawan Lingras, Jason Rhineland  
Saint Mary's University, Canada; Dalhousie University, Canada

02:00 - 02:20pm: A Threshold-Based Pattern Recognition to Filter Noise on an Embedded On-Cell Touch Panel  
Yen-Ting Chen, Tseng-Yi Chen, Heng-Yin Chen, Wei-Kuan Shih  
Department of CS, National Tsing Hua University, Hsinchu, Taiwan;  
Display Technology Center, Industrial Technology Research  
Institute, Hsinchu, Taiwan

02:20 - 02:40pm: Peripheral Detail-based Edge Preserving Image Interpolation Scheme  
Abhinash Kumar Jha, Vishwajeet Narwal, Rohit Patwa, Gerald Schaefer  
The LNM Institute of Information Technology, India;  
Loughborough University, UK

02:40 - 03:00pm: FREE SLOT

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-IPCV-MSV  
July 29, 2015 (Wednesday)  
(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Fusion Method of Visible and Infrared Images in Foggy Environment  
Jun-Woo Son, Hyuk-Ju Kwon, Tae-Eun Shim, Young-Choon Kim,  
Sang-Ho Ahn, Kyu-Ik Sohng  
School of Electronics Engineering, Kyungpook National University,  
Republic of Korea; Department of IT, Gyeongbuk Provincial College,  
Republic of Korea; Department of Information Communication & Security,  
Youngdong University, Republic of Korea; Department of Electronics  
Engineering, Inje University, Republic of Korea
- 0. An Analysis of Trihalomethanes Formation in Chlorinated Water by  
Using Ensembles of Regression Models  
Sami M. Halawani  
Faculty of Computing & IT, King Abdulaziz University, Saudi Arabia
- 0. Exponential Synchronization Of Lur'e Networks with Stochastic  
Disturbances via Impulsive Control  
J. H. Park, Ze Tang, S. M. Lee  
Department of EE, Yeungnam University, Kyongsan, Republic of Korea;  
School of EE, Daegu University, Kyongsan, Republic of Korea
- 0. Simulation-Based Multiobjective Evolutionary Approach for Traffic  
Signal Design  
Hsun-Jung Cho, You-Heng Huang, Ming-Chorng Hwang, Fan Yu  
Department of Transportation and Logistics Management, National  
Chiao Tung University, Hsinchu, Taiwan, R.O.C.
- 0. A Neural Network Approach of Seam Carved Region Identification  
Che-Wen Chang, Hui-Jun Cheng, Jyh-Da Wei  
Department of Computer Science and Information Engineering,  
Chang Gung University, Kweishan, Taoyuan, Taiwan
- 0. A Simple Approach for Abandoned Object Detection  
Fahian Shahriar Mahin, Md. Nazmul Islam, Gerald Schaefer,  
Md. Atiqur Rahman Ahad  
University of Dhaka, Bangladesh;  
Loughborough University, UK
- 0. ...



- SESSION 11-IPCV: RECOGNITION AND DETECTION METHODS: FACE, GESTURE, OBJECT, CHARACTER + IMAGING ALGORITHMS AND APPLICATIONS**  
**Co-Chairs: Dr. Lei Huang\***, **Prof. A. Tamimi\*\***, **Prof. Shivprasad Patil\*\*\***  
**\*Loyola Marymount University, Los Angeles, California, USA**  
**\*\*Al-Zaytoonah University, Jordan**  
**\*\*\*NBN Sinhgad School of Engineering, Pune, India**  
**July 29, 2015 (Wednesday); 03:40pm - 05:40pm**  
**(LOCATION: Ballroom 5)**
- 03:40 - 04:00pm: Designing a Lightweight Gesture Recognizer Based on the Kinect Version 2  
Leonidas Deligiannidis and Hamid R. Arabnia  
Wentworth Institute of Technology, Boston, MA, USA;  
University of Georgia, Georgia, USA
- 04:00 - 04:20pm: Foreign Object Detection (FOD) Using Multi-Class Classifier with Single Camera vs. Distance Map with Two Cameras  
Haoyuan Lin, Arun Somani, Raj Aggarwal  
Department of ECE, Iowa State University, Ames, Iowa, USA
- 04:20 - 04:40pm: A Pre-Sorting Method for Iron Pan Surface Inspection Based on Image Recognition  
Yujiao Liu, Yongwei Zhang, Xitao Zheng  
Shanghai Moses Marine Engineering Corp., Shanghai, P. R. China;  
Zhejiang Ocean University, Zhejiang, P. R. China
- 04:40 - 05:00pm: A Real-Time Traffic Sign Recognition System Based On Local Structure Features  
Kwangyong Lim, Hyeran Byun, Yeongwoo Choi  
Department of CS, Yonsei University, Republic of Korea;  
Department of CS, Sookmyung Women's University, Republic of Korea
- 05:00 - 05:20pm: Histo-Binary Combined Corner Enhancement (HBCCE) Improved Algorithm for Image Processing Corner Detection  
Abdeslam El Harraj, Naoufal Raissouni  
University of Abdelmalek Essaadi (Tetuan), Morocco
- 05:20 - 05:40pm: Encryption and Data Management Architecture to Protect Biometric Security  
Obaidul Malek, Rabita Alamgir  
Center for Biometrics and Biomedical Research, Virginia, USA;  
Howard University, Washington, DC, USA;  
University of Denver, Colorado, USA
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

- SESSION 12-IPCV: WAVELET TRANSFORMATION, ANALYSIS, APPLICATIONS + WATERMARKING METHODS, SECURITY, PRIVACY, AND ENCRYPTION METHODS + RECOGNITION AND TRACKING + EIGEN SPACES**  
**Co-Chairs: Prof. Yufang Bao\* and Dr. Lei Huang\*\***  
 \*Fayetteville State University, North Carolina, USA  
 \*\*Loyola Marymount University, Los Angeles, California, USA  
**July 30, 2015 (Thursday); 08:00am - 12:20pm**  
**(LOCATION: Ballroom 5)**
- 08:00 - 08:20am: Dissimilarity Representations Using Lp-Norms in Eigen Spaces  
 Sang-Woon Kim  
 Department of CE, Myongji University, Yongin, South Korea
- 08:20 - 08:40am: Application of Chaotic Maps for B-Spline Functions to Robust Image Cryptography  
 H. B. Kekre, Tanuja Sarode, Pallavi N. Halarankar  
 CE Department, TSEC, Mumbai University, Mumbai, India;  
 CE Department, MPSTME, NMIMS University, Mumbai, India
- 08:40 - 09:00am: An Image Encryption Algorithm With XOR and S-Box  
 Abdelfatah A. Tamimi, Ayman M. Abdalla  
 Department of CS, Al-Zaytoonah University of Jordan, Jordan
- 09:00 - 09:20am: Image Blur Detection with 2D Haar Wavelet Transform and its Effect on Skewed Barcode Scanning  
 Vladimir Kulyukin, Sarat Andhavarapu  
 Department of CS, Utah State University, Logan, Utah, USA
- 09:20 - 09:40am: Utilizing Discrete Wavelet Decomposition as an Effective Alternative to Watermarking  
 Chloe Martin, Mohamed Allali  
 School of Computational and Data Sciences, Chapman University, Orange, California, USA
- 09:40 - 10:00am: Text Skew Angle Detection in Vision-Based Scanning of Nutrition Labels  
 Tanwir Zaman, Vladimir Kulyukin  
 Department of CS, Utah State University, Logan, Utah, USA
- 10:00 - 10:20am: On Informed Coding and Host Rejection for Communication over Inkjet Print-And-Scan Channels  
 Joceli Mayer, Steven J. Simske  
 Digital Signal Processing Lab, LPDS, Department of EE Federal University of Santa Catarina - UFSC, Santa Catarina, Brazil;  
 Print and Content Delivery Lab, Hewlett-Packard Labs, USA
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Efficient Integration of Image Encryption with Compression Using Optimal Entropy Coder  
 Lei Huang  
 Department of EE & CS, Loyola Marymount University, Los Angeles, California, USA
- 11:00 - 11:20am: A Cryptographic, Discrete Cosine Transform and Frequency Domain Watermarking Approach for Securing Digital Images  
 Quist-Aphetsi Kester, Laurent Nana, Anca Christine Pascu, Sophie Gire, Jojo Moses Eghan, Nii Narku Quaynor  
 Lab-STICC (UMR CNRS 6285), European University of Brittany, University of Brest, France; Faculty of Informatics, Ghana Technology University College, Ghana; Department of CS & IT, University of Cape Coast, Ghana

- 11:20 - 11:40am: PiQ: Perceptual Image Quantizer for Wavelet Image Coders  
Jaime Moreno, Oswaldo Morales, Ricardo Tejeida  
Superior School of Mechanical and EE, National Polytechnic Institute of Mexico, Mexico City, Mexico; Signal, Image and Communications Department, University of Poitiers, France
- 11:40 - 12:00pm: Face Recognition and Using Ratios of Face Features in Gender Identification  
Yufang Bao, Yijun Yin, Lauren Musa  
Center of Defense and Homeland Security, Fayetteville State University, North Carolina, USA; Department of CS, Rutgers University, New Jersey, USA; Department of Mathematics and CS, Fayetteville State University, North Carolina, USA
- 12:00 - 12:20pm: Enhanced Video Target Tracking Using Kalman Filter Guided Covariance Descriptor with Gaussian Similarity Weighting  
Orhan Akbulut, Sarp Erturk  
Department of CE, Kocaeli University, Turkey;  
Department of Electronics & Telecommunications Engineering, Kocaeli University, Turkey
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 13-IPCV: MOTION SEGMENTATION, TRACKING ALGORITHMS, AND APPLICATIONS + VIDEO PROCESSING, ANALYSIS AND APPLICATIONS + PATTERN RECOGNITION AND FEATURE DETECTION, EXTRACTION AND CLASSIFICATION**  
**Chair: Prof. Mohamad Adnan Al-Alaoui**  
**American University of Beirut, Lebanon**  
**July 30, 2015 (Thursday); 01:20pm - 05:00pm**  
**(LOCATION: Ballroom 5)**
- 01:20 - 01:40pm: Motion Vector Based Abnormal Moving Vehicle Detection in Nighttime  
Cuong Nguyen Khac, Ju H. Park, Ho-Youl Jung  
Department of Information and Communication Engineering, Yeungnam University, South Korea; Department of EE, Yeungnam University, South Korea
- 01:40 - 02:00pm: Articulated Structure from Motion Through Ellipsoid Fitting  
Peter Boyi Zhang, Yeung Sam Hung  
Department of EEE, The University of Hong Kong, Hong Kong
- 02:00 - 02:20pm: Block Motion Estimation and Potential Games  
Manal K. Jalloul, Mohamad A. Al-Alaoui  
American University of Beirut, Beirut, Lebanon
- 02:20 - 02:40pm: Efficient Video Coding in Region Prediction in Online Video Surveillance  
Shivprasad Patil, Rajarshi Sanyal, Ramjee Prasad  
NBN Sinhgad School of Engineering, Pune, India;  
Aalborg University, Aalborg, Denmark;  
Belgacom International Carrier Services, Brussels, Belgium;  
Center for TeleInfrastruktur, Aalborg University, Denmark
- 02:40 - 03:00pm: Evaluation of Synthetically Generated Airborne Image Datasets Using Feature Detectors as Performance Metric  
Georg Hummel, Peter Stutz  
Institute of Flight Systems, Department of Aerospace Engineering, University of the Bundeswehr Munich, Germany
- 03:00 - 03:20pm: **BREAK**

- 03:20 - 03:40pm: Efficient Computation of Distribution Kernels and Distances  
Hongjun Su, Hong Zhang  
Department of CS & IT, Armstrong State University, Savannah,  
Georgia, USA
- 03:40 - 04:00pm: FREE SLOT
- 04:00 - 04:20pm: Plankton Image Classification Using Convolutional Neural Networks  
Hussein Ali, Abhishek Verma, Shawn Wang  
CS Department, Californian State University Fullerton, USA
- 04:20 - 04:40pm: FREE SLOT
- 04:40 - 05:00pm: Classification Using Angle and Radius of Feature Vector  
Zafer Iscan  
Centre for Cognition and Decision Making, National Research  
University Higher School of Economics, Russian Federation
- 05:00 - 05:20pm: FREE SLOT
- 05:20 - 05:40pm: FREE SLOT

# **DMIN'15 CONFERENCE SCHEDULE**

## **The 2015 International Conference on Data Mining**

*There are a number of other sessions (not listed as part of DMIN'15 in this schedule) that are of potential interest to DMIN'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, some sessions in IPCV'15, ICAI'15, FECS'15, BIOCOMP'15, ABDA'15, and IKE'15 conferences discuss topics that are within the scope of DMIN'15; these have been scheduled so that selected DMIN'15 groups/attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

- 08:30 - 08:45am: CONGRESS OPENING REMARKS - July 27, Monday:**  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am: KEYNOTE LECTURE 1 - July 27, Monday:**  
**COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA**  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor of Computer Science and of Computer and Information Technology (Courtesy); Co-Founder, Associate Director, and Charter Fellow of Center for Education and Research in Information Assurance and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am: KEYNOTE LECTURE 2 - July 27, Monday:**  
**LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST DO TO BE SUCCESSFUL**  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the World Economic Forum for his professional accomplishments, commitment to society and potential to contribute to shaping the future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS**  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 10:40 - 11:20am:** KEYNOTE LECTURE 3 - July 27, Monday:  
**ARTIFICIAL NEUROGENESIS**  
 Dr. James A. Crowder  
 Chief Engineer, Raytheon Intelligence, Information, and Services;  
 Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
 Robotics and Artificial Intelligence Research Lab - Alexandria  
 School of Innovation, Douglas County, Colorado, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 11:20a - 12:00p:** KEYNOTE LECTURE 4 - July 27, Monday:  
**The Infinity Computer and Numerical Computations with Infinities  
 and Infinitesimals**  
 Prof. Yaroslav D. Sergeyev, Ph.D., D.Sc., D.H.C.  
 Inventor of the Infinity Computer; Distinguished Professor, Head  
 of Numerical Calculus Laboratory, University of Calabria, Rende,  
 Italy; and Professor (part-time), Lobachevsky State University,  
 Nizhni Novgorod, Russia  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:00 - 12:15pm:** KEYNOTE LECTURE 5 - July 27, Monday:  
**World of IoT and Connected Cars**  
 Dr. Akash Singh, PhD  
 IBM Corporation, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:15 - 01:20pm:** LUNCH (On Your Own)
- 01:20 - 01:40pm:** DMIN OPENING REMARKS  
 Dr. Robert Stahlbock, Germany
- SESSION 1-DMIN:** REAL-WORLD DATA MINING APPLICATIONS, CHALLENGES, AND  
 PERSPECTIVES I  
 Co-Chairs: Dr. Mahmoud Abou-Nasr, Dr. Robert Stahlbock, Dr. G. M. Weiss  
 July 27, 2015 (Monday); 01:40pm - 03:00pm  
 (LOCATION: Ballroom 1)
- 01:40 - 02:00pm:** A Hierarchical Clustering Approach to Analyze Similarities  
 Between Sea Surface Temperature Patterns  
 Marc Boumedine  
 University Virgin Islands, Virgin Islands
- 02:00 - 02:20pm:** Financial Footnote Analysis: Developing a Text Mining Approach  
 Maryam Heidari, Carsten Felden  
 TU Bergakademie Freiberg, Germany
- 02:20 - 02:40pm:** Selecting a Classification Ensemble and Detecting Process Drift  
 in an Evolving Data Stream  
 Alejandro Heredia-Langner, Luke R. Rodriguez, Andy Lin,  
 and Jennifer B. Webster  
 Pacific Northwest National Laboratory, Washington, USA
- 02:40 - 03:00pm:** Product's Quality Prediction with Respect to Equipments Data  
 Mariam Melhem, Bouchra Ananou, Mohand Djeziri,  
 Mustapha Ouladsine, and Jacques Pinaton  
 Laboratoire Sciences de l'Information et des Systemes (LSIS),  
 France
- 03:00 - 03:20pm:** BREAK

