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REGISTRATION DATES AND TIMES & CONFERENCE PACKAGE PICKUP

July 16, 2017 (Sunday):

**03:00pm - 07:00pm
(LOCATION: 2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)**

July 17, 2017 (Monday):

**07:00am - 05:00pm
(LOCATION: 2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)**

July 18, 2017 (Tuesday):

**07:00am - 05:00pm
(LOCATION: 2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)**

July 19, 2017 (Wednesday):

**07:00am - 05:00pm
(LOCATION: 2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)**

July 20, 2017 (Thursday):

**07:00am - 05:00pm
(LOCATION: 2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)**

CONFERENCE RECEPTION DINNER / SOCIAL

July 17, 2017 (Monday)

**08:30 - 11:00pm
(LOCATION: Ballrooms 6 & 7)**

CONFERENCES ACRONYMS AND THEIR FULL TITLES

ABDA'17:	<i>The 4th International Conference on Advances in Big Data Analytics</i>
ACC'17:	<i>The 1st International Conference on Applied Cognitive Computing</i>
BIOCOMP'17:	<i>The 18th International Conference on Bioinformatics & Computational Biology</i>
BIOENG'17:	<i>The 3rd International Conference on Biomedical Engineering and Sciences</i>
CSC'17:	<i>The 15th International Conference on Scientific Computing</i>
DMIN'17:	<i>The 13th International Conference on Data Mining</i>
EEE'17:	<i>The 16th International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government</i>
ESCS'17:	<i>The 15th International Conference on Embedded Systems, Cyber-physical Systems, and Applications</i>
FCS'17:	<i>The 13th International Conference on Foundations of Computer Science</i>
FECS'17:	<i>The 13th International Conference on Frontiers in Education: Computer Science and Computer Engineering</i>
GCC'17:	<i>The 13th International Conference on Grid, Cloud, and Cluster Computing</i>
HIMS'17:	<i>The 3rd International Conference on Health Informatics and Medical Systems</i>
ICAI'17:	<i>The 19th International Conference on Artificial Intelligence</i>
ICOMP'17:	<i>The 18th International Conference on Internet Computing and IoT</i>
ICWN'17:	<i>The 16th International Conference on Wireless Networks</i>
IKE'17:	<i>The 16th International Conference on Information & Knowledge Engineering</i>
IPCV'17:	<i>The 21st International Conference on Image Processing, Computer Vision, & Pattern Recognition</i>
MSV'17:	<i>The 14th International Conference on Modeling, Simulation and Visualization Methods</i>
PDPTA'17:	<i>The 23rd International Conference on Parallel and Distributed Processing Techniques and Applications</i>
SAM'17:	<i>The 16th International Conference on Security and Management</i>
SERP'17:	<i>The 15th International Conference on Software Engineering Research and Practice</i>

**PARTIAL LIST OF ADDITIONAL KEYNOTES, INVITED TALKS, & PANEL
DISCUSSIONS AND TUTORIALS**

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.

O. CONGRESS OPENING REMARKS: (JULY 17)

*Prof. Hamid R. Arabnia
Professor of Computer Science, University of Georgia, USA;
Editor-in-Chief, The Journal of Supercomputing (Springer);
Fellow, Center of Excellence in Terrorism, Resilience,
Intelligence & Organized Crime Research (CENTRIC).
Date & Time: July 17 (Monday), 2017; 08:30am - 08:50am
LOCATION: East Ballrooms 6 & 7*

O. ANNOUNCEMENT: (JULY 17)

*ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS AND PHD
STUDENTS THROUGH COLLABORATION AND BUILDING NETWORKS
Nnenna Christine Martin
ResearchLink International LLC
LOCATION: East Ballrooms 6 & 7*

O. KEYNOTE LECTURE: (JULY 17)

*ROBUST COMPUTING SYSTEMS
Prof. H. J. Siegel
IEEE Fellow; ACM Fellow; Founding Director of Information Science and
Technology Center; Abell Endowed Chair Distinguished Professor of
Electrical and Computer Engineering and Professor of Computer Science;
Department ECE and CS, Colorado State University, Fort Collins, USA
Date and Time: July 17 (Monday), 2017; 9:05am - 10:00am
LOCATION: East Ballrooms 6 & 7*

O. KEYNOTE LECTURE: (JULY 17)

*VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN TRANSPORT
AND INDUSTRY
Prof. Diego Galar
Professor & Former Director of Academic Innovation and Subsequently
Pro-Vice-Chancellor; Division of O&M Engineering, Lulea University of
Technology, Sweden; Head, Maintenance and Reliability at TECNALIA,
Spain; VOLVO Chair for Reliability and Maintenance, Skovde University,
Sweden
Date and Time: July 17 (Monday), 2017; 10:05am - 10:50am
LOCATION: East Ballrooms 6 & 7*

O. KEYNOTE LECTURE: (JULY 17)

*DEVELOPING STREAMLINED COMPUTATIONAL INTELLIGENCE APPROACHES THAT
FACILITATE SINGLE-CELL GENOMICS RESEARCH
Prof. Mary Yang
Director of MidSouth Bioinformatics Center, Director of Joint UALR-UAMS
Bioinformatics Ph.D. Program, Little Rock, Arkansas, USA; Currently
visiting Department of Genetics, Yale University, New Haven,
Connecticut, USA
Date and Time: 05:20pm - 06:00pm
LOCATION: East Ballroom 8*

0. KEYNOTE LECTURE: (JULY 17)

THE ROLE OF TECHNOLOGY

(A version of this talk is scheduled for presentation at Ted.com)

Prof. Igor Schagaev

Director, ITACS Ltd, United Kingdom

Date and Time: July 17 (Monday), 2017; 05:40pm - 06:20pm

LOCATION: Platinum Room

0. INVITED LECTURE: (JULY 17)

DISCOVERY OF A NATURALLY OCCURRING TEMPERATURE SCALE

Dr. Steve Richfield

President, FixLowBodyTemp.com & DrEliza.com, USA

Date and Time: July 17 (Monday), 2017; 05:20pm - 06:00pm

LOCATION: Gold Room

0. TUTORIAL: (JULY 17)

PREDICTING WITH CONFIDENCE

Prof. Ulf Johansson

Department of Computer Science and Informatics,

Jonkoping University, Sweden; Served as an expert witness in the

Swedish Supreme Court

Date and Time: July 17 (Monday), 2017; 03:40pm - 05:40pm

LOCATION: Copper Room

0. INVITED LECTURE - TUTORIAL: (JULY 18)

BIG DATA ANALYTICS WITH SPARK

Dr. Mark C. Lewis, Trinity University, San Antonio, Texas, USA;

Author of several textbooks on Scala published by CRC Press

Date and Time: July 18 (Tuesday), 2017; 05:20pm - 06:20pm

LOCATION: Ballroom 8

0. TUTORIAL: (JULY 18)

TERRORISTS, HACKERS, AND CRIMINALS: UNDERSTANDING THE DARKNET

Prof. Gary M. Weiss and Andrew H. Johnston

Interim Chair, Associate Professor & Director of Wireless Sensor

Data Mining (WISDM) Lab, Department of Computer and Information

Science, Fordham University, Bronx, New York, USA

WISDM Lab, Fordham University, Bronx, New York, USA

Date and Time: July 18 (Tuesday), 2017; 04:20pm - 06:00pm

LOCATION: Copper Room

0. INVITED LECTURE: (JULY 18)

DATA ECONOMY: THE NEW GOLD RUSH?

Dr. Peter Geczy

National Institute of Advanced Industrial Science and Technology

(AIST), Japan; Senior Member, IEEE; Member, INFORMS and INNS

Date and Time: July 18 (Tuesday), 2017; 09:20 - 10:20am

LOCATION: Copper Room

0. TUTORIAL (JULY 18)

E-MAINTENANCE AND INDUSTRY 4.0: KNOWLEDGE EXTRACTION IN INDUSTRY AND TRANSPORTATION

Prof. Diego Galar

Professor & Former Director of Academic Innovation and Subsequently Pro-

Vice-Chancellor; Division of O&M Engineering, Lulea University of

Technology, Sweden; Head, Maintenance and Reliability at TECNALIA, Spain;

VOLVO Chair for Reliability and Maintenance, Skovde University, Sweden

Date and Time: July 18 (Tuesday), 2017; 06:00pm - 07:00pm

Location: Copper Room

0. INVITED LECTURE/TUTORIAL: (JULY 18)

CYBER SECURITY - PRIVACY: Are We All Living in Glass Houses?

Can I Get Some Privacy, Please?

Prof. Levent Ertaul

Computer Science Department, California State University, East Bay, California, USA; Fellowship recipient, Lawrence Livermore National Laboratories (LLNL), Cyber Defenders program

Date and Time: July 18 (Tuesday), 2017; 05:00pm - 06:00pm

LOCATION: Ballroom 6

0. INVITED LECTURE: (JULY 18)

INDUSTRIAL DATA SCIENCE AND BLACK SWANS

Prof. Diego Galar

Professor & Former Director of Academic Innovation and Subsequently Pro-Vice-Chancellor; Division of O&M Engineering, Lulea University of Technology, Sweden; Head, Maintenance and Reliability at TECNALIA, Spain; VOLVO Chair for Reliability and Maintenance, Skovde University, Sweden

Date and Time: July 18 (Tuesday), 2017; 10:40am - 12:20pm

LOCATION: Copper Room

0. INVITED LECTURE: (JULY 19)

MODIFICATION OF MACHINE LEARNING ALGORITHMS FOR TEXT CATEGORIZATION

Dr. Taeho Jo

Hongik University, Korea

Date and Time: July 19 (Wednesday), 2017; 05:20pm - 06:20pm

LOCATION: Copper Room

0. CONGRESS CLOSING REMARKS: (JULY 20)

Prof. Hamid R. Arabnia

Professor of Computer Science, University of Georgia, USA; Editor-in-Chief, The Journal of Supercomputing (Springer); Fellow, Center of Excellence in Terrorism, Resilience, Intelligence & Organized Crime Research (CENTRIC).