- 03:20 - 04:00pm:** INVITED TALK: Data Mining for RUL Estimation of Complex Assets  
**Prof. Diego Galar**  
 Division of Operation and Maintenance Engineering,  
 Lulea University of Technology, Lulea, Sweden  
 (LOCATION: Ballroom 1)
- SESSION 2-DMIN:** REAL-WORLD DATA MINING APPLICATIONS, CHALLENGES, AND PERSPECTIVES II  
**Co-Chairs: Dr. Mahmoud Abou-Nasr, Dr. Robert Stahlbock, Dr. G. M. Weiss**  
**July 27, 2015 (Monday); 04:00pm - 06:00pm**  
 (LOCATION: Ballroom 1)
- 04:00 - 04:20pm:** eMaintenance Platform for Performing Data Fusion Mutation on Machine Tools  
 Victor Simon, Diego Galar  
 Lulea University of Technology, Sweden
- 04:20 - 04:40pm:** The Need for Big Data Collection and Analyses to Support the Development of an Advanced Maintenance  
 David Baglee  
 University of Sunderland, UK
- 04:40 - 05:00pm:** Reliability Evaluation of Underground Power Cables with Probabilistic Models  
 Hassan Mashad Nemati, Anita Sant'Anna, Nowaczyk Sławomir  
 Halmstad University, Sweden
- 05:00 - 05:20pm:** Use of Social Networks Sites (SNSs) as Collaborative Learning Technique: Survey Analysis and Mining  
 Nevine Labib, Ahmed Sabry, Rasha H. Mostafa, Edward W. Morcos  
 Egypt
- 05:20 - 05:40pm:** Wavelet-Coupled Machine Learning Methods for Drought Forecast Utilizing Hybrid Meteorological and Re  
 Tan Robin  
 Portland State University, Portland, USA
- 05:40 - 06:00pm:** Raise Regression: Selection of the Raise Parameter  
 Catalina Garcia, Jose Garcia Perez, Roman Salmeron, and Maria del Mar Lopez Martin  
 Granada University, Spain
- 06:00 - 09:00pm:** TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
 (Please see the lists at the beginning of the program book for details)
- 09:00 - 11:45pm:** CONFERENCE RECEPTION DINNER / SOCIAL  
 July 27 - Monday; 09:00pm - 11:45pm  
 (LOCATION: Ballrooms 1-5)

**08:40a - 03:00p:** During this period, DMIN'15 attendees are encouraged to participate in sessions belonging to IPCV'15, ICAI'15, FECS'15, BIOCOMP'15, ABDA'15, or IKE'15 conferences. These sessions discuss topics that significantly overlap the scope of DMIN'15.

**03:00 - 03:40pm:** POSTER/DISCUSSION SESSION A-DMIN  
 July 28, 2015 (Tuesday)  
 (LOCATION: Hallways of Ballrooms 1-5)

- 0. Interactive Data Quality System - An Approach for Min(d)ing the Quality of Data  
 Nadia El Bekri  
 Fraunhofer IOSB, Germany
- 0. Comparison Between RF Algorithm and Decision Tree for Classification of Power Quality Disturbances  
 Borges Fabbio, Lucas Moraes  
 Universidade de Sao Paulo, Brazil
- 0. ...

**SESSION 3-DMIN:** REGRESSION/CLASSIFICATION, CLUSTERING, ASSOCIATION  
 Co-Chairs: Dr. Robert Stahlbock and Dr. Gary M. Weiss  
 July 28, 2015 (Tuesday); 03:40pm - 05:40pm  
 (LOCATION: Ballroom 1)

**03:40 - 04:00pm:** Automatic Detection of Small Groups of Persons, Influential Members, Relations and Hierarchy in Written Conversations using Fuzzy Logic  
 F. Pope Iii, Rouzbeh A. Shirvani, Mugizi Robert Rwebangira, Mohamed Chouikha, Ayo Taylor, Andres Ramirez Alarcon  
 ECE, Howard University, Washington, D.C., USA;  
 Systems and CS, Howard University, Washington, D.C., USA

**04:00 - 04:20pm:** A Machine Learning Approach for Business Intelligence Analysis Using Commercial Shipping Transaction Data  
 Lisa M. Bramer, Samrat Chatterjee, Aimee Holmes, Sean Robinson, Steven Bradley, Bobbie-Jo Webb-Robertson  
 Pacific Northwest National Laboratory, USA

**04:20 - 04:40pm:** Identifying Causes of Neonatal Mortality from Observational Data: A Bayesian Network Approach  
 Kevin Wilson  
 RTI International, USA

**04:40 - 05:00pm:** Learning Decision Trees from Histogram Data  
 Ram Gurung, Tony Lindgren, Henrik Bostrom  
 Stockholm University, Sweden

**05:00 - 05:20pm:** Modelling Ground-Level Ozone Concentration Using Ensemble Learning Algorithms  
 Eman Al Abri, Eran A. Edirisinghe, Amin Nawahda  
 Loughborough University, UK

**05:20 - 05:40pm:** Supervised Machine Learning Approach for Gender Disambiguation from Unstructured Text Documents  
 Amit Choudhary, Praveen Kumar, and Sridhar Jeyaraman  
 Annik Technology Services Pvt. Ltd., India

**05:40 - 09:00pm:** TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
 (Please see the lists at the begining of the program book for details)



- 08:20 - 09:20am: INVITED TALK: Data Science: The Road Ahead**  
**Dr. Peter Geczy**  
**National Institute of Advanced Industrial Science and Technology (AIST), Japan**  
**(LOCATION: Ballroom 1)**
- SESSION 4-DMIN: SEGMENTATION, CLUSTERING, ASSOCIATION + WEB, TEXT, MULTIMEDIA MINING + SOFTWARE**  
**Co-Chairs: Dr. Robert Stahlbock, Dr. P. Geczy, Dr. G. M. Weiss**  
**July 29, 2015 (Wednesday); 09:20am - 12:20pm**  
**(LOCATION: Ballroom 1)**
- 09:20 - 09:40am: AHC Basedword Clustering Considering Feature Similarity**  
**Taeho Jo**  
**Department of Computer and Information Engineering,**  
**Inha University, South Korea**
- 09:40 - 10:00am: How Can We Measure the Similarity Between Resumes of Selected Candidates for a Job?**  
**Luis Adrian Cabrera-Diego, Barthelemy Durette,**  
**Juan-Manuel Torres-Moreno, and Marc El-Beze**  
**Universite d'Avignon et des Pays de Vaucluse Adoc**  
**Talent Management, France**
- 10:00 - 10:20am: Extraction of Relevant Entities in Textual Documents: Modeling Intelligence Maps**  
**Isnard Martins, Edgard Thomas Martins**  
**Universidade Estacio de Sa, Brazil**
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Graph-based Link Prediction in Cross-session Task Identification**  
**Chao Xu, Mingzhu Zhu, Yi-fang Wu**  
**New Jersey Institute of Technology, New Jersey, USA**
- 11:00 - 11:20am: A Language-Based and Process-Oriented Approach for Supporting the Knowledge Discovery Processes**  
**Hesham Mansour, Daniel Duchamp, Carl-Arndt Krapp**  
**Stevens Institute of Technology, New Jersey, USA**
- 11:20 - 11:40am: Learning Temporal Regression Models and MapReduce Voronoi Tessellation for Job Offers Recommendation**  
**Sidahmed Benabderrahmane**  
**Paris 8 University IUT De Montreuil, France**
- 11:40 - 12:00pm: Scalable Mining of Frequent and Significant Sequential Patterns**  
**Zsolt Kardkovacs, Gabor Kovacs**  
**UI Research, Hungary**
- 12:00 - 12:20pm: Using Text Mining of Amazon Reviews to Explore User-defined Product Highlights and Issues**  
**Lleyana Jack**  
**Intel, USA**
- 12:20 - 01:20pm: LUNCH (On Your Own)**

**July 29**

**01:20 - 05:40pm:** During this period, DMIN'15 attendees are encouraged to participate in sessions belonging to IPCV'15, ICAI'15, FECS'15, BIOCOMP'15, ABDA'15, or IKE'15 conferences. These sessions discuss topics that significantly overlap the scope of DMIN'15.

**05:40 - 09:00pm:** TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
(Please see the lists at the beginning of the program book for details)

**July 30**

**08:20a - 05:00p:** During this period, DMIN'15 attendees are encouraged to participate in sessions belonging to IPCV'15, ICAI'15, FECS'15, BIOCOMP'15, ABDA'15, or IKE'15 conferences. These sessions discuss topics that significantly overlap the scope of DMIN'15.

# **ABDA'15, EEE'15, GCA'15, ESA'15, ICOMP'15** **CONFERENCE SCHEDULE**

**The 2015 International Conference on Advances in Big Data Analytics (ABDA'15)**

+

**The 2015 International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government (EEE'15)**

+

**The 2015 International Conference on Grid & Cloud Computing and Applications (GCA'15)**

+

**The 2015 International Conference on Embedded Systems and Applications (ESA'15)**

+

**The 2015 International Conference on Internet Computing and Big Data (ICOMP'15)**

*Because of partial topical and technical overlaps between ABDA'15, EEE'15, GCA'15, ESA'15, and ICOMP'15, the schedule of these tracks are merged into one comprehensive 4-day schedule. It is hoped that this would encourage the participants of these conferences to explore cross-fertilization of ideas. There are also a number of other sessions (not listed as part of these conferences) that are of potential interest to ABDA'15, EEE'15, GCA'15, ESA'15, and ICOMP'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in PDPTA'15, DMIN'15, ICAI'15, FECS'15, BIOCAMP'15, MSV'15, and IKE'15 conferences discuss topics that are within the scope of ABDA'15, EEE'15, GCA'15, ESA'15, and ICOMP'15; these have been scheduled so that selected ABDA'15, EEE'15, GCA'15, ESA'15, and ICOMP'15 attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

**08:30 - 08:45am: CONGRESS OPENING REMARKS - July 27, Monday:**  
**Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)**  
**University of Georgia, Georgia, USA;**  
**Editor-in-Chief, The Journal of Supercomputing (Springer)**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**

- 08:45 - 09:35am: KEYNOTE LECTURE 1 - July 27, Monday:  
 COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
 Prof. Victor Raskin  
 Distinguished Professor of English and Linguistics and Professor  
 of Computer Science and of Computer and Information Technology  
 (Courtesy); Co-Founder, Associate Director, and Charter Fellow  
 of Center for Education and Research in Information Assurance  
 and Security (CERIAS);  
 Purdue University, Indiana, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am: KEYNOTE LECTURE 2 - July 27, Monday:  
 LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
 WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
 DO TO BE SUCCESSFUL  
 Dr. Sandeep Chatterjee  
 EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
 World Economic Forum for his professional accomplishments,  
 commitment to society and potential to contribute to shaping the  
 future of the world.  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE  
 AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
 Ms. Mary E. James  
 Senior Editor Applied Sciences, Publisher: Springer  
 &  
 Mr. Todd Green  
 Publisher of Computer Science and Digital Security, Elsevier  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:40 - 11:20am: KEYNOTE LECTURE 3 - July 27, Monday:  
 ARTIFICIAL NEUROGENESIS  
 Dr. James A. Crowder  
 Chief Engineer, Raytheon Intelligence, Information, and Services;  
 Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
 Robotics and Artificial Intelligence Research Lab - Alexandria  
 School of Innovation, Douglas County, Colorado, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 11:20a - 12:00p: KEYNOTE LECTURE 4 - July 27, Monday:  
 The Infinity Computer and Numerical Computations with Infinities  
 and Infinitesimals  
 Prof. Yaroslav D. Sergeyev, Ph.D., D.Sc., D.H.C.  
 Inventor of the Infinity Computer; Distinguished Professor, Head  
 of Numerical Calculus Laboratory, University of Calabria, Rende,  
 Italy; and Professor (part-time), Lobachevsky State University,  
 Nizhni Novgorod, Russia  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:00 - 12:15pm: KEYNOTE LECTURE 5 - July 27, Monday:  
 World of IoT and Connected Cars  
 Dr. Akash Singh, PhD  
 IBM Corporation, USA  
 (LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:15 - 01:20pm: LUNCH (On Your Own)

- SESSION 1-ABDA: APPLICATIONS OF BIG DATA + SOFTWARE TOOLS AND INFRASTRUCTURES**  
**Chair: Prof. Hussain Al-Asaad**  
**University of California at Davis, USA**  
**July 27, 2015 (Monday); 01:20pm - 03:00pm**  
**(LOCATION: Silver Room)**
- 01:20 - 01:40pm: Who Influences Whom: Content-Based Approach for Predicting Influential Users In Social Networks  
 Khaled Almgren, Jeongkyu Lee  
 Department of CSE, University of Bridgeport, Bridgeport, CT, USA
- 01:40 - 02:00pm: Big Data Analytics on Acquisition Issues of Public Healthcare  
 Haibo Wang, Chenhui Zhou, Wei Wang, Yaquan Xu  
 Texas A&M International University, Laredo, Texas, USA;  
 Georgia Gwinnett College, Lawrenceville, Georgia, USA
- 02:00 - 02:20pm: A Research of Rule Discovery Method for Process Object Based on Large Scale Data  
 Tao Du, Shouning Qu, Yushui Geng, Xingang Wang  
 School of Information Science and Engineering, University of Jinan, Jinan, P. R. China; School of Information, Qilu University of Technology, Jinan, P. R. China
- 02:20 - 02:40pm: Improving Backup and Recovery of Modern Data Centers  
 Zhiwei Zhao, Haolun Yan, Hussain Al-Asaad  
 University of California-Davis, Davis, California, USA
- 02:40 - 03:00pm: On Applying Big Data and Cloud Computing for Quality Improvement in Higher Education  
 Shakeel Ahmed, Hemant Kumar Mehta  
 King Faisal University, Hofuf, Saudi Arabia
- 03:00 - 03:20pm: BREAK**
- SESSION 2-ESA: EMBEDDED SYSTEMS AND NOVEL APPLICATION + MICROCONTROLLERS + HPC + VIRTUAL MACHINES + FAULT TOLERANT DEVICES**  
**Co-Chairs: Prof. Hussain Al-Asaad\* and Dr. Bassam R. Shaer\*\***  
**\*University of California at Davis, USA**  
**\*\*University of West Florida, Florida, USA**  
**July 27, 2015 (Monday); 03:20pm - 05:20pm**  
**(LOCATION: Silver Room)**
- 03:20 - 03:40pm: FPGA Design and Implementation of Demodulator/Decoder Module for eCall In-Vehicle System  
 Majeed Nader, John Liu  
 ECE, Wayne State University, Detroit, Michigan, USA
- 03:40 - 04:00pm: GUI Implementation of a Vegetable Dryer Using a Cortex-M4 Processor  
 Wongi Kim, Byoungchul Ahn, Yeonbo Kim  
 Yeungnam University and Daegu University, South Korea
- 04:00 - 04:20pm: Prototype of Light-Weight Hypervisor for ARM Server Virtualization  
 Young-Woo Jung, Song-Woo Sok, Ganis Zulfa Santoso, Jung-Sub Shin, Hag-Young Kim  
 Electronics and Telecommunications Research Institute (ETRI), Daejeon, Republic of Korea