Date and Time: July 20 (Thursday), 2017; 05:00pm - 05:20pm

LOCATION: Ballroom 7

PDPTA'17 + GCC'17 + CSC'17 CONFERENCE SCHEDULES

The 2017 International Conference on Parallel and Distributed Processing Techniques & Applications (PDPTA'17)

+

The 2017 International Conference on Grid, Cloud, and Cluster Computing (GCC'17)

+

The 2017 International Conference on Scientific Computing (CSC'17)

Because of partial topical and technical overlap between PDPTA'17, GCC'17, and CSC'17, the schedules 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 PDPTA'17, GCC'17, and CSC'17 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ABDA (Advances in Big Data Analytics), BIOCOMP (Bioinformatics), ESCS (Cyber-physical Systems), FECS (Education), ICOMP (IoT), ICWN (Networks), IPCV (Computer Vision), MSV (Modeling & Simulation), and SAM (Security) conferences discuss topics that are within the scope of PDPTA'17, GCC'17, and CSC'17; these have been scheduled so that selected PDPTA'17, GCC'17, and CSC'17 attendees can also participate in them. Note that because of the merge, there are a number of concurrent sessions.

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 tracks they wish to attend; The conference room numbers (Locations) appear in this document.

July 16

03:00p - 07:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:30 - 08:50am: CONGRESS OPENING REMARKS - July 17, Monday:
 Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)
 Department of Computer Science, University of Georgia, USA;
 Editor-in-Chief, The Journal of Supercomputing (Springer);
 Fellow, Center of Excellence in Terrorism, Resilience,
 Intelligence & Organized Crime Research (CENTRIC).
 (LOCATION: East Ballrooms 6 & 7)
- 08:50 - 09:00am: Announcement:
 ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS
 & PHD STUDENTS THROUGH COLLABORATION & BUILDING NETWORKS
 Nnenna Christine Martin
 Research Director, ResearchLink International, Greensboro,
 North Carolina, USA
 (LOCATION: East Ballrooms 6 & 7)
- 09:05 - 10:00am: KEYNOTE LECTURE - July 17, Monday:
 ROBUST COMPUTING SYSTEMS
 Prof. H. J. Siegel
 IEEE Fellow; ACM Fellow; Founding Director of Information
 Science and Technology Center; Abell Endowed Chair
 Distinguished Professor of Electrical and Computer
 Engineering and Professor of Computer Science; Department
 ECE and CS, Colorado State University, Fort Collins, USA
 (LOCATION: East Ballrooms 6 & 7)
- 10:05 - 10:50am: KEYNOTE LECTURE - July 17, Monday:
 VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN
 TRANSPORT AND INDUSTRY
 Prof. Diego Galar
 Professor & Former Director of Academic Innovation and
 Subsequently Pro-Vice-Chancellor; Division of O&M Engineering,
 Lulea University of Technology, Sweden; Head, Maintenance
 and Reliability at TECNALIA, Spain; VOLVO Chair for
 Reliability and Maintenance, Skovde University, Sweden
 (LOCATION: East Ballrooms 6 & 7)
- SESSION 1-GCC: DISTRIBUTED COMPUTING AND NOVEL APPLICATIONS + CLUSTER COMPUTING
 Chairs: Prof. Jaime Raigoza* and Prof. Abhishek Narain Singh**
 *California State University, Chico, USA;
 **University of Virginia, USA and Leipzig University,
 Germany
 July 17, 2017 (Monday); 11:00am - 12:00pm
 (LOCATION: Ballroom 7)
- 11:00 - 11:20am: *Cost-Efficiency Comparison of an ARM Cluster and Intel
 Server*
 Jaden D. Weiss
 Hazlet, New Jersey, USA
- 11:20 - 11:40am: *Modern Parallelization for a Dataflow Programming Environment*
 Zackary Kurima-Blough, Mark C. Lewis, Lisa Lacher
 Department of Computer Science, Trinity University,
 San Antonio, Texas, USA;
 College of Science and Engineering, University of Houston
 at Clear Lake, Clear Lake, Texas, USA

- 11:40 - 12:00pm: *Evaluating the Performance Evaluation Framework for Auto-Scaling (PEAS) Under Alternative Workload Mixes*
Kester Leochico, Eugene John
Department of Electrical and Computer Engineering,
The University of Texas at San Antonio, Texas, USA
- 12:00 - 01:00pm: LUNCH (On Your Own)
- SESSION 2-PDPTA: INTERNATIONAL WORKSHOP: MATHEMATICAL MODELING & PROBLEM SOLVING, MPS
Chair: Prof. Hayaru Shouno,
The University of Electro-Communications, Japan;
(Coordination provided by Prof. Kazuki Joe,
Nara Women's University, Nara, Japan)
July 17, 2017 (Monday); 01:00pm - 06:00pm
(LOCATION: Ballroom 7)
- 01:00 - 01:20pm: *Predicting Strengths of Protein-protein Interactions through Online Regression Algorithms*
Morihiro Hayashida, Mayumi Kamada, Hitoshi Koyano
Department of Electrical Engineering and Computer Science,
National Institute of Technology, Matsue, Shimane, Japan
- 01:20 - 01:40pm: *Effective Computation Environment for the Traveling Salesman Problem using Three-dimensional Information*
Moe Unno, Shinya Mizuno
Shizuoka Institute of Science and Technology, Fukuroi,
Shizuoka, Japan
- 01:40 - 02:00pm: *Performance Evaluation of a Combination of the Parallel Bisection Method and the Block Inverse Iteration Method with Reorthogonalization for Eigenvalue Problems on MIC processor*
Sho Araki, Hiroyuki Ishigami, Masayuki Osawa, Kinji Kimura,
and Yoshimasa Nakamura
Graduate School of Informatics, Kyoto University,
Kyoto, Japan
- 02:00 - 02:20pm: *Consideration on Feature Extraction of Skill Level by Insertion Angle of Injection Technique*
Takeshi Matsuda and Yukie Majima
Siebold Campus, Manabino, Nagayo-cho, Nishi-Sonogi-gun,
Nagasaki, Japan
- 02:20 - 02:40pm: *An Improvement of Augmented Implicitly Restarted Lanczos Bidiagonalization Method*
Yuya Ishida, Masami Takata, Kinji Kimura, Yoshimasa Nakamura
Research Group of Information and Communication Technology
for Life, Nara Women's University, Nara, Japan
- 02:40 - 03:00pm: *Early-Modern Printed Character Recognition using Ensemble Learning*
Kaoru Fujimoto, Yu Ishikawa, Masami Takata, Kazuki Joe
Department of Advanced Information and Computer Science
Graduate School of Humanity and Sciences,
Nara Women's University Nara, Japan

- 03:00 - 03:40pm: POSTER SESSION A
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 17, 2017 (Monday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)**
- 0. *A Parallel Method for the Eigenpairs of the Generalized Eigenvalue Problem*
Abdelwahab Kharab
Department of Applied Mathematics, Abu Dhabi University,
Abu Dhabi, United Arab Emirates
 - 0. *Design of a Tool for Analyzing Supercomputer Status using a Integrated Log Repository*
Sung-Jun Kim, Jae-Kook Lee, Tae-Young Hong
Korea institute of Science and Technology Information,
Republic of Korea
 - 0. ...
- 03:40 - 04:00pm: *Hand Shape Recognition using the sEMG of the Upper Extremity*
Mayuko Iwamoto, Yu Ishikawa, Masami Takata, Kazuki Joe
Department of Advanced Information and Computer Science
Graduate School of Humanity and Sciences,
Nara Women's University Nara, Japan
- 04:00 - 04:20pm: *Validation of EEG Authentication Accuracy with Electrode Slippage*
Yu Ishikawa, Kaori Nishibata, Masami Takata, Hiroyasu Kamo,
and Kazuki Joe
Department of Advanced Information and Computer Science
Graduate School of Humanity and Sciences,
Nara Women's University Nara, Japan
- 04:20 - 04:40pm: *Lax Pair of Discrete Nahm Equations and its Application*
Kinji Kimura
Graduate School of Informatics, Kyoto University,
Kyoto, Japan
- 04:40 - 05:00pm: *On the Maximum Likelihood Estimation of Weibull Distribution with Lifetime Data of Hard Disk Drives*
Daiki Koizumi
Department of Information and Management Science,
Otaru University of Commerce, Hokkaido, Japan
- 05:00 - 05:20pm: *Clustering News to Create Sentiment Indexes that Help Predict Stock Prices*
Hiroshi Ishijima, Takuro Kazumi
Chuo University, Ichigayahonmuracho, Shinjuku-ku,
Tokyo, Japan
- 05:20 - 05:40pm: *Comparison of Feature Selection Method for Diffuse Lung Disease*
Satoshi Ono, Makoto Koiwai, Hayaru Shouno, Shoji Kido
Graduate School of Informatics and Engineering,
University of Electro-Communications, Chofu, Japan
- 05:40 - 06:00pm: *A Generative Model of Textures using Hierarchical Probabilistic Principal Component Analysis*
Aiga Suzuki, Hayaru Shouno
Graduate School of Informatics and Engineering,
University of Electro-Communications, Chofu, Japan

XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions
(Please refer to the lists at the beginning of the program book for details)

08:30 - 11:00pm: CONFERENCE RECEPTION DINNER / SOCIAL
July 17 - Monday; 08:30pm - 11:30pm
(LOCATION: Ballrooms 6 & 7)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 3-PDPTA: SUSTAINABLE NETWORKING SYSTEMS & APPLICATIONS FOR SAFE & SECURE SOCIETY
 Chairs: Prof. Hiroaki Nishikawa, Prof. Makoto Iwata
 Faculty of Engineering, Information and Systems,
 University of Tsukuba, Ibaraki, Japan;
 School of Information, Kochi University of
 Technology, Kami, Kochi, Japan;
 (Coordination provided by Prof. Hiroshi Ishii,
 Department Chair, Tokai University, Tokyo, Japan)
 July 18, 2017 (Tuesday); 08:20am - 12:20pm
 (LOCATION: Ballroom 7)
- 08:20 - 08:40am: *A Watermarking Scheme for 3D Objects that is Robust to Molding and Casting Duplication*
 Hiroshi Yamamoto
 School of Information and Telecommunication Engineering,
 Tokai University, Tokyo, Japan
- 08:40 - 09:00am: *A Disaster-related Information Gathering Method by Focusing on Tweets Posted Immediately after Retweeting of News Posts about Kumamoto Earthquake*
 Shusaku Tokunaga, Ayami Manaka, Osamu Uchida, Keisuke Utsu
 School of Information and Telecommunication Engineering,
 Tokai University, Tokyo, Japan
- 09:00 - 09:20am: *Operability Improvement of Twitter-based Safety Confirmation System for Disaster Situations*
 Mariko Abe, Osamu Uchida, Keisuke Utsu
 School of Information and Telecommunication Engineering,
 Tokai University, Tokyo, Japan
- 09:20 - 09:40am: *A Web Application for Location Recording and Rescue Request Using Twitter*
 Shuji Nishikawa, Yuuto Ohtsuka, Osamu Uchida, Hiroshi Ishii,
 and Keisuke Utsu
 School of Information and Telecommunication Engineering,
 Tokai University, Tokyo, Japan
- 09:40 - 10:00am: *Safety Confirmation System for Disaster Situations Using Wristwatch-type Terminals*
 Taisei Mokutani, Osamu Uchida
 School of Information Science and Technology,
 Tokai University, Kanagawa, Japan
- 10:00 - 10:20am: *Information Providing System for Commuters Unable to Get Home at the Time of Disaster by Constructing Local Network using Single-board Computers*
 Hiroto Funakoshi, Keisuke Utsu, Osamu Uchida
 School of Information Science and Technology,
 Tokai University, Kanagawa, Japan
- 10:20 - 10:40am: **BREAK**
- 10:40 - 11:00am: *Extraction of the Information from Tweet Data in Case of the Disaster using Visualization*
 Takamitsu Funayama, Yoshiro Yamamoto, Osamu Uchida
 Graduate School of Science and Technology,
 Tokai University, Kanagawa, Japan

- 11:00 - 11:20am: *Hardware Accelerator for Differentiable Neural Computer and its FPGA Implementation*
Akane Saito, Yuki Umezaki, Makoto Iwata
Graduate School of Engineering,
Kochi University of Technology, Kochi, Japan
- 11:20 - 11:40am: *Pipelined FP Array for Stream-Driven Image Processor*
Masahiro Tabara, Hiroki Shibuta, Makoto Iwata
Graduate School of Engineering,
Kochi University of Technology, Kochi, Japan
- 11:40 - 12:00pm: *Priority-Based Hardware Scheduler for Self-Timed Data-Driven Processor*
Kazuma Fukuda, Hiroki Shibuta, Makoto Iwata
Graduate School of Engineering,
Kochi University of Technology, Kochi, Japan
- 12:00 - 12:20pm: *FPGA Implementation of Cardinality-Based Abnormal Traffic Detection Algorithm*
Shuji Sannomiya, Akira Sato, Kenichi Yoshida, and Hiroaki Nishikawa
Faculty of Engineering, Information and Systems,
University of Tsukuba, Tsukuba Science City, Ibaraki, Japan
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 4-CSC: COMPUTATIONAL SCIENCE, NOVEL CONCEPTS, ALGORITHMS AND APPLICATIONS**
Chairs: Prof. Janusz Stafiej
Cardinal Stefan Wyszyński University, Warsaw, Poland
July 18, 2017 (Tuesday); 01:20pm - 03:00pm
(LOCATION: Ballroom 7)
- 01:20 - 01:40pm: *Solution to Poisson's Equation in Rectangular Inhomogeneous Dielectric Media with the Markov Chain Monte Carlo*
Adebowale E. Shadare, Matthew N. O. Sadiku, Sarhan M. Musa
Department of Electrical & Computer Engineering,
Prairie View A&M University, Prairie View, Texas, USA;
Department of Engineering Technology, Prairie View A&M University, Prairie View, Texas, USA
- 01:40 - 02:00pm: *Queuing Network Approximation Technique for Evaluating Performance of Computer Systems with Hybrid Input Source*
Nozomi Miyamoto, Daisuke Miyake, Kaori Katsumata, Mayuko Hirose, Itaru Koike, Toshiyuki Kinoshita
School of Computer Science, Tokyo University of Technology, Hachioji Tokyo, Japan
- 02:00 - 02:20pm: *A Refined Attitude Algorithm for AUV Based on IMU*
Yu Zhou, Suxia Cui, Yonghui Wang, Lujun Zhai
Prairie View A&M University, Texas, USA
- 02:20 - 02:40pm: *Moral Education for Junior College to Support Systematization*
Keiichiro Abe, Takako Nakatani
Higashichikushi Junior College, Kokurakita-ku, Fukuoka, Japan;
The Open University of Japan, Mihama-ku, Chiba, Japan
- 02:40 - 03:00pm: *Data Deduplication for Similar Files*
Mohamad Zaini Nurshafiqah, Nozomi Miyamoto, Hikari Yoshii, Riichi Kodama, Itaru Koike, Toshiyuki Kinoshita
School of Computer Science, Tokyo University of Technology, Tokyo, Japan

03:00 - 03:40pm: POSTER SESSION B
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 18, 2017 (Tuesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Correlation Analysis of OpenStack Log using Machine Learning Techniques*
 Ju-Won Park, Eunhye Kim
 Division of Supercomputing, Korea Institute of Science and Technology Information (KISTI), Daejeon, Korea;
 Hyper-connected Communication Research Lab, ETRI, Korea
- 0. *Modeling of Transition Metal Complexes*
 Steven Wang, Hua-Jun Fan
 Cypress Ranch High School, Cypress, Texas, USA;
 Department of Chemistry, Prairie View A&M University,
 Prairie View, Texas, USA
- 0. ...

SESSION 5-PDPTA: COMMUNICATION SYSTEMS, FAULT TOLERANCE METHODS, EMBEDDED SYSTEMS, AND MOBILE COMPUTING
Chairs: Prof. Timothy O'Neil
University of Akron, USA
July 18, 2017 (Tuesday); 03:40pm - 06:00pm
(LOCATION: Ballroom 7)

- 03:40 - 04:00pm: *An Algorithm for Set-to-Set Disjoint Paths Problem in a Mobius Cube*
 Keiichi Kaneko
 Institute of Engineering, Tokyo University of Agriculture and Technology, Tokyo, Japan
- 04:00 - 04:20pm: *EQS3: Earthquake Sensing and Signaling System Using Retired Mobile Devices*
 Ting-Chen Lin, Ying-Hua Wu, Che-Wei Hsu, Hung-Hsiang Liang, Yu-Ling Chen, Shiann-Tsong Sheu
 Department of Communication Engineering,
 National Central University, Taiwan, R.O.C.
- 04:20 - 04:40pm: *New Cost-efficient Approach Based on Cross-Layer Protocol in Wireless Sensor Networks*
 Nejla Rouissi, Hamza Gharsellaoui, Sadok Bouamama
 National Engineering School of Manouba, Manouba University, Tunisia; National Engineering School of Carthage, Carthage University, Tunisia; Al Jouf College of Technology, TVTC, KSA, Saudi Arabia; FCIT, Jeddah University, KSA, Saudi Arabia
- 04:40 - 05:00pm: *Mapped-File Based Techniques for Fault Recovery in Parallel Simulations*
 Issakar Ngatang, Masha Sosonkina
 Modeling, Simulation, and Visualization Engineering
 Department, Old Dominion University, Virginia, USA
- 05:00 - 05:20pm: *New Solutions for AI-Based Adaptive System Under Real-Time and Low-Memory Constraints*
 Walid Bouzayen, Hamza Gharsellaoui, Mohamed Khalgui
 FST, Tunis El Manar University, Tunisia;
 LISI, INSAT Institute, Carthage University, Tunisia;
 ENI-Carthage, Carthage University, Tunisia;
 SystemsControl Lab, Xidian University, China

05:40 - 06:00pm: *New Hybrid Genetic Based Approach for Real-Time Scheduling of Multiprocessor Reconfigurable Embedded Systems*
Ibrahim Gharbi, Hamza Gharsellaoui, Sadok Bouamama
National School of Computer Science, Manouba University,
Tunisia; National Engineering School of Carthage (ENIC),
Carthage University, Tunisia; FCIT, Jeddah University,
KSA, Saudi Arabia

XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program
book for details)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 6-GCC: CLOUD SERVICES AND COMPUTING + DISTRIBUTED COMPUTING
 Chairs: Dr. Ahmed Barnawi* and Dr. Israel Patino Galvan**
 *King Abdulaziz University, Saudi Arabia
 **Research Division of the Innovation Park,
 University La Salle Northwest, Obregon City,
 Sonora, Mexico
 July 19, 2017 (Wednesday); 08:40am - 11:20am
 (LOCATION: Ballroom 7)

08:40 - 09:00am: *Group Mutual Exclusion Algorithm for Intersection Traffic Control of Autonomous Vehicle*
 Sung-hoon Park, Suchang Yoo, Bokyoung Kim
 School of Electrical and Computer Engineering,
 Chungbuk National University, Korea

09:00 - 09:20am: *EZPoll: A Progressive Implementation of Cloud-Based Polling Systems*
 Hans Dulimarta
 School of Computing and Information Systems,
 Grand Valley State University, Grand Rapids, Michigan, USA

09:20 - 09:40am: *Using Smart Contracts and Blockchains to Support Consumer Trust Across Distributed Clouds*
 Stephen S. Kirkman, Richard Newman
 Computer and Information Science and Engineering Department,
 University of Florida, Gainesville, Florida, USA

09:40 - 10:00am: *A Review of Electric Vehicle Charging Impact on Power Grid*
 Azhar Ul-Haq
 National University of Sciences and Technology,
 Islamabad, Pakistan

10:00 - 10:20am: *Developing Enterprise Applications for Cloud: The Unicorn Application Framework*
 Marek Beranek, George Feuerlicht, Vladimir Kovar
 Information Technology Department, Unicorn College,
 Prague, Czech Republic

10:20 - 10:40am: *HPC Cluster Management with Open Source Software*
 Fernando G. Tinetti, Leopoldo J. Rios
 Fac. de Informatica, UNLP, Comision de Investigaciones Cientificas Prov. de Bs. As., La Plata, Argentina;
 Fac. Ciencias Exactas, UNNE, IMIT-Conicet-UNNE,
 Corrientes, Argentina

10:40 - 11:00am: *A Rapid Auto-Scaling Mechanism in Cloud Computing Environment*
 Chia-Wei Tseng, Ming-Shiun Tsai, Yao-Tsung Yang, Li-Der Chou
 Department of Computer Science and Information Engineering,
 National Central University, Taoyuan, Taiwan

11:00 - 11:20am: *MCloud API for Managing Data in Multi-Cloud Environment*
 Maram Alhafdi, Ahmed Barnawi
 Department of Information Technology,
 King Abdulaziz University, Jeddah, KSA, Saudi Arabia