- 04:20 - 04:40pm: Design and Implementation of a Microcontroller-Based Digital Filter  
Chiagunye Tochukwu, Udeani Henrietta, Chineke Hyacinth Amaechi,  
Ihekweaba Chukwugoziem  
Okpara University of Agriculture, Nigeria
- 04:40 - 05:00pm: UDP/IP Protocol Stack with PCIe Interface On FPGA  
Burak Batmaz, Atakan Dogan  
Anadolu University, EEE, Eskisehir, Turkey
- 05:00 - 05:20pm: Microcontroller Based Embedded System for Vehicle Plate Number  
Authentication and Verification Using Radio Frequency  
Nweke Chisom B., Ihekweaba Chukwugoziem, and  
Ihekweaba Ogechikanma Linda  
Okpara University of Agriculture, Nigeria
- 05:20 - 05:40pm: The Simulation and Modeling of Active Filters  
Chiagunye Tochukwu, Okereke Eze Aru, Ihekweaba Chukwugoziem  
Department of Computer Engineering, Michael Okpara University  
of Agriculture, Abia State, Nigeria
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the beginning of the program book for details)
- 09:00 - 11:45pm: **CONFERENCE RECEPTION DINNER / SOCIAL**  
July 27 - Monday; 09:00pm - 11:45pm  
(LOCATION: Ballrooms 1-5)

08:00 - 08:40am: FREE SLOTS

**SESSION 3-GCA: CLOUD COMPUTING, CLOUD SERVICES AND SECURITY + MOBILE COMPUTING**

**Chair: Dr. John M. Medellin**

**\*Retired IBM Executive & PricewaterhouseCoopers Partner;  
Visiting Assis. Prof. of Information Systems, Graduate School,  
Univ. of Mary Hardin-Baylor (affiliated with Baylor Univ.  
System), Texas, USA**

**July 28, 2015 (Tuesday); 08:40am - 10:20am  
(LOCATION: Silver Room)**

08:40 - 09:00am: Scheduling of Composite Services in Multi-Cloud Environment  
Faisal Ahmad, Anirban Sarkar

Department of Computer Applications, National Institute of  
Technology, Durgapur, Durgapur, WB, India;  
Tata Consultancy Services Ltd., Newark, New Jersey, USA

09:00 - 09:20am: Providing Lifetime Service-Level-Agreements for Cloud  
Spot Instances

Alexander Pucher, Rich Wolski, Chandra Krintz  
University of California, Santa Barbara, California, USA

09:20 - 09:40am: Enabling Migration Decisions through Policy Services in SOA  
Mobile Cloud Computing Systems

John Medellin, Osama Barack, Qiao Zhang, Liguang Huang  
Department of CSE, Southern Methodist University, Dallas,  
Texas, USA

09:40 - 10:00am: New Protection of Kernel-Level Digital Rights Management in  
Cloud-based Consumer Electronics Environments

Woei-Jiunn Tsaur, Lo-Yao Yeh  
Department of Info. Management, Da-Yeh University, Changhua,  
Taiwan; Network and Information Security Division, National  
Center for High-Performance Computing, Taichung, Taiwan

10:00 - 10:20am: Distributed XML With Tag Shuffling in Cloud Computing

Behrooz Seyed-Abbassi, Jamie Gordon  
School of Computing, University of North Florida,  
Jacksonville, Florida, USA

10:20 - 10:40am: BREAK

**SESSION 4-GCA: SCALABLE COMPUTING + DATA CENTERS + WEB-BASED SYSTEMS AND APPLICATIONS**

**Chair: Dr. John M. Medellin**

**Retired IBM Executive & PricewaterhouseCoopers Partner;  
Visiting Assis. Prof. of Information Systems, Graduate School,  
Univ. of Mary Hardin-Baylor (affiliated with Baylor Univ.  
System), Texas, USA**

**July 28, 2015 (Tuesday); 10:40am - 12:00pm  
(LOCATION: Silver Room)**

10:40 - 11:00am: High Throughput Data Replication Model with Asynchronous  
Event Tracking Method

Ki Sung Jin, Young Kyun Kim  
Electronics and Telecommunications Research Institute  
(ETRI), Daejeon, Korea

- 11:00 - 11:20am: Analysis of Network Segmentation Techniques in Cloud Data Centers  
Ramaswamy Chandramouli  
Computer Security Division, Information Technology Laboratory,  
National Institute of Standards & Technology, Maryland, USA
- 11:20 - 11:40am: A Dynamic and Efficient Coalition Formation Game in Cloud Federation for Multimedia Applications  
Mohammad Mehedi Hassan, Abdulhameed Alelaiwi, Atif Alamri  
College of CIS, King Saud University, Riyadh, Saudi Arabia
- 11:40 - 12:00pm: Web-Based Data Management System Design and Development for the Multi-site Renewable Energy Research and Education Partnership  
B. Asiabanpour, S. Aslan, Z. H. Salamy, Almusaid, J. Warren  
Ingram School of Engineering, Texas State University,  
San Marcos, Texas, USA; School of Engineering, University of  
Saint Thomas, Saint Paul, Minnesota, USA

12:00 - 01:00pm: LUNCH (On Your Own)

**SESSION 5-EEE: E-BUSINESS, E-COMMERCE, ENTERPRISE INFORMATION SYSTEMS, TELEWORK, AND RELATED ISSUES**  
**Chair: Dr. Charles Balch**  
Northern Arizona University, Arizona, USA  
July 28, 2015 (Tuesday); 01:00pm - 03:00pm  
(LOCATION: Silver Room)

01:00 - 01:40pm: INVITED TALK: Funding Enabling Technologies  
Steve Richfield  
Founder of Savant AI Holdings, USA

01:40 - 02:00pm: Influential Factors for Online Impulse Buying in China: A model and its empirical analysis  
Yalin Chen, Liang Zhang  
School of Management Science and Engineering, Nanjing  
University of Finance and Economics, Nanjing, P. R. China

02:00 - 02:20pm: A Study for the Moderating Effect of Social Identify on Purchase Intention in the Context of Group Buy  
Shwu-Min Horng  
National Chengchi University, Wenshan District, Taipei City,  
Taiwan, R.O.C.

02:20 - 02:40pm: The Impact of Mobile Usage and Social Media on E-Commerce Acceptance and Implementation in Saudi Arabia  
Eyad Makki, Lin-Ching Chang  
Department of EECS, School of Engineering, The Catholic  
University of America, Washington, DC, USA

02:40 - 03:00pm: Energy Saving Effects of Telework  
Hodaka Nakanishi  
Teikyo University, Itabashi-ku, Tokyo, Japan

03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-ABDA-EEE-GCA-ESA-ICOMP  
July 28, 2015 (Tuesday)  
(LOCATION: Hallways of Ballrooms 1-5)

0. Big Data Analysis Based Practical Applications In Construction  
Yongho Ko, Seungwoo Han  
Department of Architectural Engineering, Inha University,  
Incheon, South Korea



- 0. Circadian Rhythm of Hospital Death: Difference Between the Intensive Care Unit and General Room  
Jung-Ho Park, Yun-Kyeong Cho, Jong-Ha Lee, Yunjung Lee, In-Cheol Kim, Hyoung-Seob Park, Hyuck-Jun Yoon, Hyungseop Kim, Chang-Wook Nam, Seongwook Han, Seung-Ho Hur, Yoon-Nyun Kim  
Department of Internal Medicine, Keimyung University, Korea; Medical Imaging & Biosignals Lab, Dept of Biomedical Eng., Keimyung University, Korea; R&BD Center for Medical Devices for Arrhythmia Diagnosis & Therapy, Keimyung University, Dongsan Medical Center, Daegu, Korea
- 0. A Study on Framework for Efficient Government R&D Program Feasibility Analysis Using the Bayesian Network and Big Data  
Jaehyuk Cho  
Korea Institute of S&T Evaluation and Planning, Seoul, Korea
- 0. Predicting Sports Outcomes with a Rank-and-Choose Variable Selection Process  
Tao Lin, Ricardo Trujillo, Haibo Wang  
Texas A&M International University, Laredo, Texas, USA
- 0. Big Data on Performance Logs - A Collaborative Monitoring Cloud for ERP Systems  
Hendrik Muller, Klaus Turowski  
Otto von Guericke University Magdeburg, Very Large Business Applications Lab, Magdeburg, Germany
- 0. The Impact of ICT and Big Data on E-Government  
Joseph M. Woodside, Shahram Amiri, Brianne Boldrin  
Stetson University, Florida, USA
- 0. ...

#### **SESSION 6-ABDA-ICOMP: BIG DATA ANALYTICS + DATA CENTERS + INPUT & OUTPUT**

**Chair: Dr. Afrand Agah**

**Department of CS, West Chester University of Pennsylvania, USA**

**July 28, 2015 (Tuesday); 03:40pm - 05:40pm**

**(LOCATION: Silver Room)**

- 03:40 - 04:00pm: Improving the Feature Selection for the Development of Linear Model for Discovery of HIV-1 Integrase Inhibitors  
Matineh Kashani Moghaddam, Richard Adrian Galvan, and Ahmad Reza Hadaegh  
California State University San Marcos, San Marcos, CA, USA
- 04:00 - 04:20pm: Applying Fuzzy C-Means and Artificial Neural Networks into High-Order Fuzzy Time Series Prediction Model  
Mu-Yen Chen, Hsiu-Sen Chiang, Chia-Chen Chen  
Department of Information Management, National Taichung University of Science and Technology, Taichung, Taiwan;  
Department of Management Information Systems, National Chung Hsing University, Taichung, Taiwan
- 04:20 - 04:40pm: Using Random Neural Network for Load Balancing in Data Centers  
Peixiang Liu  
Nova Southeastern University, Fort Lauderdale, Florida, USA
- 04:40 - 05:00pm: Generic Architecture for Building Knowledge Base Automatically by Analyzing Big Data Available in the Web Environment  
Marcus Vinicius Da Silveira, Gwang Jung  
Lehman College, The City University of New York, Bronx, New York, USA

- 05:00 - 05:20pm: Applying Scalable Machine Learning Techniques on Big Data  
Using a Computational Cluster  
Dev Dua, Sujala D. Shetty, Lekha R. Nair  
Department of CS, BITS Pilani, Dubai Campus, Dubai, U.A.E.
- 05:20 - 05:40pm: From Events to Local Dependence Between Random Units in Big Data  
Boyan Dimitrov  
Department of Mathematics, Kettering University, Flint, Michigan, USA
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
(Please see the lists at the beginning of the program book for details)**

- SESSION 7-EEE: E-BUSINESS, E-COMMERCE, EIS, TELEWORK, E-LEARNING, EDUCATIONAL CONCEPTS AND TOOLS, AND ACADEMIA RELATED ISSUES + CERTIFICATION**  
**Chair: Prof. Marcelo Correia Santos**  
**UNICAMP and SENAC, Brazil**  
**July 29, 2015 (Wednesday); 08:00am - 10:40am**  
**(LOCATION: Silver Room)**
- 08:00 - 08:20am: FREE SLOT
- 08:20 - 08:40am: Customer's Protection in e-Commerce Transaction Through Identifying Fake Online Stores  
 Akazue, M . I, Aghaulor A., Ajenaghughrure I. B.  
 Delta State University, Abraka, Nigeria
- 08:40 - 09:00am: User and Provider Perspectives on ES Engagement by Chinese SMEs: A Process Analysis  
 David H. Brown, Zheng Xu, Mark Stevenson  
 Department of Management Science, Lancaster University  
 Management School, Lancaster University, Lancashire, UK
- 09:00 - 09:20am: Integration of the Real-Time Simulation Systems with the Automated Control System of an Enterprise  
 Konstantin Aksyonov, Eugene Bykov, Eugene Sysoletin,  
 Olga Aksyonova, Alena Nevolina  
 Ural Federal University, Russia
- 09:20 - 09:40am: Visualizing The Top 400 Universities  
 S. Aljehane, R. Alshahrani, M. Thafar  
 Kent State University, Kent, Ohio, USA
- 09:40 - 10:00am: MPEG-SCORM: An Ontological Approach of Interoperable Metadata for Multimedia e-Learning  
 Marcelo Correia Santos, Yuzo Iano  
 Department of Telecommunications of the Electrical and Computer Engineering School, UNICAMP, Sao Paulo State  
 Universty of Campinas, Campinas-SP, Brazil
- 10:00 - 10:20am: Teaching Mathematics at Different School Levels in Developing Countries  
 Nabil Moussa  
 Advisor to the President for Development of Academic Staff;  
 Professor of Math, Ahlia University in Bahrain, Bahrain
- 10:20 - 10:40am: Re-Certification of Enterprises in Russia  
 Golodnov Vladimir  
 Docent Department of Mathematical Economics and Informatics,  
 Moscow, Russia

**SESSION 8-ESA: RESOURCE CONSTRAINED DEVICES + POWER AWARE COMPUTING AND ENERGY MINIMIZATION + SUPPORTING TOOLS**  
**Chair: Prof. Quist-Aphetsi Kester**  
 Ghana Technology University College, Ghana & CNRS Lab-STICC, Cyber Security Division, France & Universite britagne Occidentale, France  
**July 29, 2015 (Wednesday); 10:40am - 12:20pm**  
**(LOCATION: Silver Room)**

- 10:40 - 11:00am: Neural Cryptography for Secure Voice Communication using Custom Instructions  
 C. H. Lin, B. C. Yang, C. B. Duanmu, B. W. Chen, D. S. Chen, and Y. Wang  
 Department of Information Engineering and Computer Science, Feng Chia University, Taichung, Taiwan
- 11:00 - 11:20am: Raspberry Pi Webserver  
 Max Runia, Kanwalinderjit Gagneja  
 Department of CS, Southern Oregon University, Oregon, USA
- 11:20 - 11:40am: A Visualization Method of Inter-Module Communications for Profiling Energy Consumption of Android Applications  
 Hiroki Furusho, Kenji Hisazumi, Takeshi Kamiyama, Hiroshi Inamura, Shigemi Ishida, Akira Fukuda  
 Graduate School, Faculty of Information Science and EE, Kyushu University, Fukuoka, Japan; System LSI Research Center, Kyushu University, Fukuoka, Japan; Research Laboratories, NTT DOCOMO Inc., Kanagawa, Japan
- 11:40 - 12:00pm: A Comparative Study on the Energy Efficiency of 4th Gen Intel Core Processor Vs 3rd Gen Intel Core Processor  
 Siti Nur Diana Muhd Azmi, Nazarudin Bujang, Ah-Lian Kor, and Colin Pattinson  
 Leeds Beckett University, Leeds, UK; and Intel Kulim, Malaysia
- 12:00 - 12:20pm: Task Mapping with Cache Reconfiguration and Partitioning for Energy Minimization in Real-Time Multicores  
 Zhihua Gan, Zhimin Gu  
 School of Computer Science and Technology, Beijing Institute of Technology, Beijing, P. R. China;  
 Software School, Henan University, Kaifeng, P. R. China
- 12:20 - 01:20pm: **LUNCH (On Your Own)**