- SESSION 7-CSC: MODELING AND SIMULATION FRAMEWORKS**
Chairs: Dr. Douglas D. Hodson, Prof. Michael R. Grimaila
Computer Science & Engineering Department,
US Air Force Institute of Technology, USA;
Head of the Systems Engineering & Management
Department, US Air Force Institute of Technology, USA
July 19, 2017 (Wednesday); 11:20am - 12:20pm
(LOCATION: Ballroom 7)
- 11:20 - 11:40am: *A Bell State Analyzer Model for Measurement Device Independent Quantum Key Distribution*
M. B. Russell, L. O. Mailloux, D. D. Hodson, M. R. Grimaila
Liberty University, Lynchburg, Virginia, USA;
Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA
- 11:40 - 12:00pm: *Prototyping a Data Analysis Capability Leveraging Lambda Architecture Concepts*
Donald A. Van Patten, Douglas D. Hodson,
Michael R. Grimaila, Ryan D. Engle
Department of Electrical and Computer Engineering,
Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA
- 12:00 - 12:20pm: *A Sandbox to Learn and Develop Soar Agents*
Daniel Lugo, Douglas D. Hodson
Department of Electrical and Computer Engineering,
Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA
- 12:20 - 01:00pm: **LUNCH (On Your Own)**
- SESSION 8-CSC: SIMULATION AND COMPUTATIONAL MODELING METHODS + SCIENTIFIC COMPUTING, AND NOVEL APPLICATIONS**
Chairs: Prof. Mitchell Neilsen*, Prof. Adel Boules, and**
Prof. Janusz Stafiej***
***Kansas State University, Manhattan, KS, USA;**
****University of North Florida, Jacksonville, Florida, USA;**
*****Cardinal Stefan Wyszynski University, Warsaw, Poland**
July 19, 2017 (Wednesday); 01:00pm - 03:00pm
(LOCATION: Ballroom 7)
- 01:00 - 01:20pm: *Characterizing Molecular-Dynamics Simulations using Non-Local Spatial-Temporal Metrics*
Jeremy Liu, Ke-Thia Yao, Pankaj Rajak, Aiichiro Nakano
University of Southern California, Los Angeles, California;
Information Sciences Institute, University of Southern California, Marina Del Rey, California, USA
- 01:20 - 01:40pm: *Simulation and Modeling of Valve Dynamic Characteristics of Regulator in Hydraulic Winch by using Amesim and CFX*
Yooseong Jeong, Won Jee Chung, Seok Jeong Kang,
Young Wook Jeong, Jung Min Lee, Ki Tae Noh
School of Mechatronics, Changwon National University,
Changwon, South Korea;
Flutek Kawasaki Corp., Changwon, South Korea
- 01:40 - 02:00pm: *Coupled Dam Safety Analysis using BREACH and WinDAM*
Mitchell L. Neilsen, Chendi Cao
Department of Computer Science, Kansas State University,
Manhattan, Kansas, USA

- 02:00 - 02:20pm: *Simulation Data Analysis for Cellular Automata 2D Model of Corrosion of a Planar Metal-Solution Interface*
J. Stepien, J. Salach, J. Stafiej
Department of Complex Systems and Chemical Information Processing, Institute of Physical Chemistry, Warsaw, Poland;
Faculty of Mathematics and Natural Sciences, School of Exact Sciences, Cardinal Stefan Wyszyński University, Warsaw, Poland
- 02:20 - 02:40pm: *Construction/Destruction Monte Carlo to Estimate the Number of Path-sets for the Reliability Measure of a Network with Diameter Constraints*
I. B. Gertsbakh, L. Petingi, S. Wojcik
Department of Math and Computer Science, Ben Gurion University of the Negev, Beer-Sheva, Israel;
Department of Computer Science, College of Staten Island (CUNY), Staten Island, New York, USA
- 02:40 - 03:00pm: *Application of Gain Scheduling Programming to a 6-Axis Articulated Robot with Fuzzy Logic Using LabVIEW*
Seokjeong Kang, Seungkyu Park, Wonjee Chung, Yooseong Jeong, Sunghun Noe
School of Mechatronics, Changwon National University, Changwon, The Republic of Korea;
YoungChang Robo-tech Corp., Gimhae, The Republic of Korea
- 03:00 - 03:40pm: **POSTER SESSION C**
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 19, 2017 (Wednesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)
0. *BornAgain: An Open-source Framework to Simulate Grazing-incidence Small-angle Scattering*
J. Burle, J. Fisher, M. Ganeva, G. Pospelov, W. Van Herck, J. Wuttke
Juelich Centre for Neutron Science (JCNS), Heinz Maier-Leibnitz Zentrum (MLZ), Forschungszentrum Juelich GmbH, Garching, Germany
0. *Intelligent Custom Garments Project (ICGP): Body Parameters Measuring Via Mobile Phone Photos*
Xiaoxi Zhu, Su Deng
Science and Technology on Information Systems Engineering Laboratory, National University of Defense Technology, Changsha, China
0. ...
- SESSION 9-PDPTA: PARALLEL & SCALABLE ALGORITHMS & SYSTEMS, HPC, & COMPUTATIONAL SCIENCE + DATAFLOW PROGRAMMING**
Chairs: Dr. Satish Penmatsa
Framingham State University, Massachusetts, USA
July 19, 2017 (Wednesday); 03:40pm - 06:00pm
(LOCATION: Ballroom 7)
- 03:40 - 04:00pm: *Parallel Model for Complex Attack Detection*
Kyle Wamsley, Lisa Frye
Computer Science & Information Technology Department, Kutztown University, Kutztown, PA, USA
- 04:00 - 04:20pm: *Using GPUs to Forensically Recover Non-Addressable Data on Hardware-FTL-Backed NAND Storage*
Sarah Diesburg, Mark Fienup
Computer Science Department, University of Northern Iowa, USA

- 04:20 - 04:40pm: *Temperature Dispersion: Many-Core vs. Traditional Multi-Core Laplace Transform Implementation*
 Amy Knowles, Eduardo Colmenares
 Department of Computer Science,
 Midwestern State University, Wichita Falls, Texas, USA
- 04:40 - 05:00pm: *Pipelined Execution of a Pig Monitoring Application on a Heterogeneous Computing Environment*
 Yeonwoo Chung, Yunchang Choi, Jinseong Kim, Jaehak Kim,
 Yongwha Chung, Daihee Park, Hakjae Kim
 Department of Applied Statistics, Korea University,
 Republic of Korea;
 Department of Computer Convergence Software,
 Korea University, Republic of Korea;
 Class Act, Republic of Korea
- 05:00 - 05:20pm: *Parallel Construction of Edge-Disjoint Node-Independent Spanning Trees in Dense Gaussian Networks*
 Zaid Hussain, Bader Albdaiwi, Hosam Aboelfotoh
 Computer Science Department, Kuwait University, Kuwait
- 05:20 - 05:40pm: *New Optimal Based Steganalysis Solutions for Embedding the Hidden Information in Audio Cover Media*
 Ahlem Fatnassi, Hamza Gharsellaoui, Sadok Bouamama
 National School of Computer Science (ENSI),
 Manouba University, Tunisia;
 National Engineering School of Carthage (ENIC),
 Carthage University, Tunisia;
 FCIT, Jeddah University, KSA, Saudi Arabia
- 05:40 - 06:00pm: *Finite Difference Method for Non-Smooth Beam Bending*
 Mladen Mestrovic
 Faculty of Civil Engineering, University of Zagreb,
 Zagreb, Croatia
- XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 10-CSC: SCIENTIFIC COMPUTING & ENGINEERING + COMPUTATIONAL SCIENCE AND APPLICATIONS
Chairs: Prof. Reuben Thieberger* and Prof. Adel Boules**
 *Ben Gurion University, Beer Sheva, Israel;
 **University of North Florida, Jacksonville, Florida, USA
July 20, 2017 (Thursday); 08:40am - 10:40am
(LOCATION: Ballroom 7)

08:40 - 09:00am: *A Heuristic Algorithm for Allocation and Sizing of Charging Stations using the Capacitated Flow-Refueling Location Model*
 Wang Yue, Shi Jianmai, Liu Zhong
 Science and Technology on Information Systems Engineering Laboratory, National University of Defense Technology, Changsha, Hunan, China

09:00 - 09:20am: *A Simple Traffic Model Including Possibility of Overtaking*
 R. Thieberger
 Department of Physics, Ben Gurion University, Beer Sheva, Israel

09:20 - 09:40am: *Traffic Flow Simulation Under the Influence of Different Acceleration Policies*
 R. C. P. Leal-Toledo, G. V. P. Magalhaes, I. Miranda, and E. M. Toledo
 Federal Fluminense University, Niteroi, Brazil;
 LNCC - UFJF, Petropolis, Brazil

09:40 - 10:00am: *Visiting Open Source Hardware: A Survey of Opportunities*
 Angel Barriga
 Instituto de Microelectronica de Sevilla (IMSE-CNM), CSIC/University of Sevilla, Sevilla, Spain

10:00 - 10:20am: *An Interactive Fuzzy Satisfying Method Based on Imperialist Competitive Algorithm for Multi-Objective Function in Reactive Power Market*
 Heidarali Shayanfar, Mehdi Mehdinejad, and Reza Dadashzadeh Bonab
 Center of Excellence for Power Systems Automation and Operation, School of Electrical Engineering, Iran University of Science and Technology, Tehran, Iran;
 Faculty of Electrical and Computer Engineering, University of Tabriz, Tabriz, Iran

10:20 - 10:40am: FREE SLOT

10:40 - 11:00am: BREAK

SESSION 11-PDPTA: DISTRIBUTED PROCESSING + WEB APPLICATIONS + BIG DATA ANALYTICS + REAL-TIME ALGORITHMS
Chairs: Dr. Jeremy Mange and Mrs. Sara Boyle
 US Army - TARDEC, USA
July 20, 2017 (Thursday); 11:00am - 12:20pm
(LOCATION: Ballroom 7)

11:00 - 11:20am: *A Cluster Cooperation Protocol in Distributed Systems*
 Sung-Hoon Park, Suchang Yoo, Bokyoung Kim
 School of Electrical and Computer Engineering, Chungbuk National University, Republic of Korea

11:20 - 11:40am: *Performance Evaluation Of System Optimal Load Balancing Schemes For Multi-User Job Distributed Systems*
 Satish Penmatsa, Gurdeep S. Hura
 Department of Computer Science, Framingham State University,
 Framingham, Massachusetts, USA;
 Department of Mathematics and Computer Science, University
 of Maryland Eastern Shore, Princess Anne, Maryland, USA

11:40 - 12:00pm: *Self-Management SaaS Application by CBR Algorithm*
 Nadir Kamal Salih
 Electrical and Computer Engineering Department,
 Karary University, Sudan

12:00 - 12:20pm: *Job Scheduling in a Heterogenous Distributed Computing System using a Competitive Matchmaking System*
 David Mendez Lopez, Fabian Garcia Nocetti
 Applied Mathematics and Systems Research Institute,
 National Autonomous University of Mexico, UNAM, Mexico

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

SESSION 12-PDPTA: PARALLEL PROCESSING + MULTICORE, GPU BASED UTILIZATION AND SYSTEMS + MULTI-THREADING

Chairs: Dr. Hamza Gharsellaoui
 ENIC, Carthage University, Tunisia
 July 20, 2017 (Thursday); 01:20pm - 03:20pm
 (LOCATION: Ballroom 7)

01:20 - 01:40pm: *A Flexible and Precise Batch-mode Technique for Multi-threaded Gate Simulation*
 Po-Chia Huang, Chun-Hung Huang, Hsi-En Yu, Wei-Cheng Huang,
 Chin-Tu Chen, Jim H. Chen, Cheng-Ying Chou, Ching-Han Hsu
 Department of Biomedical Engineering and Environmental
 Sciences, National Tsing Hua University, Hsinchu, Taiwan;
 National Center for High-Performance Computing, Taiwan;
 International Center for Advanced Internet Research,
 Northwestern University, Chicago, Illinois, USA;
 Department of Bio-Industrial Mechatronics Engeneering,
 National Taiwan University, Taipei, Taiwan
 Department of Radiology, University of Chicago, Chicago,
 Illinois, USA;

01:40 - 02:00pm: *Multicore Programming on Small-Scale Systems*
 Rozita Johari, Mohamed Othman
 Department of Interdisciplinary Studies, University College,
 Zayed University, UAE;
 Department of Communication Technology and Networks,
 Faculty of Computer Science and Information Technology,
 Universiti Putra Malaysia, Malaysia

02:00 - 02:20pm: *Accelerate Local Tone Mapping for High Dynamic Range Images Using OpenCL with GPU*
 Kuo-Feng Liao, Yarsun Hsu
 Department of Electrical Engineering,
 National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

02:20 - 02:40pm: *Hyper Parallel Image Feature Extraction Applications on Modern Multicore Processors*
 T. Mogale, M. B. Esiefarienrhe
 Department Of Computer Science,
 North West University, Mafikeng Campus, South Africa

- 02:40 - 03:00pm: *Accelerating Motif Finding Problem Using Skip Brute-Force on CPU's and GPU's Architectures*
M. M. Al-Qutt, H. Khaled, H. M. Faheem, R. El Gohary
Computer Systems Department, Faculty of Computer & Information Science, Ain Shams University, Cairo, Egypt
- 03:00 - 03:20pm: FREE SLOT
- 03:20 - 03:40pm: BREAK
- 03:40 - 05:00pm: During this period, PDPTA'17, GCC'17, and CSC'17 attendees are encouraged to participate in sessions belonging to ICAI (Artificial Intelligence), EEE (e-Business, Enterprise IS, & e-Government), IPCV (Image Processing, Computer Vision, & Pattern Recognition), and ICOMP (Internet Computing & IoT) conferences. These sessions discuss topics that may be of interest to PDPTA'17, GCC'17, and CSC'17 attendees.
- 05:00 - 05:20pm: Congress Closing Remarks
(LOCATION: Ballroom 7)

SAM'17 + ICWN'17 CONFERENCE SCHEDULES

The 2017 International Conference on Security and Management (SAM'17)

+

The 2017 International Conference on Wireless Networks (ICWN'17)

Because of partial topical and technical overlap between SAM'17 and ICWN'17, the presentations of these two conferences are scheduled in the same conference room resulting in a comprehensive 4-day schedule. It is hoped that this would encourage the participants of these conferences to explore cross-fertilization of ideas. Each of these conferences (SAM'17 and ICWN'17) is arranged and organized by its own team of experts - i.e., each conference has its own chair, organization, program committee and referees. There are also a number of other sessions (not listed as part of these conferences) that are of potential interest to SAM'17 and ICWN'17 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ABDA (Advances in Big Data Analytics), DMIN (Data Mining), EEE (e-Learning, e-Business, EIS, e-Government), ESCS (Cyber-physical Systems), FECS (Education), HIMIS (Health Informatics), ICAI (Artificial Intelligence), ICOMP (IoT), PDPTA (Parallel and Distributed Processing) conferences discuss topics that are within the scope of SAM'17 and ICWN'17; these have been scheduled so that selected SAM'17 and ICWN'17 attendees can also participate in them. Note that there are a number of concurrent sessions.

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 tracks they wish to attend; The conference room numbers (Locations) appear in this document.

July 16

03:00p - 07:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:30 - 08:50am: CONGRESS OPENING REMARKS - July 17, Monday:
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)
Department of Computer Science, University of Georgia, USA;
Editor-in-Chief, The Journal of Supercomputing (Springer);
Fellow, Center of Excellence in Terrorism, Resilience,
Intelligence & Organized Crime Research (CENTRIC).
(LOCATION: East Ballrooms 6 & 7)
- 08:50 - 09:00am: Announcement:
ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS
& PHD STUDENTS THROUGH COLLABORATION & BUILDING NETWORKS
Nnenna Christine Martin
Research Director, ResearchLink International, Greensboro,
North Carolina, USA
(LOCATION: East Ballrooms 6 & 7)
- 09:05 - 10:00am: KEYNOTE LECTURE - July 17, Monday:
ROBUST COMPUTING SYSTEMS
Prof. H. J. Siegel
IEEE Fellow; ACM Fellow; Founding Director of Information
Science and Technology Center; Abell Endowed Chair
Distinguished Professor of Electrical and Computer
Engineering and Professor of Computer Science; Department
ECE and CS, Colorado State University, Fort Collins, USA
(LOCATION: East Ballrooms 6 & 7)
- 10:05 - 10:50am: KEYNOTE LECTURE - July 17, Monday:
VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN
TRANSPORT AND INDUSTRY
Prof. Diego Galar
Professor & Former Director of Academic Innovation and
Subsequently Pro-Vice-Chancellor; Division of O&M Engineering,
Lulea University of Technology, Sweden; Head, Maintenance
and Reliability at TECNALIA, Spain; VOLVO Chair for
Reliability and Maintenance, Skovde University, Sweden
(LOCATION: East Ballrooms 6 & 7)
- SESSION 1-ICWN: WIRELESS NETWORKS, MOBILITY, SENSOR NETWORKS, AND
APPLICATIONS + SECURITY ISSUES
Chairs: Prof. Arshia A. Khan* and Ms. Jia Wang**
*University of Minnesota Duluth, Minnesota, USA;
**City University of Hong Kong, HK SAR, Hong Kong
July 17, 2017 (Monday); 11:00am - 12:20pm
(LOCATION: Ballroom 6)
- 11:00 - 11:20am: *Design and Implementation of SDN-Based Packet Transport
Networks*
Wen-Chun Hsu, Ping-Fan Ho, Jyh-Cheng Chen
Loop Telecommunication International, Inc., Hsinchu, Taiwan;
Department of Computer Science, National Chiao Tung
University, Hsinchu, Taiwan
- 11:20 - 11:40am: *Security of Software Defined Networks (SDN)*
Krishnakumar Venkatachalam, Levent Ertaul
Department of Computer Science, California State University,
East Bay, California, USA

11:40 - 12:00pm: *A Device for Integrated Traffic Violation Apprehension and Payment System using NFC Technology*
 Luisito L. Lacatan, Patrick M. Tolentino, Paul S. Gilber,
 Seth B. Guerrero, Ken L. Pascual
 Computer Engineering Department, College of Engineering,
 Adamson University, Manila, Philippines

12:00 - 12:20pm: *Application Level Encryption in Bluetooth*
 Ajay K. Katangur, Somasheker Akkaladevi, Dula Kar
 Department of Computing Sciences, Texas A&M University
 - Corpus Christi, Texas, USA;
 Department of Computer Information Systems, Virginia State
 University, Petersburg, Virginia, USA

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

SESSION 1-SAM: NETWORK SECURITY + SECURITY MANAGEMENT
Chair: Dr. Greg Vert,
Embry Riddle Aeronautical University, USA
July 17, 2017 (Monday); 01:00pm - 03:00pm
(LOCATION: Ballroom 6)

01:00 - 01:20pm: *A Visual Approach to Data Fusion in Sensor Networks*
 Martin Zsifkovits, Maximilian Moll, Truong Son Pham,
 Stefan Wolfgang Pickl
 Universitaet der Bundeswehr Muenchen, Germany

01:20 - 01:40pm: *Protection from Black Hole Attacks in Communication Networks*
 Beatrice Cerda, Ester Martinez-Belmares, Shengli Yuan
 Department of Computer Science and Engineering Technology,
 University of Houston-Downtown, Houston, Texas, USA

01:40 - 02:00pm: *A Survey on Wireless Security Protocol WPA2*
 Samia Alblwi, Khalil Shujaee, Roy George
 Department of Computer and Information Science,
 Clark Atlanta University, Atlanta, Georgia, USA

02:00 - 02:20pm: *MAC Address Based Sensor Network Authentication: Survey*
 Sunghyuck Hong, Kyungil Ko
 Baekseok University, Cheonan, Republic of Korea

02:20 - 02:40pm: *NOAH for IoT: Cybersecurity Strategy for Home Applications*
 Erica Mitchell, Joon Park
 Syracuse University, USA

02:40 - 03:00pm: *Evaluation of Highly Efficient Scalar Multiplication in Elliptic Curve Cryptography*
 Nozomi Miyamoto, Hikari Yoshii, Daisuke Miyake,
 Mayuko Hirose, Itaru Koike, Toshiyuki Kinoshita
 School of Computer Science, Tokyo University of Technology,
 Hachioji Tokyo, Japan

03:00 - 03:40pm: **POSTER SESSION A**
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 17, 2017 (Monday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Wireless Electricity Charging Protocol with Solar Cell and Magnetic Resonant Coupling Technologies*
 Hwajung Lee
 Department of Information Technology, Radford University,
 Radford, Virginia, USA
- 0. ...