**SESSION 9-EEE: MANAGEMENT ISSUES, WEB TOOLS + PREDICTION AND FORECASTING METHODS + EDUCATIONAL CONCEPTS AND TOOLS**  
**Chair: Dr. Kanwal Gagneja**  
 Southern Oregon University, Oregon, USA  
**July 29, 2015 (Wednesday); 01:20pm - 03:00pm**  
**(LOCATION: Silver Room)**

- 01:20 - 01:40pm: A Web Application Using MVC Framework  
 Marissa Principe, David Yoon  
 University of Michigan - Dearborn, Michigan, USA
- 01:40 - 02:00pm: Technical Indicators as Predictors of Position Outcome for Technical Trading  
 Ryan Steele, Larbi Esmahi  
 School of Computing, Faculty of Science and Technology, Athabasca University, Canada

- 02:00 - 02:20pm: Adopting Change  
Charles Balch  
Department of Business and Administration, Northern Arizona University, Arizona, USA
- 02:20 - 02:40pm: Assessment of Scoring Content and English in the First CLIL Project at a High School in Sardinia  
Chiharu Nakanishi, Hodaka Nakanishi  
Music Department, Kunitachi College of Music, Tachikawa, Tokyo, Japan; Technology Transfer Center, Teikyo University, Itabashi-ku, Tokyo, Japan
- 02:40 - 03:00pm: Building A Game-Based Internet Security Learning System by Ontology Crystallization Approach  
Shian-Shyong Tseng, Tsung-Yu Yang, Jui-Feng Weng, Yuh-Jye Wang  
Department of Applied Informatics and Multimedia, Asia University, Taiwan; Department of Information Engineering, Asia University, Taiwan, R.O.C.
- 03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-ABDA-EEE-GCA-ESA-ICOMP  
July 29, 2015 (Wednesday)  
(LOCATION: Hallways of Ballrooms 1-5)**
- 0. A Strategy for Multimedia Data File Retrieval Using Hadoop Framework  
Kyung Chang Kim, Jaekyung Lee  
Department of CE, Hongik University, Seoul, South Korea
  - 0. An English Listening Learning System Based on Brainwave Meditation Recognition Technology  
Yu-Chen Kuo, Chien-Jen Chen  
Department of CS and Information Management, Soochow University, Taipei, Taiwan
  - 0. InkAnnotation: An Annotation Tool for E-Learning Environments  
Andre Constantino Da Silva  
Instituto Federal de Sao Paulo, Hortolandia, SP, Brazil
  - 0. Research on the Development of Smart Application for e-Learning as an Assistive Device for People with Hearing Impaired  
Kun-Min Rhee, Hye-Jung Park, Shin-Young Lee, Bong-Geun Choi, Dae-Young Na, Kyung-Im Han  
Department of Rehabilitation Science & Technology, Daegu University, South Korea;  
College of Liberal Education, Keimyung University, South Korea
  - 0. Control of a Plotter with Use of LabVIEW and Embedded Microcontrollers  
Bassam Shaer, Teresa Frigon, Adam Ferguson, Darius Bethel  
ECE Department, University of West Florida, Florida, USA
  - 0. ...
- SESSION 10-ICOMP: PATTERN MATCHING + COMMUNICATION SYSTEMS AND NETWORKS  
July 29, 2015 (Wednesday); 03:40pm - 05:00pm  
Chair: Dr. Kanwal Gagneja  
Southern Oregon University, Oregon, USA  
(LOCATION: Silver Room)**
- 03:40 - 04:00pm: Polymorphic Worms Detection Using Longest Common Substring  
Mohssen M. Z. E. Mohammed, Eisa Aleisa, Neco Ventura  
College of CIS, Al-Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia; Department of EE, University of Cape Town, Rondebosch, South Africa

- 04:00 - 04:20pm: Energy Efficient Opportunistic Wireless as Digital Inclusion Support and Easy Access to Information in Southeast Goias-Brazil  
Antonio Oliveira-Jr, Rosario Ribeiro, Tercio Filho, Dalton Matsuo, Marcos Batista, Claudio Souza, Roberto Piedade, Waldir Moreira  
University Federal of Goias (UFG), Brazil; R&D in Cognition and People Centric Computing (COPELABS), Portugal
- 04:20 - 04:40pm: Local Trend Detection from Network Traffic Using Topic Model and Network Router  
Kenichi Takagiwa, Hiroaki Nishi  
Department of Science and Technology, Keio University, Japan
- 04:40 - 05:00pm: Expansion of Redundant Traffic Reduction Region by Network Node with Packet Cache  
Shunsuke Furuta, Michihiro Okamoto, Akiko Narita  
Graduate School of Science and Technology,  
Hirosaki University, Aomori, Japan
- 05:00 - 05:40pm: **ABDA INVITED TALK: Systems Genomics Approaches for Streamlined Big-Data Integrative Genomics Analysis**  
**Dr. Mary Yang**  
Director of MidSouth Bioinformatics Center; Director of the Joint Bioinformatics Ph.D. Program of University of Arkansas Little Rock Donaghey College of Engineering & IT and University of Arkansas for Medical Sciences, Arkansas, USA  
(LOCATION: Silver Room)
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the beginning of the program book for details)

**SESSION 11-ABDA: HIGH PERFORMANCE COMPUTING, DISTRIBUTED AND PARALLEL PROCESSING, DATABASES**

**Chair: TBA**

**July 30, 2015 (Thursday); 08:20am - 10:20am**

**(LOCATION: Silver Room)**

08:20 - 08:40am: FREE SLOT

08:40 - 09:00am: From In-disk to In-memory Big Data with Hadoop: Performance Experiments with Nucleotide Sequence Data  
A. Radenski, L. Ehwerhemuepha, K. Anderson  
Schmid College of Science and Technology, Chapman University, Orange, California, USA

09:00 - 09:20am: Benchmarking and Performance Studies of Mapreduce, Hadoop Framework on Blue Waters Supercomputer  
Manisha Gajbe, Kalyana Chadalavada, Gregory Bauer, and William Kramer  
National Center for Supercomputing Applications, University Of Illinois at Urbana-Champaign, Illinois, USA

09:20 - 09:40am: Analytic Query Engine  
Rovshen Nazarov, Greg Speegle  
Baylor University, Waco, Texas, USA

09:40 - 10:00am: Lightning Sparks All Around: A comprehensive analysis of popular distributed computing frameworks  
Balazs Meszaros, Piyush Harsh, Thomas M. Bohnert  
Zurich University of Applied Sciences (ZHAW), Winterthur, Switzerland; InIT, ZHAW Winterthur, Switzerland

10:00 - 10:20am: Adaptive Fusion SQL Engine on Hadoop Framework  
Shu-Ming Chang, Chia-Hung Lu, Jiazheng Zhou, Wenguang Chen, Ching-Hsien Hsu, Hung-Chang Hsiao, Yeh-Ching Chung  
Department of CS, National Tsing Hua University, Hsinchu, Taiwan;  
Department of CST, Tsinghua University, Beijing, P. R. China;  
Department of CS and Information Engineering, Chung Hua University, Taiwan  
Department of CS and Information Engineering, National Cheng Kung University, Taiwan, R.O.C.

10:20 - 10:40am: BREAK

**SESSION 12-ICOMP: COMMUNICATION AND NETWORKS + MULTIMEDIA + WEB SERVICES & ACCESSIBILITY**

**July 30, 2015 (Thursday); 10:40am - 12:20pm**

**Co-Chairs: Prof. Gwang Jung\* and Dr. Hong Jiang\*\***

**\*Lehman College, the City University of New York, New York, USA**

**\*\*Mathematics & CS Department, Benedict College, USA**

**(LOCATION: Silver Room)**

10:40 - 11:00am: A New TF-IDF Formulation for Web Service Business Protocol Discovery  
Abdelkader Moudjari, Salim Chikhi, Amer Draa  
MISC Laboratory, Department of Fundamental Informatics and its Applications, Abdelhamid Mehri University, Algeria

11:00 - 11:20am: Customized Multimedia Google Form For Education - A User Friendly Approach  
Chandani Shrestha And Hong Jiang  
Benedict College, Columbia, South Carolina, USA

- 11:20 - 11:40am: World Wide Web: A Survey of its Development and Possible Future Trends  
Abdulelah A. Algosaibi, Saleh Albahli, Austin Melton  
Department of CS, Kent State University, Kent, Ohio, USA
- 11:40 - 12:00pm: Web Accessibility, Litigation and Complaint Mechanisms  
Justin Brown, Scott Hollier  
School of Computer and Security Science, Edith Cowan University, Perth, Western Australia
- 12:00 - 12:20pm: Web Accessibility and Security: An Analysis of Online Security Mechanisms and the Web Content Accessibility Guidelines 2.0  
Justin Brown, Scott Hollier  
School of Computer and Security Science, Edith Cowan University, Perth, Western Australia
- 12:00 - 01:00pm: **LUNCH (On Your Own)**
- SESSION 13-EEE: E-LEARNING + EDUCATIONAL CONCEPTS AND TOOLS, AND ACADEMIA RELATED ISSUES**  
**Co-Chairs: Dr. Charles Balch\* and Dr. Hong Jiang\*\***  
\*Northern Arizona University, Arizona, USA  
\*\*Mathematics & CS Department, Benedict College, USA  
**July 30, 2015 (Thursday); 01:00pm - 02:20pm**  
**(LOCATION: Silver Room)**
- 01:00 - 01:20pm: Evaluating Presence Perception in Video-Mediated Activities in Real Time  
Fernando Y. Obana, Romero Tori  
Escola Politecnica da Universidade de Sao Paulo, Sao Paulo, Brazil; Departamento de Computacao, UNEMAT, Alto Araguaia, Brazil
- 01:20 - 01:40pm: FREE SLOT
- 01:40 - 02:00pm: Layering Information Literacy: A Taxonomy of Literacies for Academic and Lifelong Learning  
Moses Moyo, Kudakwashe Madzima, Teresa Chikerema  
University of Venda, South Africa; University of South Africa, South Africa; Botho University, Gaborone, Botswana
- 02:00 - 02:20pm: Assessment Issues for MOOCs and Large Scale Examinations and Robust, Objective Testing with Multiple-Choice  
Indu M. Anand, Lamia Atma Djoudi  
Sushila Publications, Chelmsford, Massachusetts, USA; Synchrone Technologies, Paris, France
- SESSION 14-ABDA: BIG DATA SEARCH, MINING METHODS, CLUSTERING, KNOWLEDGE EXTRACTION AND ENGINEERING**  
**Chair: TBA**  
**July 30, 2015 (Thursday); 02:20pm - 04:20pm**  
**(LOCATION: Silver Room)**
- 02:20 - 02:40pm: Randomized Sorting as a Big Data Search Algorithm  
Ivan Avramovic, Dana S. Richards  
Department of CS, George Mason University, Fairfax, Virginia, USA



- 02:40 - 03:00pm: Keyword Extraction by KNN Considering Similarity Among Features  
Taeho Jo  
Department of CIE, Inha University, Incheon, Korea
- 03:00 - 03:20pm: BREAK**
- 03:20 - 03:40pm: A New Random Approach to Dimensionality Reduction  
Augustine S. Nsang, Alheri Maikori, Funmilayo Oguntoyinbo, and Hubabah Yusuf  
Department of CS, School of Information Technology and Computing, American University of Nigeria, Yola, Nigeria
- 03:40 - 04:00pm: Multi-Label Classification for Mining Big Data  
Passent Elkafrawy, Amr M. Sauber, Awad Khalil  
Menofia University, Shebin Elkom, Egypt;  
American University, Cairo, Egypt
- 04:00 - 04:20pm: Query-Based Dimensionality Reduction Applied to Images  
Augustine S. Nsang, Donatus Edi, Chinyere Ahanonu  
Department of CS, American University of Nigeria, Nigeria

# CSC'15 & SERP'15 CONFERENCE SCHEDULES

## The 2015 International Conference on Scientific Computing (CSC'15)

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## The 2015 International Conference on Software Engineering Research and Practice (SERP'15)

*Because of partial topical and technical overlap between CSC'15 & SERP'15 tracks, the schedule of SERP'15 is merged with the schedule of CSC'15, resulting in a more comprehensive schedule. It is hoped that this would encourage the participants of the two conferences to explore cross-fertilization of ideas. There are also a number of other sessions (not listed as part of these two conferences) that are of potential interest to CSC'15 and SERP'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in PDPTA'15, SAM'15, FECS'15, ABDA'15, EEE'15, ICOMP'15, MSV'15, and GCA'15 conferences discuss topics that are within the scope of CSC'15 and SERP'15; these have been scheduled so that selected CSC'15 and SERP'15 attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

**July 27**

**08:30 - 08:45am:** CONGRESS OPENING REMARKS - July 27, Monday:  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

**08:45 - 09:35am:** KEYNOTE LECTURE 1 - July 27, Monday:  
COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

**09:40 - 10:20am:** KEYNOTE LECTURE 2 - July 27, Monday:  
LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:40 - 11:20am: KEYNOTE LECTURE 3 - July 27, Monday:  
ARTIFICIAL NEUROGENESIS  
Dr. James A. Crowder  
Chief Engineer, Raytheon Intelligence, Information, and Services;  
Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,  
Robotics and Artificial Intelligence Research Lab - Alexandria  
School of Innovation, Douglas County, Colorado, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 11:20a - 12:00p: KEYNOTE LECTURE 4 - July 27, Monday:  
The Infinity Computer and Numerical Computations with Infinities  
and Infinitesimals  
Prof. Yaroslav D. Sergeyev, Ph.D., D.Sc., D.H.C.  
Inventor of the Infinity Computer; Distinguished Professor, Head  
of Numerical Calculus Laboratory, University of Calabria, Rende,  
Italy; and Professor (part-time), Lobachevsky State University,  
Nizhni Novgorod, Russia  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:00 - 12:15pm: KEYNOTE LECTURE 5 - July 27, Monday:  
World of IoT and Connected Cars  
Dr. Akash Singh, PhD  
IBM Corporation, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 12:15 - 01:20pm: LUNCH (On Your Own)
- SESSION 1-CSC: FUZZY LOGIC & SYSTEMS + DATA SCIENCE + SEMANTIC WEB + OPTIMIZATION  
Chair: Prof. Qi Yang  
University of Wisconsin - Platteville, Wisconsin, USA  
July 27, 2015 (Monday); 01:20pm - 03:00pm  
(LOCATION: Sterling ABC Room)
- 01:20 - 01:40pm: Designing Bilateralism and Developing Fuzzy Inference System  
in the Political Domain  
Sameera Alshayji, Nasser Al-Sabah, Abdulla Al-Sabah  
Political and Economic Affairs Department, Amiri Diwan,  
Seif Palace, Kuwait
- 01:40 - 02:00pm: Computing with Fuzzy Rule Continua  
Bart Kosko  
Department of EE, Signal and Image Processing Institute,  
University of Southern California, Los Angeles, California, USA
- 02:00 - 02:20pm: An Effective Methodology for Processing and Managing  
Massive Spacecraft Datasets  
Haydar Teymourlouei  
Department of Computer Science, Bowie State University,  
Bowie, Maryland, USA