SESSION 2-SAM: CRYPTOGRAPHIC TECHNOLOGIES
Chair: Dr. Erica Mitchell
Syracuse University, USA
July 17, 2017 (Monday); 03:40pm - 05:00pm
(LOCATION: Ballroom 6)

03:40 - 04:00pm: *IoT Security: Performance Evaluation of Grain, MICKEY, and Trivium - Lightweight Stream Ciphers*
 Levent Ertaul, Arnold Woodall
 Department of Computer Science, California State University Eastbay, California, USA

04:00 - 04:20pm: *Performance Analysis of CLEFIA, PICCOLO, TWINE Lightweight Block Ciphers in IoT Environment*
 Levent Ertaul, Sachin Kattepuraj Rajegowda
 Department of Computer Science, California State University Eastbay, California, USA

04:20 - 04:40pm: *A New Key Management and Authentication Architecture for ZigBee Networks (KAAZ)*
 Ouassila Hoceini, Hossam Afifi, and Rachida Aoudjit
 Mouloud Mammeri University of Tizi Ouzou, Algeria;
 Mines Telecom, France

04:40 - 05:00pm: *FREE SLOT*

SESSION 3-SAM: BIOMETRICS + HARDWARE SECURITY
Chair: Dr. Hiroshi Dozono
Saga University, Japan
July 17, 2017 (Monday); 05:00pm - 06:20pm
(LOCATION: Ballroom 6)

05:00 - 05:20pm: *A Study on Korea's Information Security Management System: An Insider Threat Perspective*
 Ran Kyoung Park, Jong In Lim, Kwon, Hun Yeong, Jin-Young Choi
 Korea University, Korea

05:20 - 05:40pm: *Cloud Solution for Management and Security in Temporary Reception Centres*
 G. L. Masala, R. Pola, M. L. Ganadu
 School of Computing, Electronics and Mathematics,
 Plymouth University, UK; Department of Humanities and Social Sciences, University of Sassari, Sassari, Italy

05:40 - 06:00pm: *A High-order Masking Approach for Hardware Implementation of CLEFIA Cipher on FPGA*
 Abdullah Baihan, Parasara Sridhar Duggirala, Mohammed Baihan
 CSE Department, University of Connecticut, USA;
 CS Department, Community College, King Saud University, Saudi Arabia

06:00 - 06:20pm: *A Framework for Web Applications Security and Response System*
 Naveen Chada, Dulal Kar, Ajay Katangur
 Department of Computing Sciences,
 Texas A&M University-Corpus Christi, Texas, USA

XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)

08:30 - 11:00pm: **CONFERENCE RECEPTION DINNER / SOCIAL**
July 17 - Monday; 08:30pm - 11:30pm
(LOCATION: Ballrooms 6 & 7)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 4-SAM: SECURITY EDUCATION
Chair: Dr. Martin Zsifkovits
 Universitaet der Bundeswehr Muenchen, Germany
 July 18, 2017 (Tuesday); 08:20am - 10:20am
 (LOCATION: Ballroom 6)

08:20 - 08:40am: *Analyzing and Improving the NCL Ethical Hacking Lab Exercises*
 George Shoemaker, Ahmed Gedi, Balal Rahim, Nick Tan,
 Jens Mache, Richard Weiss
 Lewis & Clark College, Portland, Oregon, USA;
 The Evergreen State College, Olympia, Washington, USA

08:40 - 09:00am: *Building a Gh0st Malware Experimentation Environment*
 Vamshika Boinapally, George Hsieh, Kevin S. Nauer
 Norfolk State University, Norfolk, Virginia, USA;
 Sandia National Laboratories, Albuquerque, New Mexico, USA

09:00 - 09:20am: *Building a Virtual Enterprise Network Environment for APT Experimentation*
 Kaila M. Perry, George Hsieh, Cody Butler,
 Sean Michael Yurko Galvin, Kevin S. Nauer
 Norfolk State University, Norfolk, Virginia, USA;
 Sandia National Laboratories, Albuquerque, New Mexico, USA

09:20 - 09:40am: *Applying Security in Moodle Grades*
 Sofia Oraa Perez, Carmen Hernandez Diez,
 and Jose Antonio Marcos Garcia
 Isabel I University, Spain; University of Valladolid, Spain

09:40 - 10:00am: *Undergraduate Software Engineering Experience - Developing an Authentication System*
 Suhair Amer, Wenxing Qiu
 Department of Computer Science, Southeast Missouri State University, Cape Girardeau, Missouri, USA

10:00 - 10:20am: *Steganography - Capstone Experience Project*
 Suhair Amer
 Department of Computer Science, Southeast Missouri State University, Cape Girardeau, Missouri, USA

10:20 - 10:40am: BREAK

SESSION 5-SAM: Computer SECURITY I
Chair: Prof. Levent Ertaul
 California State University East Bay, USA
 July 18, 2017 (Tuesday); 10:40am - 12:20pm
 (LOCATION: Ballroom 6)

10:40 - 11:00am: *A Light-weight Method to Send and Receive SMS Messages in an Emulator*
 Chi-Yu You, Yan-Ling Hwang, Chuan-Kai Kao, Fu-Hau Hsu,
 and Chia-Hao Lee
 Department of Computer Science and Information Engineering,
 National Central University, Taoyuan City, Taiwan, ROC;
 School of Applied Foreign Languages, Chung Shan Medical University, Taichung City, Taiwan, ROC;
 CyberTrust Technology Institute, Institute for Information Industry, Taipei City, Taiwan, ROC

11:00 - 11:20am: *Android-App-Dissection on the Wandboard - Automatic Analysis of Malicious Mobile Code*
Heiner Winkler, Christian Hummert
Hochschule Mittweida - University of Applied Sciences,
Forensic Science Investigation Lab, Mittweida, Germany

11:20 - 11:40am: *Model for Autonomous Correlation of Intrusion Detection State Variables over Spatial, Temporal, and Ontological Domains*
Erica Bott, Jesse Roberts, Gregory Vert
College of Security and Intelligence, Embry-Riddle
Aeronautical University, USA

11:40 - 12:00pm: *Examining Features for Android Malware Detection*
Matthew Leeds, Miclaine Keffeler, Travis Atkison
Computer Science Department, University of Alabama,
Tuscaloosa, Alabama, USA

12:00 - 12:20pm: *An Evolutionary Approach of Attack Graphs and Attack Trees: A Survey of Attack Modeling*
Md. Shariful Haque, Miclaine Keffeler, Travis Atkison
Department of Computer Science, University of Alabama,
Tuscaloosa, Alabama, USA

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

SESSION 2-ICWN: COMMUNICATION SYSTEMS, WIRELESS NETWORKS AND NOVEL APPLICATIONS
Chairs: Nnenna Christine Martin
College of Computing & Informatics,
University of North Carolina, Charlotte, USA;
& ResearchLink International, North Carolina, USA
July 18, 2017 (Tuesday); 01:20pm - 03:00pm
(LOCATION: Ballroom 6)

01:20 - 01:40pm: *A Hybrid Passive and Active Location Aware Framework for Tracking Movement Indoors*
Kevin Curran
School of Computing and Intelligent Systems,
Ulster University, Londonderry, Northern Ireland

01:40 - 02:00pm: *Relationship-based Intercom Platform for Smart Space*
Daechon Kim, Duc-Tai Le, Hyunseung Choo
School of Information and Communication Engineering,
Sungkyunkwan University, Suwon, South Korea

02:00 - 02:20pm: *IoT Radio in 250 Mhz*
Carlos Henrique Rodrigues De Oliveira, Rodolfo De Sousa Costa,
Giselle Braga Carvalho, Felipe Santana Oliveira
Computer Engineering - Technological Sciences Center (CCT),
State University of Maranhao (UEMA), Sao Luis, Brazil;
Telecommunications Research and Development Center (CPqD),
Campinas, Brazil

02:20 - 02:40pm: *A Message Sharing Method for Clustered Environment in VANET*
Jaejeong Lee, Byoungchul Ahn
Department of Computer Engineering, Yeungnam University,
South Korea

02:40 - 03:00pm: *Improvement of Route Detection Ratio by Node Mobility in Wireless Multihop Networks*
Hiroaki Higaki
Department of Robotics and Mechatronics,
Tokyo Denki University, Japan

03:00 - 03:40pm: POSTER SESSION B
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 18, 2017 (Tuesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Dynamic Scalable ECC Scheme and its Application to Encryption Workflow Design*
 Jia Wang, Lee-Ming Cheng
 City University of Hong Kong, Hong Kong
- 0. *An Analysis of Intrusion Prevention Data Against HPC Services in KISTI*
 Jae-Kook Lee, Sung-Jun Kim, Taeyoung Hong
 Division of Supercomputer Infrastructure, KISTI, Daejeon, South Korea
- 0. *A Chaining User Authentication with Distributed Clustering in the IoT Environment*
 Dong-Hoon Kim, Ki Young Lee
 Department of Information & Telecommunication Engineering, Incheon National University, Incheon, South Korea
- 0. *Coordinated Multi Point with Spatial Phase Coding for Interference Mitigation in the Wireless Communication*
 Won-Chang Kim, Sang-Young Kim, Hyoung-Kyu Song
 uT Communication Research Institute, Sejong-University, Seoul, Republic of Korea
- 0. *Lattice-Reduction Aided Adaptive Detection Scheme Depending on Channel Condition*
 Seung-Jin Choi, Jong-Kwang Kim, Jae-Hyun Ro, Hyoung-Kyu Song
 uT Communication Research Institute, Sejong-University, Seoul, Republic of Korea
- 0. ...