- 02:20 - 02:40pm: TOPSIS-based Multi-objective ABC Algorithm to Attune Plan of PV/Wind Generation System  
H. Shayeghi, Y. Hashemi, H. A. Shayanfar  
Technical Engineering Department University of Mohaghegh Ardabili, Ardabil, Iran; Department of EE, College of Tech. and Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran
- 02:40 - 03:00pm: Travelling Wave Solutions of the Majda-Biello System  
Abdullahi Rashid Adem  
International Institute for Symmetry Analysis and Mathematical Modelling, North-West University, Republic of South Africa
- 03:00 - 03:20pm: BREAK**
- SESSION 2-SERP: TESTING, VERIFICATION, VALIDATION METHODS + SECURITY ANALYSIS, ENERGY EFFICIENT SOFTWARE + SOFTWARE QUALITY ISSUES**  
**Co-Chairs: Dr. Bernd Mueller\* and Prof. Esiefarienrhe Bukohwo Michael\*\***  
**\*Ostfalia, University of Applied Sciences, Germany**  
**\*\*North-West University, South Africa**  
**July 27, 2015 (Monday); 03:20pm - 05:40pm**  
**(LOCATION: Sterling ABC Room)**
- 03:20 - 03:40pm: Modelling The Energy Cost Of Application Software For Developers  
Fadwa Abdulhalim, Omar Alghamdi, Kshirasagar Naik  
Department of ECE, University of Waterloo, Ontario, Canada
- 03:40 - 04:00pm: A Systematic Mapping about Testing of Functional Programs  
Alexandre Ponce De Oliveira, Paulo Sergio Lopes De Souza, Simone R. Senger De Souza, Julio Cezar Estrella, Sarita Mazzini Bruschi  
Universidade de Sao Paulo, ICMC, Sao Carlos, SP, Brazil; Faculdade de Tecnologia de Lins, Lins, SP, Brazil
- 04:00 - 04:20pm: Taxonomy Dimensions Of Complexity Metrics  
Bouchaib Falah, Issar Arab, Kenneth Magel  
Al Akhawayn University, Ifrane, Morocco;  
North Dakota State University, Fargo, North Dakota, USA
- 04:20 - 04:40pm: Support for Security Analysis of Design Models Based on Traceability  
Hirokazu Yatsu, Masaru Matsunami, Toshimi Sawada, Go Hirakawa, Atsushi Noda, Naoya Obata, Takahiro Ando, Kenji Hisazumi, Weiqiang Kong, Akira Fukuda  
Kyushu University, Fukuoka, Japan; Sony Digital Network Applications, Inc., Tokyo, Japan; Kosakusha, Ltd., Tokyo, Japan; Network Application Engineering Laboratories, Ltd., Fukuoka, Japan; Dalian University of Technology, Dalian, P. R. China
- 04:40 - 05:00pm: Automatization of Acceptance Test for Metrology Algorithms  
Bernd Muller  
Ostfalia, Faculty of Computer Science, Germany
- 05:00 - 05:20pm: Design and Implementation of a Constraint-Based Test Data Generator with Test Fixture Computation  
Chi-Kuang Chang, Nai-Wei Lin  
Department of CS and Information Engineering, National Chung Cheng University, Chiayi, Taiwan, R.O.C.
- 05:20 - 05:40pm: Cloud-ODC: Defect Classification and Analysis for the Cloud  
Mohammed Alansary, J. Tian  
Department of CSE, Southern Methodist University, Dallas, Texas, USA; School of CS, Northwestern Polytechnical University, Xi'an, P. R. China

**05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the beginning of the program book for details)

**09:00 - 11:45pm: CONFERENCE RECEPTION DINNER / SOCIAL**  
July 27 - Monday; 09:00pm - 11:45pm  
(LOCATION: Ballrooms 1-5)

- SESSION 3-CSC: SCIENTIFIC COMPUTING, ALGORITHMS AND APPLICATIONS  
+ STATISTICAL METHODS**  
**Co-Chairs: Prof. George Jandieri\* and Dr. Haydar Teymourlouei\*\***  
**\*Georgian Technical University, Georgia**  
**\*\*Bowie State University, USA**  
**July 28, 2015 (Tuesday); 08:00am - 12:20pm**  
**(LOCATION: Sterling ABC Room)**
- 08:00 - 08:20am: FREE SLOT
- 08:20 - 08:40am: Slow MHD Waves in the Turbulent Magnetized Plasma  
George Jandieri  
Georgian Technical University, Tbilisi, Georgia
- 08:40 - 09:00am: Nonsingular Robust Covariance Estimation in Multivariate  
Outlier Detection  
Maximilian J. Wang, Guifen Mao  
Valdosta State University, Valdosta, Georgia, USA
- 09:00 - 09:20am: Solutions of a Coupled Four-Parameter Family of  
Boussinesq System  
Chaudry Masood Khalique  
International Institute for Symmetry Analysis and Mathematical  
Modelling, North-West University, Republic of South Africa
- 09:20 - 09:40am: On Initial Effects of The K-Means Clustering  
Sherri Burks, Greg Harrell, Jin Wang  
Valdosta State University, Valdosta, Georgia, USA
- 09:40 - 10:00am: Application LabVIEW-Based Gain Scheduling Programming to a  
6-Axis Articulated Robot Considering Kinematic Analysis  
Seong Bhin Kim, Won Jee Chung, Jun Hyeong Bae  
School of Mechatronics, Changwon National University,  
Changwon, The Republic of Korea
- 10:00 - 10:20am: Understanding the K-Medians Problem  
Christopher Whelan, Greg Harrell, Jin Wang  
Valdosta State University, Valdosta, Georgia, USA
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Response Variability Due to Randomness of Beam Height for  
Beam Bending Problem  
Mladen Mestrovic  
Faculty of Civil Engineering, University of Zagreb, Croatia
- 11:00 - 11:20am: Programmable Reference Generator to Control a DC/AC Converter  
for Solar Applications  
Navarro, David Vazquez, Nimrod Cortes, Domingo  
Instituto Politecnico Nacional ESIME Culhuacan, Coyoacan, Mexico;  
Departamento de ingenieria electronica, Instituto tecnologico de  
Celaya, Celaya, Mexico
- 11:20 - 11:40am: Online Auction and Secretary Problem  
Greg Harrell, Josh Harrison, Jin Wang  
Valdosta State University, Valdosta, Georgia, USA
- 11:40 - 12:00pm: Low-Noise Fast Digital Differentiation Filters  
Abdulwahab A. Abokhodair  
King Fahd University of Petroleum and Minerals, Department of  
Earth Sciences, Dhahran, Saudi Arabia

12:00 - 12:20pm: Using Pi Digits to Generate Random Numbers: A Visual and Statistical Analysis  
Ilya Rogers, Greg Harrell, Jin Wang  
Valdosta State University, Valdosta, Georgia, USA

12:20 - 01:20pm: LUNCH (On Your Own)

SESSION 4-SERP: SOFTWARE DEVELOPMENT AND PRODUCT LINES + AGILE DEVELOPMENT AND MANAGEMENT  
Co-Chairs: Dr. James A. Crowder\* and Dr. Bouchaib Falah\*\*  
\*Raytheon Intelligence, Information, and Services, USA  
\*\*Al Akhawayn University, Morocco  
July 28, 2015 (Tuesday); 01:20pm - 03:00pm  
(LOCATION: Sterling ABC Room)

01:20 - 01:40pm: The Impacts of Absorptive Capacity on Improving Software Development: A preliminary study  
Chung-Yang Chen, Jung-Chieh Lee  
Department of Information Management,  
National Central University, Taiwan

01:40 - 02:00pm: An Infrastructure to Support Autonomic Control Loops in Dynamic Software Product Lines  
Jane Dirce Alves Sandim Eleuterio, Cecilia Mary Fischer Rubira  
Institute of Computing - University of Campinas, Brazil; Faculty of Computing - Federal University of Mato Grosso do Sul, Brazil

02:00 - 02:20pm: Formal Modelling In The Concept Phase of Product Development  
Mathijs Schuts, Jozef Hooman  
Philips HealthTech, Best, The Netherlands; Embedded Systems Innovation (ESI) by TNO, Eindhoven, The Netherlands;  
Radboud University, Nijmegen, The Netherlands

02:20 - 02:40pm: On the Agile Development of Virtual Reality Systems  
Fernando Mattioli, Daniel Caetano, Alexandre Cardoso, and Edgard Lamounier  
Faculty of EE, Federal University of Uberlandia, Minas Gerais, Brazil

02:40 - 03:00pm: Psychological Considerations for Agile Development Teams  
James A. Crowder  
Raytheon Intelligence, Information and Services, Aurora, Colorado, USA

03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-CSC-SERP  
July 28, 2015 (Tuesday)  
(LOCATION: Hallways of Ballrooms 1-5)

- 0. Numerical Simulation of the Internal Flow of a Three-Dimensional Thrust-Vectoring Nozzle  
Tsung Leo Jiang, En-Yu Yeh, Hsiang-Yu Huang  
Department of Aeronautics and Astronautics, National Cheng Kung University, Tainan City, Taiwan, R.O.C.
- 0. Verification Based Development Process for Improving Reliability of Open Feedback System  
Jungeun Cha, Youngjoon Jung, Chaedeok Lim  
Embedded Software Platform Research Team, Electronics Telecommunication Research Institute, ETRI, South Korea
- 0. ...

- SESSION 5-SERP: SOFTWARE ENGINEERING PROCESSES + WORKFLOWS + DISTRIBUTED AGILE DEVELOPMENT + UML**  
**Co-Chairs: Dr. Devon Michael Simmonds\*, William Yang\*\***  
**\*University of North Carolina Wilmington, USA**  
**\*\*TACC, University of Texas at Austin, USA**  
**July 28, 2015 (Tuesday); 03:40pm - 05:40pm**  
**(LOCATION: Sterling ABC Room)**
- 03:40 - 04:00pm: Semi-supervised Learning Applied to Performance Indicators in Software Engineering Processes  
 Leandro Bodo, Hilda Carvalho de Oliveira, Fabricio Aparecido Breve, Danilo Medeiros Eler  
 Universidade Estadual Paulista - UNESP, Brazil
- 04:00 - 04:20pm: An Architecture for Dynamic Self-Adaptation in Workflows  
 Sheila Katherine Venero, Cecilia Mary Fischer Rubira  
 Institute of Computing, University of Campinas (UNICAMP), Campinas (SP), Brazil
- 04:20 - 04:40pm: Distributed Agile Development: A Survey Of Challenges and Solutions  
 Harneet Kaur, Hisham M. Haddad, Jing (Selena) He  
 Department of CS, Kennesaw State University, Georgia, USA
- 04:40 - 05:00pm: A Directive-Based Transformation Approach for UML Class Diagrams  
 Devon M. Simmonds  
 Department of CS, University of North Carolina, Wilmington, North Carolina, USA
- 05:00 - 05:20pm: Quantitative Software Engineering  
 Svetlana Anulova, Igor Schagaev, Hamid R. Arabnia  
 Institute of Control Sciences, Russian academy of Sciences, Moscow, Russia; University of Georgia, USA; London Metropolitan University, London, UK
- 05:20 - 05:40pm: Spam Detection in Twitter  
 Raviteja Murukutla, William Yang, Qingzhong Liu  
 Sam Houston State University, Texas, USA;  
 University of Texas at Austin, Texas, USA
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the beginning of the program book for details)**



08:00 - 08:40am: FREE SLOT

**SESSION 6-CSC: COMPUTATIONAL SCIENCE, OPTIMIZATION METHODS, AND PERFORMANCE ISSUES**

**Co-Chairs: Dr. Jeremy Mange\*, Dr. Asoke Nath\*\* and Prof. Quist-Aphetsi Kester\*\*\***

**\*US Army - TARDEC, USA**

**\*\*Department of CS, St. Xavier's College(Autonomous), India**

**\*\*\*Ghana Technology University College, Ghana & CNRS Lab-STICC, Cyber Security Division, France & Universite britagne Occidentale, France**

**July 29, 2015 (Wednesday); 08:40am - 10:20am**

**(LOCATION: Sterling ABC Room)**

08:40 - 09:00am: A Fast Algorithm for Coordinate Rotation without using Transcendental Functions  
Jorge Resa-Trejo, Domingo Cortes, David Navarro-Duran  
Mexico National Polytechnic Institute, Superior School of Electrical and Mechanical Engineering, Mexico City, Mexico

09:00 - 09:20am: Orthogonality and Computation  
Daniel Topa, Pedro Embid  
Los Alamos National Laboratory, Los Alamos, New Mexico, USA;  
University of New Mexico, Albuquerque, New Mexico, USA;  
Engility Corporation, U.S. Army Engineer Research and Development Center, Vicksburg, MS, USA

09:20 - 09:40am: Shuffled Frog Leaping Algorithm for 0/1 Knapsack Problem on the GPU  
Pranav Bhandari, Rahul Chandrashekhar, Peter Yoon  
Department of CS, Trinity College, Hartford, CT, USA

09:40 - 10:00am: Queuing Network Approximation Technique for Evaluating Performance of Computer Systems in Finite Input Source  
Mayuko Hirose, Madoka Shiratori, Noorafiza Matrazali, Ryo Tsuboi, Itaru Koike, Toshiyuki Kinoshita  
Tokyo University of Technology, Tokyo, Japan

10:00 - 10:20am: A Complete Solution to the Set Covering Problem  
Qi Yang, Adam Nofsinger, Jamie Mcpeek, Joel Phinney, and Ryan Knuesel  
Department of CS and Software Engineering, University of Wisconsin - Platteville, Platteville, Wisconsin, USA

**10:20 - 10:40am: BREAK**

**SESSION 7-CSC: MODELING AND SIMULATION FRAMEWORKS**

**Co-Chairs: Dr. Douglas D. Hodson\* and Dr. Michael R. Grimaila\*\***

**\*CSE Department, Air Force Institute of Technology, USA;**

**\*\*Head of the Systems Engineering and Management Department, Air Force Institute of Technology, USA**

**July 29, 2015 (Wednesday); 10:40am - 12:20pm**

**(LOCATION: Sterling ABC Room)**

10:40 - 11:00am: The Unified Behavior Framework for the Simulation of Autonomous Agents  
Daniel Roberson, Douglas Hodson, Gilbert Peterson, Brian Woolley  
Air Force Institute of Technology, USA

11:00 - 11:20am: An Efficient Testing Process for a Quantum Key Distribution System Modeling Framework  
Jennifer Holes, Logan Mailloux, Michael Grimaila, Douglas Hodson  
Air Force Institute of Technology, USA

11:20 - 11:40am: Single and Multi-Station Virtual Simulation Design Patterns  
Douglas Hodson, David Gehl  
Air Force Institute of Technology, USA

11:40 - 12:00pm: Advanced Framework for Simulation, Integration and Modeling (AFSIM)  
Peter D. Clive, Jeffery Johnson, Michael Moss, Brian Birkmire, and James Zeh  
US Air Force, USA

12:00 - 12:20pm: FREE SLOT

12:20 - 01:20pm: LUNCH (On Your Own)

**SESSION 8-CSC: SIMULATION AND COMPUTATIONAL MODELING METHODS AND RELATED ISSUES + STORAGE OPTIMIZATION**  
**Co-Chairs: Dr. Janusz Stafiej\* and Dr. Mitchell L. Neilsen\*\***  
\*Cardinal Stefan Wyszynski University, Warsaw, Poland  
\*Department of CIS, Kansas State University, Kansas, USA  
July 29, 2015 (Wednesday); 01:20pm - 03:00pm  
(LOCATION: Sterling ABC Room)

01:20 - 01:40pm: Coupled Dam Erosion Analysis Using DAKOTA and WinDAM  
Mitchell L. Neilsen, Quan Kong, Matthew Bulleigh, G. Williams  
Department of CIS, Kansas State University, Manhattan, Kansas, USA

01:40 - 02:00pm: Application of SimulationX-Based Simulation Technique to the Design of Opening Area for a Valve Plate of Swash Plate Type Piston Pump  
Jun Hyeong Bae, Won Jee Chung, Seong Bhin Kim  
School of Mechatronics, Changwon National University, Changwon, The Republic of Korea

02:00 - 02:20pm: Analysis of Microstrip Line Using Markov Chain Monte Carlo  
A. E. Shadare, M. N. O. Sadiku, S. M. Musa  
Roy G. Perry College of Engineering,  
Prairie View A&M University, Prairie View, Texas, USA

02:20 - 02:40pm: Rover Trajectory Planning via Simulation Using Incremented Particle Swarm Optimization  
Ayman Hamdy Kassem  
Aerospace Engineering Department, Cairo University, Egypt

02:40 - 03:00pm: Optimum Singularity Size in Data Deduplication Technique  
Mayuko Hirose, Matrazali Noorafiza, Mizuki Takaya, Itaru Koike, Toshiyuki Kinoshita  
Tokyo University of Technology, Hachioji Tokyo, Japan

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-CSC-SERP**  
**July 29, 2015 (Wednesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**

- 0. Effect of Reduced Grid on the Global-Domain Fourier Finite-Element Model  
 Hyeong-Bin Cheong, Han-Byul Jeong  
 Department of Environmental Atmospheric Sciences,  
 Pukyong National University, South Korea
- 0. ...

**SESSION 9-SERP: PETRI NETS + NLP + CROSS PLATFORM ENVIRONMENTS + DISTRIBUTED APPLICATIONS + SOFTWARE ENGINEERING AND APPLICATIONS**  
**Chair: Dr. Mao Zheng**  
**University of Wisconsin-La Crosse, USA**  
**July 29, 2015 (Wednesday); 03:40pm - 05:40pm**  
**(LOCATION: Sterling ABC Room)**

03:40 - 04:00pm: Modeling Elevator System with Coloured Petri Nets  
 Mohammed Assiri, Mohammed Alqarni, Ryszard Janicki  
 Computing and Software Department, McMaster University,  
 Hamilton, Ontario, Canada

04:00 - 04:20pm: Semantic Approach for Traceability Link Recovery Using Uniform Resource Identifier - STURI  
 Mazen Alobaidi, Khalid Mahmood  
 Department of CSE, Oakland University, Rochester, USA

04:20 - 04:40pm: Adapting Native Applications to Cross Platform Environments  
 Andrew Moubray, Tyler Danner, Harry Sellars,  
 Jason Litchfield, and Roger Lee  
 CS Department, Central Michigan University, Michigan, USA

04:40 - 05:00pm: Metrics for Migrating Distributed Applications  
 Devon M. Simmonds  
 Department of CS, University of North Carolina, Wilmington,  
 North Carolina, USA

05:00 - 05:20pm: PRONTO System: Integration Between Doctors and Pharmacists in the Basic Health Care  
 Luciana Pereira De Araujo, Maria Eduarda Demmer,  
 Shaiane Mafra Casa, Eric Boeing, Mauro Marcelo Mattos  
 Development and Technology Transference Lab, Computer System  
 Department, University of Blumenau, Blumenau, Brazil

05:20 - 05:40pm: FREE SLOT

**05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

**SESSION 10-SERP: SOFTWARE ENGINEERING AND DEVELOPMENT ISSUES +  
SOFTWARE SCALABILITY + APPLICATIONS**  
**Co-Chairs: Dr. Mao Zheng\* and Prof. Esiefarienrhe Michael Bukohwo\*\***  
 \*University of Wisconsin-La Crosse, USA  
 \*\*North-West University, South Africa  
**July 30, 2015 (Thursday); 08:00am - 11:00am**  
**(LOCATION: Sterling ABC Room)**

08:00 - 08:20am: FREE SLOT

08:20 - 08:40am: Performance of Lambda Expressions in Java 8  
 A. Ward, D. Deugo  
 School of CS, Carleton University, Ottawa, Ontario, Canada

08:40 - 09:00am: Programmers: A Revolution in Computer Language Parsing  
 Steven A. O'Hara  
 Eagle Legacy Modernization, LLC, Grovetown, Georgia, USA

09:00 - 09:20am: Fault Detection Coverage Measurement Using a Fault  
 Imitation Method for Nuclear Digital Controller  
 Young-Jun Lee, Jang-Soo Lee, Young-Kuk Kim  
 Korea Atomic Energy Research Institute, South Korea;  
 Chungnam National University, Daejeon, South Korea

09:20 - 09:40am: Designing Context Sensitive Mobile User Interface  
 Mao Zheng, Olga Ormandjieva, Hao Fan  
 University of Wisconsin-La Crosse, La Crosse, Wisconsin, USA;  
 Concordia University, Montreal, QC, Canada;  
 Wuhan University, Wuhan, Hubei, P. R. China

09:40 - 10:00am: cnetmon: A Curses-Based Network Interface Activity Monitor  
 Steve Hutchinson, John Wittkamper, Jovina Allen, Robert F. Erbacher  
 ICF International for US Army Research Laboratory, Adelphi,  
 Maryland, USA;  
 US Army Research Laboratory, Adelphi, Maryland, USA

10:00 - 10:20am: Political Risk Mitigation Model for Software Development Budget  
 Esiefarienrhe Michael Bukohwo, Wajiga Greg  
 North-West University, Mafikeng, South Africa;  
 Modibbo Adama University, Yola, Adamawa State, Nigeria

10:20 - 11:00am: Invited Talk:  
 Evolving Systems: Theory, Implementation, Application  
 Igor Schagaev  
 London Metropolitan University, London, UK;  
 Research Advisor of ITACS Ltd, UK

**SESSION 11-CSC: FINITE ELEMENT METHODS AND FINITE DIFFERENCE METHODS +  
CELLULAR AUTOMATA**  
**Chair: Dr. Janusz Stafiej**  
 Cardinal Stefan Wyszyński University, Warsaw, Poland  
**July 30, 2015 (Thursday); 11:00am - 12:20pm**  
**(LOCATION: Sterling ABC Room)**

11:00 - 11:20am: Nonlinear Vibration of Single-Walled Carbon Nanotubes with  
 Magnetic Field Based on Stochastic FEM  
 Tai-Ping Chang, Quey-Jen Yeh  
 Department of Construction Engineering, National Kaohsiung First  
 University of Science and Technology, Kaohsiung, Taiwan;  
 Department of Business Administration, National Cheng-Kung  
 University, Tainan, Taiwan

- 11:20 - 11:40am: Finite Element Analysis of Microstrip Transmission Lines on Silicon Substrate  
Sarhan M. Musa, Matthew N. O. Sadiku, A. E. Shadare  
Roy G. Perry College of Engineering, Prairie View A&M University,  
Prairie View, Texas, USA
- 11:40 - 12:00pm: Time Adaptivity Stable Finite Difference for Acoustic Wave Equation  
A. J. M. Antunes, R. C. P. Leal-Toledo, E. M. Toledo,  
O. T. S. Filho, E. Marques  
SEEDUC-FAETEC, Rio de Janeiro, Brazil; Federal Fluminense  
University, Niteroi, Brazil; LNCC - UFJF, Petropolis, Brazil
- 12:00 - 12:20pm: Simplified Cellular Automata Model of Aluminum Anodization  
J. Stafiej, L. Bartosik  
Department of Mathematics and Natural Sciences, Cardinal Stefan  
Wyszynski University, Warsaw, Poland;  
Institute of Physical Chemistry, Warsaw, Poland
- 12:20 - 01:40pm: **LUNCH (On Your Own)**
- SESSION 12-SERP: SOFTWARE ARCHITECTURE AND FRAMEWORKS + ENTERPRISE ARCHITECTURE + COMMERCIAL ISSUES**  
**Chair: Prof. Esiefarienne Michael Bukohwo**  
**North-West University, South Africa**  
**July 30, 2015 (Thursday); 01:40pm - 03:20pm**  
**(LOCATION: Sterling ABC Room)**
- 01:40 - 02:00pm: A Step Ahead to Connect Your Bus - With GPS  
Srikanth Nagadapally, Balakumar Krishnaswamy, Abhigna Shettap,  
Prathika Devireddy, Roger Lee  
CS Department, Central Michigan University, Michigan, USA
- 02:00 - 02:20pm: Development of Enterprise Architecture of PPDR Organisations  
Wilmuth Muller, Frank Reinert  
Fraunhofer Institute of Optronics, System Technology and Image  
Exploitation IOSB, Germany
- 02:20 - 02:40pm: Enterprise Architecture and Information Technology: Coping with Organizational Transformation Applying the Theory of Structuration  
Dominic M. Mezzanotte, Sr., Josh Dehlinger  
Towson University, USA
- 02:40 - 03:00pm: Proposed Framework for Handling Architectural NFR's Within Scrum Methodology  
Ahmed E. Sabry, Sherif S. El-Rabbat  
CIS Department, Sadat Academy, Cairo, Egypt; Research and  
Development Department, BG, Kuwait
- 03:00 - 03:20pm: Honic - Customer Satisfaction Index Based Framework to Transform Customer Experience  
Rose Neena Tom  
HCL Technologies, Bangalore, India
- 03:20 - 03:40pm: **BREAK**
- 03:40 - 05:40pm: **During this period, CSC'15 and SERP'15 attendees are encouraged to participate in sessions belonging to PDPTA'15 or ABDA'15 conferences. These sessions discuss topics that significantly overlap the scopes of CSC'15 and SERP'15.**

# ICWN'15 CONFERENCE SCHEDULE

## The 2015 International Conference on Wireless Networks

*There are a number of other sessions (not listed as part of ICWN'15 in this schedule) that are of potential interest to ICWN'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, some sessions in PDPTA'15, SAM'15, FECS'15, ICOMP'15, ESA'15, and GCA'15 conferences discuss topics that are within the scope of ICWN; these have been scheduled so that selected ICWN'15 groups/attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

July 27

- 08:30 - 08:45am:** CONGRESS OPENING REMARKS - July 27, Monday:  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am:** KEYNOTE LECTURE 1 - July 27, Monday:  
COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor of  
Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am:** KEYNOTE LECTURE 2 - July 27, Monday:  
LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am:** A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE  
AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 10:40 - 11:20am: **KEYNOTE LECTURE 3 - July 27, Monday:**  
**ARTIFICIAL NEUROGENESIS**  
**Dr. James A. Crowder**  
**Chief Engineer, Raytheon Intelligence, Information, and Services;**  
**Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,**  
**Robotics and Artificial Intelligence Research Lab - Alexandria**  
**School of Innovation, Douglas County, Colorado, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 11:20a - 12:00p: **KEYNOTE LECTURE 4 - July 27, Monday:**  
**The Infinity Computer and Numerical Computations with Infinities**  
**and Infinitesimals**  
**Prof. Yaroslav D. Sergeev, Ph.D., D.Sc., D.H.C.**  
**Inventor of the Infinity Computer; Distinguished Professor, Head**  
**of Numerical Calculus Laboratory, University of Calabria, Rende,**  
**Italy; and Professor (part-time), Lobachevsky State University,**  
**Nizhni Novgorod, Russia**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:00 - 12:15pm: **KEYNOTE LECTURE 5 - July 27, Monday:**  
**World of IoT and Connected Cars**  
**Dr. Akash Singh, PhD**  
**IBM Corporation, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:15 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 1-ICWN: NETWORKS AND SYSTEMS: NOVEL APPLICATIONS AND ALGORITHMS,**  
**SYSTEMS + SENSOR TECHNOLOGIES**  
**Co-Chairs: Prof. C. Jinshong Hwang\* and Dr. Kanwal Gagneja\*\***  
**\*Department of CS, Texas State University, USA**  
**\*\*Southern Oregon University, Oregon, USA**  
**July 27, 2015 (Monday); 01:20pm - 05:40pm**  
**(LOCATION: Copper Room)**
- 01:20 - 01:40pm: **PAPR Reduction of Coded OFDM Signals**  
**Pedro Bento, Marko Beko, Joao Nunes, Marco Gomes,**  
**Rui Dinis, Vitor Silva**  
**Instituto de Telecomunicacoes, Portugal; University of**  
**Coimbra, Portugal; FCT-UNL, Caparica, Portugal;**  
**Universidade Lusofona de Humanidades e Tecnologias, Lisbon,**  
**Portugal; UNINOVA - Campus FCT UNL, Caparica, Portugal**
- 01:40 - 02:00pm: **An Open-Source Based Speech Recognition Android Application**  
**for Helping Handicapped Students Writing Programs**  
**Tong Lai Yu, Santhrushna Gande, Ronald Yu**  
**School of CSE, California State University, San Bernardino,**  
**California, USA; Department of Computer Science,**  
**University of Southern California, Los Angeles, California, USA**
- 02:00 - 02:20pm: **Stability and Performance Evaluation of Wireless Tele-Control**  
**System for MIMO System**  
**Faramarz Alsharif, Shiro Tamaki, Katsumi Yamashita,**  
**Tustomu Nagado, Tomokazu Nagata, Mohammad Reza Alsharif,**  
**and Heung Gyoon Ryu**  
**Graduate School of Engineering and Science, University of**  
**Ryukyus, Nishihara, Japan; Osaka Prefecture University, Osaka,**  
**Japan; Chungbuk National University, South Korea**

- 02:20 - 02:40pm: Self Healing MANET Using Weight Factor  
C. Jinshong Hwang, Ashwani Kush, Rosy Pawar  
Texas State University, San Marcos, Texas, USA; UC KUK, India
- 02:40 - 03:00pm: On Minimizing Broadcast Latency in Duty-cycled Wireless Sensor Networks  
Duc-Tai Le, Thang Le Duc, Vyacheslav V. Zalyubovskiy, Dongsoo Kim, Hyunseung Choo  
Sungkyunkwan University, South Korea; Sobolev Institute of Mathematics, Russia;  
Indiana University-Purdue University Indianapolis, USA
- 03:00 - 03:20pm: BREAK**
- 03:20 - 03:40pm: Optimization Modeling in a Smart Grid  
Damian Lampl, Md Chowdhury, Pranav Dass, Kendall E. Nygard, and Vahid Khiabani  
Department of CS, North Dakota State University, Fargo, North Dakota, USA; Department of Construction Management and Operations Management, Minnesota State University, Moorhead, Minnesota, USA
- 03:40 - 04:00pm: A Divide-and-Combination Based TMBOC Signal Tracking Scheme  
Sunghyuk Woo, Keunhong Chae, Huaping Liu, Seokho Yoon  
College of Information and Communication Engineering, Sungkyunkwan University, Suwon, South Korea; School of EECS, Oregon State University, Oregon, USA
- 04:00 - 04:20pm: The Link List with Wormhole Mechanism for Wireless Data Collection Network  
Jih-Ching Chiu, Wen-Shin Wang, Chien-Lung Chen  
Electrical Engineering, National Sun Yat-sen University, Kaohsiung, Taiwan, R.O.C.
- 04:20 - 04:40pm: Design of the Pig Management Application  
Hoseok Jeong, Misuk Kim, Hyun Yoe  
Department of Information and Communication Engineering, Suncheon National University, Republic of Korea; Agrifood Convergence ICT Research Center, Suncheon National University, Republic of Korea
- 04:40 - 05:00pm: Transducer Module Recognition in a Network Environment Based on IEEE 1451  
Teircio A. Dos Santos Filho, Antonio C. Oliveira-Jr, Dalton M. Tavares, Marcos A. Batista, and Alexandre C. R. Da Silva  
University Federal of Goia, UFG CAC, Institute of Biotechnology, Catalao, Goia, Brazil; Department of EE, Ilha Solteira, Sao Paulo, Brazil
- 05:00 - 05:20pm: IT-Based Ventilation Control System for Optimal Management of Single Span Greenhouses  
Seongjin Kim, Hyun Yoe  
Department of Information and Communication Engineering, Suncheon National University, Republic of Korea
- 05:20 - 05:40pm: Performance Perspective of Real Time Monitoring of Availability of Radio Access in a Network  
Okonigene Robert, Ikhine Matthew, Samuel John, Agbator Austin  
Ambrose Alli University, Ekpoma Edo State, Nigeria; Covenant University, Otta Ogun State, Nigeria