SESSION 6-SAM: INFORMATION ASSURANCE
Chair: Dr. Mario A. Garcia
Texas A&M University - Corpus Christi, Texas, USA
July 18, 2017 (Tuesday); 03:40pm - 06:00pm
(LOCATION: Ballroom 6)

- 03:40 - 04:00pm: *The Significance of Information Security Risk Assessments: Exploring the Consensus of Raters' Perceptions of Probability and Severity*
 Jonas Hallberg, Johan Bengtsson, Niklas Hallberg, Henrik Karlzen, Teodor Sommestad
 Swedish Defence Research Agency, Linkoping, Sweden
- 04:00 - 04:20pm: *Backup Monitoring in Large Heterogenous Business Cloud Computing Environments: A Framework for the Development of a Reliable Automated Process*
 Krassie Petrova, Anne Abbott
 Auckland University of Technology, Auckland, New Zealand
- 04:20 - 04:40pm: *Efficient Isolation Enabled Role-Based Access Control for Database Systems*
 Mohammad Rahat Helal, Weiqing Sun, Ahmad Y. Javaid
 University of Toledo, Toledo, USA
- 04:40 - 05:00pm: *Minimal TCB for System-Model Execution*
 Mahalingam Ramkumar
 Department of Computer Science and Engineering, Mississippi State University, Mississippi, USA

- 05:00 - 06:00pm: INVITED LECTURE/TUTORIAL:**
Cyber Security - Privacy: Are We All Living in Glass Houses?
Can I Get Some Privacy, Please?
Prof. Levent Ertaul
Computer Science Department, California State University,
East Bay, California, USA; Fellowship recipient, Lawrence
Livermore National Laboratories (LLNL), Cyber Defenders program
July 18, 2017 (Tuesday)
(LOCATION: Ballroom 6)
- XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program
book for details)

- 07:00a - 05:00p:** REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 7-SAM:** SECURITY APPLICATIONS
Chair: Prof. Levent Ertaul
 California State University East Bay, USA
 July 19, 2017 (Wednesday); 08:20am - 10:20am
 (LOCATION: Ballroom 6)
- 08:20 - 08:40am:** *Using Pattern Filtering to Detect and Prevent Persistent Cross-Site Scripting (XSS) Attacks*
 Samrat Bongiri, Mario A. Garcia
 Texas A&M University-Corpus Christi, Texas, USA
- 08:40 - 09:00am:** *Applications of Fair and Privacy-Enhanced Matchmaking with Identity Linked Wishes*
 Dwight Horne, Suku Nair
 Department of Computer Science and Engineering,
 Southern Methodist University, USA
- 09:00 - 09:20am:** *Thematic Graphical Authentication: Graphical Authentication Using Themed Images on Mobile Devices*
 Joshua Sherfield, Cheryl V. Hinds
 Lawrence Livermore National Laboratories, Livermore, California, USA;
 Computer Science Department, Norfolk State University, Virginia, USA
- 09:20 - 09:40am:** *Improved Reversible Data Hiding using Mean Values in an Encrypted Image*
 Kyung-Yoon Seo, Dae-Soo Kim, Eun-Jun Yoon, Kee-Young Yoo
 School of Computer Science and Engineering,
 Kyungpook National University, South Korea;
 Department of Cyber Security, Kyungil University, South Korea
- 09:40 - 10:00am:** *Virtual Keyboard Logging Counter-measures using Common Fate's Law*
 Nicolas Echallier, Gilles Grimaud, Julien Iguchi-Cartigny,
 Jean-Marie Place, Jean-Phillipe Wary
 Universite de Lille, France;
 Orange Labs, France
- 10:00 - 10:20am:** *Threshold Secret Sharing Based on 3D-Cellular Automata*
 Rosemary Koikara, Pyung-Han Kim, Eun-Jun Yoon, Anand Paul,
 and Kee-Young Yoo
 School of Computer Science and Engineering, Kyungpook
 National University, South Korea;
 Department of Cyber Security, Kyungil University, South Korea
- 10:20 - 10:40pm:** BREAK
- 10:40a - 12:20p:** During this period, SAM'17 and ICWN'17 attendees are encouraged to participate in sessions belonging to ABDA (Advances in Big Data Analytics), DMIN (Data Mining), EEE (e-Learning, e-Business, EIS, e-Government), ESCS (Cyber-physical Systems), FECS (Education), HIMS (Health Informatics), ICAI (Artificial Intelligence), ICOMP (IoT), or PDPTA (Parallel and Distributed Processing). These sessions discuss topics that may be of interest to SAM'17 and ICWN'17 attendees.
- 12:20 - 01:20pm:** LUNCH (On Your Own)

SESSION 8-SAM: COMPUTER SECURITY II
Chair: Dr. Ken Ferens
University of Manitoba, Canada
July 19, 2017 (Wednesday); 01:20am - 03:00pm
(LOCATION: Ballroom 6)

01:20 - 01:40pm: Probabilistic Deception and Attacker Experimentation
Sharif Hassan, Ratan Guha
University of Central Florida, Orlando, Florida, USA

01:40 - 02:00pm: Using IDS to Prevent XSS Attacks
Charlie Obimbo, Kashan Ali, Khalid Mohamed
School of Computer Science, University of Guelph,
Guelph, Ontario, Canada

02:00 - 02:20pm: Comparison of SVMs with Radial-Basis function and Polynomial
Kernels in Classification of Categories in Intrusion
Detection
Charlie Obimbo, Eric Nyakundi
School of Computer Science, University of Guelph, Guelph,
Ontario, Canada

02:20 - 02:40pm: Formal Specification and Verification of Firewall using TLA+
Young-Mi Kim, Miyoung Kang, Jing-Young Choi
Department of Computer & Radio Communication Engineering,
Korea University, Seoul, Korea;
ITRC Center, Korea University, Seoul, Korea;
Graduate School of Information Security, Korea University,
Seoul, Korea

02:40 - 03:00pm: FREE SLOT

03:00 - 03:40pm: POSTER SESSION C
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 19, 2017 (Wednesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. Cost Integrated Schemes for Decoy Deployment in Virtualized Cloud Services Protection*
Tulha Al-Salah, Liang Hong
College of Engineering, Tennessee State University,
Nashville, Tennessee, USA
- 0. Vulnerability Analysis and Attacks on Intel Xeon Phi Coprocessor*
Seungmin Lee, Ju-Won Park
Division of Supercomputing, Korea Institute of Science & Technology Information (KISTI), Daejeon, Republic of Korea
- 0. The Proximity Communication Frameworks for Target Recognition Before Participating in a WLAN*
Jaebok Park, Sungho Im, Seungmok Yoo, Kyunghye Lee,
Seokjin Yun, Changsik Cho
Electronics and Telecommunications Research Institute (ETRI), Daejeon, Chungnam, South Korea
- 0. ...*

- SESSION 3-ICWN: WIRELESS NETWORKS, MOBILITY, SENSOR NETWORKS, AND APPLICATIONS + SECURITY ISSUES**
Chairs: Dr. Ahmed Barnawi
King Abdulaziz University, Saudi Arabia
July 19, 2017 (Wednesday); 03:40pm – 06:00pm
(LOCATION: Ballroom 6)
- 03:40 – 04:00pm:** *Intelligent Mobile Agent Application for Spectrum and Network Management in Cognitive Radio Networks*
Nnenna Christine Martin
College of Computing & Informatics, University of North Carolina, Charlotte, North Carolina, USA
- 04:00 – 04:20pm:** *An Energy Efficient Geographic Routing Scheme Based on Location Prediction*
Zhenchao Wang, Huanhuan Hou, Rui Lian
College of Electronic and Information Engineering,
Hebei University, China;
Key Laboratory of Digital Medical Engineering,
Hebei Province, China
- 04:20 – 04:40pm:** *An Efficient Approach for Evaluating Performance in LTE Wireless Networks*
Yunus Egi, Engin Eyceyurt, Ivica Kostanic, Carlos E. Otero
Florida Institute of Technology, Florida, USA
- 04:40 – 05:00pm:** *Design of Livestock Farm Integrated Control System*
Hyun Yoe, Hyungi Kim
Department of Information and Communication Engineering,
Sunchon National University, Korea
- 05:00 – 05:20pm:** *Monitoring and Fault Detection System for Power Transmission using GSM Technology*
Okokpujie Kennedy, Amuta Elizabeth, Okonigene Robert, and Samuel John
Department of Electrical and Information Engineering,
Covenant University, Ota, Nigeria;
Department of Electrical and Electronics Engineering,
Ambrose Alli University, Ekopma, Nigeria
- 05:20 – 05:40pm:** *Performance Evaluation of a Base Station Sleeping Scheme Meant for Next Generation Mobile Networks*
Weston Mwashita, Marcel O. Odhiambo
Department of Electrical & Mining Engineering, University of South Africa, UNISA, South Africa;
Department of Process Control & Computer Systems,
Vaal University of Technology, Vanderbijlpark, South Africa
- 05:40 – 06:00pm:** *Space-Time Massive MIMO*
Jeremy J. Ice, Reza Abdolee, Vida Vakilian
Department of Electrical and Computer Engineering,
California State University Bakersfield, California, USA
- XX:XX – 07:00pm:** **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:40a - 05:00p: During this period, SAM'17 and ICWN'17 attendees are encouraged to participate in sessions belonging to BIOCOMP (Computational Biology), CSC (Scientific Computing), EEE (e-Learning, e-Business, EIS, e-Government), FECS (Education), HIMS (Health Informatics), ICAI (Artificial Intelligence), ICOMP (IoT), IPCV (Image Processing, Computer Vision, & Pattern Recognition), MSV (Modeling, Simulation and Visualization Methods), PDPTA (Parallel and Distributed Processing), and/or SERP (Software Engineering Research). These sessions discuss topics that may be of interest to SAM'17 and ICWN'17 attendees.
- 05:00 - 05:20pm: Congress Closing Remarks
(LOCATION: Ballroom 7)

DMIN'17 + ABDA'17 + MSV'17 + EEE'17 CONFERENCE **SCHEDULES**

The 2017 International Conference on Data Mining (DMIN'17)

+

**The 2017 International Conference on Advances in
Big Data Analytics (ABDA'17)**

+

**The 2017 International Conference on Modeling, Simulation
and Visualization Methods (MSV'17)**

+

**The 2017 International Conference on e-Learning, e-Business,
Enterprise Information Systems, and e-Government (EEE'17)**

Because of partial topical and technical overlap between DMIN'17, ABDA'17, MSV'17, and EEE'17, the schedules 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. Each of these conferences (DMIN'17, ABDA'17, MSV'17, and EEE'17) is arranged and organized by its own team of experts - i.e., each conference has its own chair, organization, program committee and referees. There are also a number of other sessions (not listed as part of these conferences) that are of potential interest to DMIN'17, ABDA'17, MSV'17, and EEE'17 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ACC (Cognitive Computing), BIOCOMP (Bioinformatics), ESCS (Cyber-physical Systems), FECS (Education), HIMS (Health Informatics), ICAI (Artificial Intelligence), ICOMP (IoT), IKE (Information & Knowledge Engineering), IPCV (Computer Vision), and SAM (Security) conferences discuss topics that are within the scope of DMIN'17, ABDA'17, MSV'17, and EEE'17; these have been scheduled so that selected DMIN'17, ABDA'17, MSV'17, and EEE'17 attendees can also participate in them. Note that because of the merge, there are a number of concurrent sessions.