**06:00 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
(Please see the lists at the beginning of the program book for details)

**09:00 - 11:45pm: CONFERENCE RECEPTION DINNER / SOCIAL**  
July 27 - Monday; 09:00pm - 11:45pm  
(LOCATION: Ballrooms 1-5)

- SESSION 2-ICWN: AD-HOC NETWORKS, MANET**  
**Chair: Dr. Muazzam Ali Khan Khattak**  
**NUST Islamabad, Pakistan**  
**July 28, 2015 (Tuesday); 08:20am - 09:20am**  
**(LOCATION: Copper Room)**
- 08:20 - 08:40am: An Efficient Crowdsourcing Search Scheme in Vehicular Ad Hoc Networks  
Chyi-Ren Dow, Duc-Binh Nguyen, Zi-How Lin, Shiow-Fen Hwang  
Department of Information Engineering and Computer Science,  
Feng Chia University, Taichung, Taiwan
- 08:40 - 09:00am: Wireless Power Control for Tactical MANET: Power-Rate Bounds  
Sarah Lauff, Jeff Allen, Dave Schwartz  
Space and Naval Warfare Systems Center Pacific, SSC PACIFIC,  
San Diego, California, USA
- 09:00 - 09:20am: Fault-Tolerant Wireless Multihop Transmissions with Byzantine Failure Detection  
Norihiro Sota, Hiroaki Higaki  
Tokyo Denki University, Japan
- SESSION 3-ICWN: NETWORKS AND SYSTEMS: NOVEL APPLICATIONS AND ALGORITHMS AND SYSTEMS + SENSOR TECHNOLOGIES**  
**Chair: Dr. Afrand Agah**  
**West Chester University of PA, USA**  
**July 28, 2015 (Tuesday); 09:20am - 12:00pm**  
**(LOCATION: Copper Room)**
- 09:20 - 09:40am: Evaluation of a Remote Sensing Architecture for Precision Irrigation Using Open Hardware Technologies  
Rafael Boufleuer, Alfredo Del Fabro Neto, Bruno Romero De Azevedo, Iara Augustin, Joao Carlos D. Lima, Mirta T. Petry, Reimar Carlesso, Laudenir J. Basso  
Federal University of Santa Maria, Santa Maria RS, Brazil
- 09:40 - 10:00am: FREE SLOT
- 10:00 - 10:20am: Model for Action Prediction and Inference of Risk Situation in Smart Environments  
Alfredo Del Fabro Neto, Bruno Romero De Azevedo, Rafael Boufleuer, Iara Augustin, Joao Carlos D. Lima  
Informatics Graduation Program, Federal University of Santa Maria, Santa Maria RS, Brazil; Department of Languages & CS, Federal University of Santa Maria, Santa Maria RS, Brazil
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Hybrid Watchdog and Pathrater Algorithm for Improved Security in Mobile Ad Hoc Networks  
Ndabezihle Soganile, Benson Moyo, Tinny T. Baletlwa  
Department of CS, University of Venda, Thohoyandou, South Africa; Department of CS, Botho University, Botswana
- 11:00 - 11:20am: Anonymous Authorization Scheme Using ECC for RFID Privacy  
Chung Sei Rhee  
Chungbuk National University, South Korea

- 11:20 - 11:40am: Home Network Security: Beginner Versus Advanced  
Lauren Evanoff, Nicole Hatch, Kanwalinderjit Gagneja  
Southern Oregon University, Ashland, Oregon, USA
- 11:40 - 12:00pm: Preserving Source-Location Privacy in Wireless Sensor Networks Against a Global Eavesdropper  
Zhiwen Zeng, Xiaoyan Hu, Zhigang Chen, Hui Liu  
School of Information Science and Engineering, Central South University, Changsha, P. R. China; Department of CS, Missouri State University, Springfield, Missouri, USA

12:00 - 01:20pm: LUNCH (On Your Own)

**SESSION 4-ICWN: WIRELESS SENSOR NETWORKS**  
Co-Chairs: Prof. K. Ferens\* and Dr. Kanwal Gagneja\*\*  
\*University of Manitoba, Winnipeg, Manitoba, Canada  
\*\*Southern Oregon University, Oregon, USA  
July 28, 2015 (Tuesday); 01:20pm- 03:00pm  
(LOCATION: Copper Room)

- 01:20 - 01:40pm: Wireless Sensor Network Wormhole Detection Using Artificial Neural Network  
Mohammad Nurul Afsar Shaon, Ken Ferens  
Department of Electrical and Computer Engineering,  
University of Manitoba, Winnipeg, Manitoba, Canada
- 01:40 - 02:00pm: S-LEACH: A LEACH Extension for Shared Sensor Networks  
Gabriel Caldas, Claudio M. de Farias, Luci Pirmez, and Flavia Delicato  
Universidade Federal do Rio de Janeiro (PPGI-UFRJ),  
Rio de Janeiro, Brazil
- 02:00 - 02:20pm: Energy Aware Bottleneck Nodes Avoidance Data Gathering Tree for Wireless Sensor Networks  
Md. Morshedul Islam, M. Mahfuzul Islam, Golam Sorwar  
Bangladesh University of Engineering & Technology, Bangladesh;  
Southern Cross University, Australia
- 02:20 - 02:40pm: A Software Update Method for Noisy Wireless Environment of WSNs  
Hyeonrak Park, Hyeeyeong Jeong, Byoungchul Ahn  
Department of CE, Yeungnam University, South Korea
- 02:40 - 03:00pm: FREE SLOT

**03:00 - 03:40pm: POSTER/DISCUSSION SESSION A-ICWN**  
July 28, 2015 (Tuesday)  
(LOCATION: Hallways of Ballrooms 1-5)

- 0. Design and Implementation of Vehicular Network Platform Using Wi-Fi Direct  
Beomjun Kim, Yongsu Jeon, Seyoung Park, Yunju Baek  
School of Electrical and Computer Engineering, Pusan National University, Busan, Republic of Korea
- 0. Trustworthy and Communal Social Classifieds Using HTTP and SMS  
Yung-Ting Chuang  
Department of Information Management, National Chung Cheng University, Chia-Yi County, Taiwan
- 0. ...

- SESSION 5-ICWN: GREEN NETWORKS AND ENERGY EFFICIENT SYSTEMS: METHODS AND POWER AWARE SYSTEMS + WSN AND OTHER WIRELESS SYSTEMS**  
**Co-Chairs: Dr. Asoke Nath\* and Ms. Ulaa Al- Haddad\*\***  
**\*Department of CS, St. Xavier's College(Autonomous), India**  
**\*\*King Abdulaziz University, Jeddah, Saudi Arabia**  
**July 28, 2015 (Tuesday); 03:40pm - 05:40pm**  
**(LOCATION: Copper Room)**
- 03:40 - 04:00pm: Prediction and Recovery Based Smart Target Tracking Mechanism for WSNs  
 Muazzam A. Khan  
 NUST College of Electrical and Mechanical Engineering,  
 National University of Sciences & Technology, Pakistan
- 04:00 - 04:20pm: A Survey of Base Station Sleeping Technologies For Green Cellular Networks  
 Weston Mwashita, Ohanga Marcel Odhiambo  
 University of South Africa, Windhoek, Namibia;  
 Vaal University of Technology, South Africa
- 04:20 - 04:40pm: Improving Energy Efficiency for Carrier Aggregation in Cellular Networks via Desirability-Based Resource Allocation  
 Pei-Rong Li, Szu-Chen Yeh, Kai-Ten Feng  
 Department of ECE, National Chiao Tung University, Hsinchu, Taiwan; Department of EE, National Tsing Hua University, Hsinchu, Taiwan
- 04:40 - 05:00pm: Energy-Efficient Communication Algorithm Using Luminance Control of Ceiling Lighting for Wireless Sensor Networks  
 Hiroki Murakami, Hiroto Aida, Mitsunori Miki, Motoi Okada, and Kento Matsui  
 Graduate School of Science and Engineering, Doshisha University, Kyoto, Japan; Department of Science and Engineering, Doshisha University, Kyoto, Japan
- 05:00 - 05:20pm: A Study of Greenhouse Meteorological Disasters Prevention System Using Sensor  
 Soonyong Kim, Hyun Yoe  
 Department of Information and Communication Engineering,  
 Sunchon National University, Jeollanam-do, Republic of Korea
- 05:20 - 05:40pm: Computer Simulation of a Tapered Helical Antenna for Wireless Communication Applications  
 Obidiwe Tochukwu, Nweke Chisom B., Chineke Amechi, and Nwaokafor Kenneth  
 Department of CE, Michael Okpara University of Agriculture,  
 Umudike, Abia State, Nigeria
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

- 08:40 - 10:20am:** During this period, ICWN'15 attendees are encouraged to participate in sessions belonging to PDPTA'15, SAM'15, FECS'15, ICOMP'15, ESA'15, and GCA'15 conferences. These sessions discuss topics that significantly overlap the scope of ICWN'15.
- 10:20 - 10:40am:** BREAK
- SESSION 7-ICWN: MOBILITY: MOBILE COMPUTING AND APPLICATIONS + RELATED ALGORITHMS**  
**Co-Chairs: Prof. Tong Yu\* and Dr. Ihekweaba Chukwugoziem\*\***  
 \*California State University, San Bernardino, California, USA  
 \*\* Department of CE, Michael Okpara University Of Agriculture Umudike, Nigeria  
**July 29, 2015 (Wednesday); 10:40am - 12:20pm**  
**(LOCATION: Copper Room)**
- 10:40 - 11:00am:** Interference Coordination in FemtoCell Networks for QoS Performance Optimization  
 Jiao Wang, Jay Weitzen, Volkan Sevindik, Oguz Bayat, and Mingzhe Li  
 Department of EE, University of Massachusetts, Lowell, Massachusetts, USA; Q Factor Communications, Waltham, Massachusetts, USA; Graduate school of Science and Eng., Istanbul Kemerburgaz University, Istanbul Turkey
- 11:00 - 11:20am:** Clusterization-Based Resource Leverage in Hybrid Access FemtoCell Networks  
 Dlamini Thembelihle, Kai-Ten Feng, Jui-Hung Chu, Pei-Rong Li  
 Department of ECE, National Chiao Tung University, Hsinchu, Taiwan
- 11:20 - 11:40am:** Measurements of Inter-FemtoCell Reverse Link Interference  
 Jay Weitzen, Theodore Grosch  
 University of Massachusetts Lowell, Massachusetts, USA; Airvana, USA; Southern Polytechnic State University, Alpharetta, Georgia, USA
- 11:40 - 12:00pm:** IP Network Mobility Using OSPF Area  
 Sunghyun Yoon, Ho-Yong Ryu  
 Smart Network Research Department, Electronics and Telecommunications Research Institute (ETRI), Daejeon, South Korea
- 12:00 - 12:20pm:** Hand Gesture Interface Using Light-Dark Changes in an Illuminance Meter Built in Mobile Devices  
 Kento Matsui, Hiroto Aida, Hikaru Ichikawa, Mitsunori Miki, and Hiroki Murakami  
 Graduate School of Science and Engineering, Doshisha University, Kyoto, Japan; Department of Science and Engineering, Doshisha University, Kyoto, Japan
- 12:20 - 01:20pm:** LUNCH (On Your Own)
- 01:20 - 03:00pm:** During this period, ICWN'15 attendees are encouraged to participate in sessions belonging to PDPTA'15, SAM'15, FECS'15, ICOMP'15, ESA'15, and GCA'15 conferences. These sessions discuss topics that significantly overlap the scope of ICWN'15.

- 03:00 - 03:40pm: POSTER/DISCUSSION SESSION B-ICWN**  
**July 29, 2015 (Wednesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**
- SESSION 8-ICWN: MOBILITY: MOBILE COMPUTING AND APPLICATIONS + RELATED ALGORITHMS + BIOMETRIC**  
**Chair: Dr. Ghadah Aldabbagh**  
**King Abdulaziz University, Jeddah, Saudi Arabia**  
**July 29, 2015 (Wednesday); 03:40pm - 05:40pm**  
**(LOCATION: Copper Room)**
- 03:40 - 04:00pm:** Infrastructured Mobility Management Approach for Future Internet ETArch Networks  
 Felipe Silva, Augusto Neto, Douglas Braz, Jose Castillo-Lema, Flavio Silva  
 Federal Institute of Education, Science and Technology of Rio Grande do Norte (DIATINF IFRN), Brazil; Departament of Informatics and Applied Mathematics (DIMAp), Federal University of Rio Grande do Norte, Brazil; Polytechnic School (Poli-USP), University of Sao Paulo, Brazil; Faculty of Computing (FACOM), Federal University of Uberlandia, Brazil
- 04:00 - 04:20pm:** A Study on the NFC Based Livestock Management System for Traceability  
 Byeongbeom Kang, Kyungjin Lee, Hyun Yoe  
 Department of Information and Communication Engineering, Suncheon National University, Republic of Korea; Agrifood Convergence ICT Research Center, Suncheon National University, Republic of Korea
- 04:20 - 04:40pm:** A Classification of Clustering Approaches and Algorithms for Wireless Networks  
 Ula'a A. Alhaddad, Ghadah Aldabbagh  
 Faculty of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia
- 04:40 - 05:00pm: FREE SLOT**
- 05:00 - 05:20pm:** A Distributed Parallel Reconstruction Method for Mobile Terminals  
 Liu Zhen, Meng Tengting, Liu Xiao  
 Jiangsu University of Science and Technology, Zhenjiang, Jiangsu, P. R. China
- 05:20 - 05:40pm:** Multimodal Biometrics as Attack Measures in Biometric Systems  
 Ifeoma U. Ohaeri, Obeten Ekabua, Naison Gasela  
 Department of Computer Science, North-West University, Mafikeng Campus, South Africa
- 05:40 - 09:00pm: TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

- 08:40a - 05:00p:** During this period, ICWN'15 attendees are encouraged to participate in sessions belonging to PDPTA'15, SAM'15, FECS'15, ICOMP'15, ESA'15, and GCA'15 conferences. These sessions discuss topics that significantly overlap the scope of ICWN'15.

# IKE'15 CONFERENCE SCHEDULE

## The 2015 International Conference on Information & Knowledge Engineering

*There are a number of other sessions (not listed as part of IKE'15 in this schedule) that are of potential interest to IKE'15 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, some sessions in DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, and ICOMP'15 conferences discuss topics that are within the scope of IKE'15; these have been scheduled so that selected IKE'15 groups/attendees can also participate in them.*

*Note that each conference is divided into a number of topical sessions. These sessions are not necessarily scheduled in the same room/location. Therefore, conference attendees are to check the location of the session(s) they wish to attend; The conference room numbers (Locations) appear in this document.*

July 27

- 08:30 - 08:45am: CONGRESS OPENING REMARKS - July 27, Monday:**  
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)  
University of Georgia, Georgia, USA;  
Editor-in-Chief, The Journal of Supercomputing (Springer)  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 08:45 - 09:35am: KEYNOTE LECTURE 1 - July 27, Monday:**  
COMPUTING THE CONTEXT AT THE END OF THE NON-SEMANTIC ERA  
Prof. Victor Raskin  
Distinguished Professor of English and Linguistics and Professor  
of Computer Science and of Computer and Information Technology  
(Courtesy); Co-Founder, Associate Director, and Charter Fellow  
of Center for Education and Research in Information Assurance  
and Security (CERIAS);  
Purdue University, Indiana, USA  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 09:40 - 10:20am: KEYNOTE LECTURE 2 - July 27, Monday:**  
LESSONS FROM COMMERCIALIZING IDEAS FROM COLLEGES AROUND THE  
WORLD: WHAT COLLEGE STUDENTS, FACULTY AND RESEARCHERS MUST  
DO TO BE SUCCESSFUL  
Dr. Sandeep Chatterjee  
EVx Global ([www.evxglobal.com](http://www.evxglobal.com)); Named Young Global Leader by the  
World Economic Forum for his professional accomplishments,  
commitment to society and potential to contribute to shaping the  
future of the world.  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)
- 10:25 - 10:35am: A MESSAGE FROM REPRESENTATIVES OF MAJOR PUBLISHERS OF SCIENCE  
AND RESEARCH BOOKS, JOURNALS, AND MONOGRAPHS**  
Ms. Mary E. James  
Senior Editor Applied Sciences, Publisher: Springer  
&  
Mr. Todd Green  
Publisher of Computer Science and Digital Security, Elsevier  
(LOCATION: Monte Carlo, Blue Man Group, main THEATER)

- 10:40 - 11:20am: **KEYNOTE LECTURE 3 - July 27, Monday:**  
**ARTIFICIAL NEUROGENESIS**  
**Dr. James A. Crowder**  
**Chief Engineer, Raytheon Intelligence, Information, and Services;**  
**Aurora, Colorado, USA; Chief Mentor/Scientist of the Automation,**  
**Robotics and Artificial Intelligence Research Lab - Alexandria**  
**School of Innovation, Douglas County, Colorado, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 11:20a - 12:00p: **KEYNOTE LECTURE 4 - July 27, Monday:**  
**The Infinity Computer and Numerical Computations with Infinities**  
**and Infinitesimals**  
**Prof. Yaroslav D. Sergeev, Ph.D., D.Sc., D.H.C.**  
**Inventor of the Infinity Computer; Distinguished Professor, Head**  
**of Numerical Calculus Laboratory, University of Calabria, Rende,**  
**Italy; and Professor (part-time), Lobachevsky State University,**  
**Nizhni Novgorod, Russia**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:00 - 12:15pm: **KEYNOTE LECTURE 5 - July 27, Monday:**  
**World of IoT and Connected Cars**  
**Dr. Akash Singh, PhD**  
**IBM Corporation, USA**  
**(LOCATION: Monte Carlo, Blue Man Group, main THEATER)**
- 12:15 - 01:20pm: **LUNCH (On Your Own)**
- 01:20 - 03:00pm: **During this period, IKE'15 attendees are encouraged to**  
**participate in sessions belonging to DMIN'15, IPCV'15,**  
**ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences.**  
**These sessions discuss topics that significantly overlap**  
**the scope of IKE'15.**
- 03:00 - 03:20pm: **BREAK**
- SESSION 1-IKE:** **INFRASTRUCTURES + APPLICATIONS OF INFORMATION & KNOWLEDGE**  
**ENGINEERING + LEGISLATION & INTELLECTUAL PROPERTY DISCUSSIONS**  
**Chair: Dr. Hamdy M. Mousa**  
**Faculty of Computers and Information, Menoufia University, Egypt**  
**July 27, 2015 (Monday); 03:20pm - 04:20pm**  
**(LOCATION: Gold Room)**
- 03:20 - 03:40pm: **Wind Power Generation Prediction on a Large Real Life Dataset**  
**Roshil Paudyal, Mugizi Robert Rwebangira, Mandoye Ndoye**  
**Howard University, Washington, D.C., USA;**  
**Tuskegee University, USA**
- 03:40 - 04:00pm: **The Impact of Uncertainty Measures in the Cardiac Arrhythmia**  
**Detection Supported by IK-DCBRC**  
**Abdeljalil Khelessi**  
**Department of informatics, Abou Bakr Belkaid University,**  
**Tlemcen, Algeria**
- 04:00 - 04:20pm: **Post-Mayo/Biosig/Alice - The Precise Meanings of Their**  
**New SPL Terms**  
**Sigram Schindler, Bernd Wegner, Juergen Schulze, and**  
**Doerte Schoenberg**  
**TELES Patents Rights International GmbH, Berlin, Germany;**  
**TU Berlin, Germany**



- SESSION 2-IKE: SECURITY, PRIVACY & RELATED METHODS + IDENTITY MANAGEMENT METHODS**  
**Chair: Dr. Hamdy M. Mousa**  
**Faculty of Computers and Information, Menoufia University, Egypt**  
**July 27, 2015 (Monday); 04:20pm - 05:20pm**  
**(LOCATION: Gold Room)**
- 04:20 - 04:40pm: Multi-Participant Encryption-Steganography Technique  
Hamdy M. Mousa  
Faculty of Computers and Information,  
Menoufia University, Egypt
- 04:40 - 05:00pm: Design Consideration for Synchronization Methods in an  
Identity Management Service  
Fumiko Kobayashi, John Talburt  
Department of Information Science, University of Arkansas  
at little Rock, Arkansas, USA
- 05:00 - 05:20pm: Applying Phonetic Hash Functions to Mitigate Data Quality  
Issues in Student Enrollment Data  
Daniel Pullen, Pei Wang, John Talburt, Ningning Wu  
Department of Information Science, University of  
Arkansas at little Rock, Arkansas, USA
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the beginning of the program book for details)**
- 09:00 - 11:45pm: **CONFERENCE RECEPTION DINNER / SOCIAL**  
**July 27 - Monday; 09:00pm - 11:45pm**  
**(LOCATION: Ballrooms 1-5)**

- SESSION 3-IKE: KNOWLEDGE ENGINEERING & INFORMATION FUSION +  
KNOWLEDGE DISCOVERY + SEMANTIC WEB + DATA MINING**  
**Co-Chairs: Dr. James A. Crowder\* and Dr. Deok Hee Nam\*\***  
**\*Raytheon Intelligence, Information, and Services, USA**  
**\*\*Wilberforce University, Wilberforce, Ohio, USA**  
**July 28, 2015 (Tuesday); 08:00am - 10:20am**  
**(LOCATION: Ballroom 1)**
- 08:00 - 08:20am: A Scalable Strategy for Mining Association Rules  
Under Grids  
Raja Tlili, Khaoula Elbedoui, Yahya Slimani  
Faculty of Sciences of Tunis (FST), Higher Institute  
of Multimedia Arts of Manouba (ISAMM), Tunisia
- 08:20 - 08:40am: Formation of Word Dictionary of Bangla Vowel Ended Roots  
for First Person for Universal Networking Language  
Md. Nawab Yousuf Ali, Golam Sorwar, Md. Shamsujjoha  
Computer Science and Engineering Department, East West  
University, Dhaka, Bangladesh; School of Business and  
Tourism, Southern Cross University, Australia
- 08:40 - 09:00am: Determinants of Plasma Beta-Carotene Levels Using  
Neurofuzzy System and Multivariate Analyses  
Deok Hee Nam  
Wilberforce University, Wilberforce, Ohio, USA
- 09:00 - 09:20am: Lifecycle Based Modeling of Smart City Ecosystem  
Ahmed Hefnawy, Abdelaziz Bouras, Chantal Cherifi  
DISP Lab, Lyon 2 University, Lyon, France;  
DCSE, College of Engineering, Qatar University, Qatar;  
Ministry of Information and Communications Technology  
(ictQATAR), Qatar
- 09:20 - 09:40am: Stochastic and Chaotic Calculus Methods for Detection of  
Multi-Agile Threat Emitters  
James A. Crowder  
Raytheon Intelligence, Information and Services, Aurora,  
Colorado, USA
- 09:40 - 10:00am: FREE SLOT
- 10:00 - 10:20am: Condensation of Reverse Engineered UML Diagrams by Using  
the Semantic Web Technologies  
Meisam Booshehri, Peter Luksch  
Institute of Computer Science, University of Rostock, Germany
- 10:20 - 10:40am: BREAK**

- SESSION 4-IKE: INFORMATION AND KNOWLEDGE EXTRACTION, REPRESENTATION AND SHARING**  
**Chair: Dr. Abdeljalil Khelassi**  
**Abou Bakr Belkaied University of Tlemcen, Algeria**  
**July 28, 2015 (Tuesday); 10:40am - 12:20pm**  
**(LOCATION: Ballroom 1)**
- 10:40 - 11:00am: Applying a Semantic and Syntactic Comparisons Based Automatic Model Transformation Methodology to Serve Information Sharing  
Tiexin Wang, Sebastien Truptil, Frederick Benaben  
Centre Genie Industriel, University de Toulouse - Mines Albi, Campus Jarlard, Albi, France
- 11:00 - 11:20am: Knowledge Representation: Conceptual Graphs vs. Flow-Based Modeling  
Sabah Al-Fedaghi  
Department of Computer Engineering, Kuwait University, Kuwait
- 11:20 - 11:40am: A Hybrid Approach to Extract and Classify Relation from Biomedical Text  
Abdul Wahab Muzaffar, Farooque Azam, Usman Qamar, Muhammad Latif, and Shumyla Rasheed Mir  
National University of Sciences and Technology (NUST), Islamabad, Pakistan; University of Hail, Saudi Arabia
- 11:40 - 12:00pm: Real-Time Motion Detection Using Low-Resolution Web Cams  
Mark Smith  
Department of Computer Science, University of Central Arkansas, Conway, Arkansas, USA
- 12:00 - 12:20pm: Market Research of the Innovative Smelling Smartphone  
Raed Al-Wishah, Nof Aljamani, Zeid Abukhalaf, Omar Naser, and Omar Khasasbeh  
Princess Sumaya University for Technology, Amman, Jordan
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- 01:20 - 03:00pm: **During this period, IKE'15 attendees are encouraged to participate in sessions belonging to DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences. These sessions discuss topics that significantly overlap the scope of IKE'15.**
- 03:00 - 03:40pm: **POSTER/DISCUSSION SESSION A-IKE**  
**July 28, 2015 (Tuesday)**  
**(LOCATION: Hallways of Ballrooms 1-5)**
- 03:40 - 05:40pm: **During this period, IKE'15 attendees are encouraged to participate in sessions belonging to DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences. These sessions discuss topics that significantly overlap the scope of IKE'15.**
- 05:40 - 09:00pm: **TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES**  
**(Please see the lists at the begining of the program book for details)**

**08:20a - 01:40p:** During this period, IKE'15 attendees are encouraged to participate in sessions belonging to DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences. These sessions discuss topics that significantly overlap the scope of IKE'15.

**SESSION 5-IKE:** BIG DATA ANALYTICS + DATA WAREHOUSE DESIGN + SOCIAL MEDIA + BUSINESS INTELLIGENCE AND KNOWLEDGE DISCOVERY + RECOMMENDER SYSTEMS  
**Chair:** Dr. AbdeIdjalil KheIassi  
 Abou Bakr Belkaied University of Tlemcen, Algeria  
 July 29, 2015 (Wednesday); 01:40pm - 03:00pm  
 (LOCATION: Ballroom 1)

**01:40 - 02:00pm:** Data Warehouse Design Using Row and Column Data Distribution  
 Behrooz Seyed-Abbassi, Vivekanand Madesi  
 School of Computing, University of North Florida,  
 Jacksonville, Florida, USA

**02:00 - 02:20pm:** The Effect of Neighbor Selection in Collaborative Filtering Systems  
 Soojung Lee  
 Gyeongin National University of Education,  
 Republic of Korea

**02:20 - 02:40pm:** Multidimensional Analysis Using Knowledge Layer for Effective Decision Making  
 Ayaz Mahmood, Sohail Asghar  
 Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Islamabad, Pakistan

**02:40 - 03:00pm:** Identifying Common Individual Identities across Various Social Media Sources through Analytics  
 Gurpreet Singh Bawa  
 Accenture, India

**03:00 - 03:40pm:** POSTER/DISCUSSION SESSION B-IKE  
 July 29, 2015 (Wednesday)  
 (LOCATION: Hallways of Ballrooms 1-5)

**03:40 - 05:40pm:** During this period, IKE'15 attendees are encouraged to participate in sessions belonging to DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences. These sessions discuss topics that significantly overlap the scope of IKE'15.

**05:40 - 09:00pm:** TUTORIALS + PANEL DISCUSSIONS + ADDITIONAL INVITED LECTURES  
 (Please see the lists at the begining of the program book for details)

**08:20 - 11:00am:** During this period, IKE'15 attendees are encouraged to participate in sessions belonging to DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences. These sessions discuss topics that significantly overlap the scope of IKE'15.

**SESSION 6-IKE:** FEATURE EXTRACTION AND RELATED ALGORITHMS + INFORMATION RETRIEVAL and ONTOLOGY BASED METHODS  
**Chair:** Dr. Abdeljalil Khelassi  
 Abou Bakr Belkaied University of Tlemcen, Algeria  
 July 30, 2015 (Thursday); 11:00am - 12:20pm  
 (LOCATION: Ballroom 1)

**11:00 - 11:20am:** ODISEES: Ontology-Driven Interactive Search Environment for Earth Sciences  
 Matthew T. Rutherford, Elisabeth B. Huffer, John M. Kusterer, and Brandi M. Quam  
 Lingua Logica LLC, USA; NASA Langley Research Center, Atmospheric Science Data Center, Hampton, Virginia, USA; Science Directorate, NASA Langley Research Center, Atmospheric Science Data Center, Hampton, Virginia, USA

**11:20 - 11:40am:** Index Optimization with KNN Considering Similarities Among Features  
 Taeho Jo  
 Department of Computer and Information Engineering, Inha University, Republic of Korea

**11:40 - 12:00pm:** Classification Based Filtering for Personalized Information Retrieval  
 Sachintha Pitigala, Cen Li  
 Center for Computational Sciences, MTSU, Murfreesboro, TN, USA; Department of Computer Science, MTSU, Murfreesboro, TN, USA

**12:00 - 12:20pm:** Computing the Semantic Distance Between Terms: An Ontology-Based Approach  
 Alicia Martinez, Fernando Pech, Noe Castro, Dante Mujica, and Ilse Caspeta  
 Computer Science Department, Centro Nacional de Investigacion y Desarrollo Tecnológico CENIDET, Cuernavaca, Morelos, Mexico

**12:20 - 01:20pm:** LUNCH (On Your Own)

**01:20 - 05:00pm:** During this period, IKE'15 attendees are encouraged to participate in sessions belonging to DMIN'15, IPCV'15, ICAI'15, BIOCOMP'15, ABDA'15, EEE'15, or ICOMP'15 conferences. These sessions discuss topics that significantly overlap the scope of IKE'15.