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 tracks they wish to attend; The conference room numbers (Locations) appear in this document.

July 16

03:00p - 07:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:30 - 08:50am: CONGRESS OPENING REMARKS - July 17, Monday:
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)
Department of Computer Science, University of Georgia, USA;
Editor-in-Chief, The Journal of Supercomputing (Springer);
Fellow, Center of Excellence in Terrorism, Resilience,
Intelligence & Organized Crime Research (CENTRIC).
(LOCATION: East Ballrooms 6 & 7)
- 08:50 - 09:00am: Announcement:
ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS
& PHD STUDENTS THROUGH COLLABORATION & BUILDING NETWORKS
Nnenna Christine Martin
Research Director, ResearchLink International, Greensboro,
North Carolina, USA
(LOCATION: East Ballrooms 6 & 7)
- 09:05 - 10:00am: KEYNOTE LECTURE - July 17, Monday:
ROBUST COMPUTING SYSTEMS
Prof. H. J. Siegel
IEEE Fellow; ACM Fellow; Founding Director of Information
Science and Technology Center; Abell Endowed Chair
Distinguished Professor of Electrical and Computer
Engineering and Professor of Computer Science; Department
ECE and CS, Colorado State University, Fort Collins, USA
(LOCATION: East Ballrooms 6 & 7)
- 10:05 - 10:50am: KEYNOTE LECTURE - July 17, Monday:
VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN
TRANSPORT AND INDUSTRY
Prof. Diego Galar
Professor & Former Director of Academic Innovation and
Subsequently Pro-Vice-Chancellor; Division of O&M Engineering,
Lulea University of Technology, Sweden; Head, Maintenance
and Reliability at TECNALIA, Spain; VOLVO Chair for
Reliability and Maintenance, Skovde University, Sweden
(LOCATION: East Ballrooms 6 & 7)
- 11:00 - 11:20am: DMIN'17 OPENING REMARKS
Dr. Robert Stahlbock
(LOCATION: Copper Room)
- SESSION 1-DMIN: SPECIAL SESSION ON REAL-WORLD DATA MINING APPLICATIONS,
CHALLENGES, AND PERSPECTIVES (Part I)
Chairs: Dr. Mahmoud Abou-Nasr, Dr. Robert Stahlbock, and
Dr. Gary M. Weiss
Ford Motor Company, USA;
University of Hamburg, Germany;
Fordham University, New York, USA;
July 17, 2017 (Monday); 11:20am - 12:20pm
(LOCATION: Copper Room)
- 11:20 - 11:40am: FREE SLOT

- 11:40 - 12:00pm: *Mining Large Point Clouds for Feature Matching of LIDAR Datasets using Self-Similarity*
Daniel Pulido, Anthony Stefanidis
George Mason University, Fairfax, Virginia, USA
- 12:00 - 12:20pm: *A Novel Approach to Coke Strength Prediction Using Self Organizing Maps*
Lauren North, Karen Blackmore, Keith Nesbitt, Kim Hockings, and Merrick Mahoney
University of Newcastle, Australia, Centre for Ironmaking Materials Research, Australia
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 2-DMIN: SPECIAL SESSION ON REAL-WORLD DATA MINING APPLICATIONS, CHALLENGES, AND PERSPECTIVES (Part II)**
Chairs: Dr. Mahmoud Abou-Nasr, Dr. Robert Stahlbock, & Dr. Gary M. Weiss
Ford Motor Company, USA;
University of Hamburg, Germany;
Fordham University, New York, USA
July 17, 2017 (Monday); 01:20pm - 03:00pm
(LOCATION: Copper Room)
- 01:20 - 01:40pm: *Detecting Influenza Outbreaks in United States by Analyzing Climatic Heat Maps Using Convolutional Neural Network*
JuHyeon Kim
Center for Convergent Research of Emerging Virus Infection, Korea Research Institute of Chemical Technology, Korea
- 01:40 - 02:00pm: *An Attempt for Sign Detection to Clarify Transonic Buffet via Unsteady-Data Mining*
Kazuhisa Chiba, Shinya Watanabe, Masaya Nakata, Yuhei Umeda, Naoki Hamada, Kanako Yasue, Koji Suzuki, Shigeru Kuchi-Ishi, Kazuyuki Nakakita, Takeshi Ito
The University of Electro-Communications, Japan
- 02:00 - 02:20pm: *Using Time Series Forecasting for Adaptive Traffic Signal Control*
Sungkyun Kim, Miclaine Keffeler, Travis Atkison, Alexander Hainen
Department of Computer Science, University of Alabama, Tuscaloosa, Alabama, USA
- 02:20 - 02:40pm: *Data Mining the Effects of Testing Conditions on Brain Biomechanical Properties*
Folly Crawford, Osama AbuOmar, Mike Jones, Roger King, and Raj Prabhu
Mississippi State University, Agricultural and Biological Engineering, USA
- 02:40 - 03:00pm: *Predicting Vulnerable Threats Location in Real Time*
Sandeep Rawat
Iowa State University, Iowa, USA

- 03:00 - 03:40pm: POSTER SESSION A**
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 17, 2017 (Monday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)
0. *Development of Road Traffic Analysis Platform using Big Data*
Hong Ki Sung, Kyu Soo Chong
Korea Institute of Civil Engineering and Building Technology, Goyang, South Korea
0. ...
- 03:40 - 05:40pm: TUTORIAL**
Predicting with Confidence
Prof. Ulf Johansson
Department of Computer Science and Informatics,
Jonkoping University, Sweden; Served as an expert witness
in the Swedish Supreme Court
- XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)
- 08:30 - 11:00pm: CONFERENCE RECEPTION DINNER / SOCIAL**
July 17 - Monday; 08:30pm - 11:30pm
(LOCATION: Ballrooms 6 & 7)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 3-DMIN: REGRESSION AND CLASSIFICATION
 Chairs: Dr. Robert Stahlbock, Dr. Gary M. Weiss
 University of Hamburg, Germany;
 Fordham University, New York, USA
 July 18, 2017 (Tuesday); 08:20am - 09:20am
 (LOCATION: Copper Room)

08:20 - 08:40am: *A Probabilistic Signal Representation for Detecting Faults in Highly Fragmented and Down-Sampled Vibration Signals*
 Dean Lee
 SPAWAR Systems Center Pacific, USA

08:40 - 09:00am: *Labeling Author Affiliations in Biomedical Articles Using HMM Classifiers*
 Jongwoo Kim, George R. Thoma, Soyoung Hong
 National Library of Medicine, Maryland, USA

09:00 - 09:20am: *SVM Constraint Discovery using KNN applied to the Identification of Cyberbullying*
 Daniel Ducharme, Leandro Costa, Lisa DiPippo, Lutz Hamel
 University of Rhode Island, Rhode Island, USA

09:20 - 10:20am: INVITED LECTURE
 Data Economy: The New Gold Rush?
 Dr. Peter Geczy
 National Institute of Advanced Industrial Science and Technology (AIST), Japan; Senior Member, IEEE; Member, INFORMS and INNS
 July 18, 2017 (Tuesday)
 (LOCATION: Copper Room)

10:20 - 10:40am: BREAK

10:40a - 12:20p: INVITED LECTURE
 Industrial Data Science and Black Swans
 Prof. Diego Galar
 Professor & Former Director of Academic Innovation and Subsequently Pro-Vice-Chancellor; Division of O&M Engineering, Lulea University of Technology, Sweden; Head, Maintenance and Reliability at TECNALIA, Spain; VOLVO Chair for Reliability and Maintenance, Skovde University, Sweden
 July 18, 2017 (Tuesday)
 (LOCATION: Copper Room)

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

SESSION 4-DMIN: CLUSTERING, ASSOCIATION + WEB, TEXT, MULTIMEDIA MINING + SOFTWARE
Chairs: Prof. Diego Galar, Dr. Peter Geczy, Dr. Robert Stahlbock, Dr. Gary M. Weiss
Lulea University of Technology, Sweden;
National Institute of Advanced Industrial Science and Technology (AIST), Japan;
University of Hamburg, Germany;
Fordham University, New York, USA
July 18, 2017 (Tuesday); 01:20pm - 04:20pm
(LOCATION: Copper Room)

- 01:20 - 01:40pm: *Table Based AHC for Text Clustering*
 Taeho Jo
 Department of Computer and Information Communication Engineering, Hongik University, Sejong, South Korea
- 01:40 - 02:00pm: *FREE SLOT*
- 02:00 - 02:20pm: *GALILEO: A Generalized Low-Entropy Mixture Model*
 Cetin Savkli, Jeffrey Lin, Philip Graff, Matthew Kinsey
 Johns Hopkins University, Applied Physics, Maryland, USA
- 02:20 - 02:40pm: *Discovering Deep Knowledge from Relational Data by Attribute-Value Association*
 Pei-Yuan Zhou, Antonio Sze-To, Andrew K. C. Wong
 University of Waterloo, Canada
- 02:40 - 03:00pm: *Fake Filtering in Advertising Restaurant Blogs Using Machine Learning Methods*
 Han-joon Kim, Jae Young Chang, Jong Hoon Chun
 University of Seoul, South Korea
- 03:00 - 03:20pm: BREAK & MINI POSTER SESSION B (INCLUDES POSTER + SHORT & POSITION PAPERS)**
July 18, 2017 (Tuesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)
0. *Design on Distributed Deep Learning Platform with Big Data*
 Mikyoung Lee, Sungho Shin, Sa-Kwang Song
 Korea Institute of Science and Technology Information, Korea
0. ...
- 03:20 - 03:40pm: *Pushing Sequential Constraints into Unordered Tree Mining Algorithms*
 Zhang Sen, Wei Gao, Zhihui Du
 State University of New York (SUNY) at Oneonta, New York, USA
- 03:40 - 04:00pm: *Mining Ordinance Data from the Web for Smart City Development*
 Aparna Varde, Xu Du, Robert Taylor
 Montclair State University, Department of Computer Science, New York, USA
- 04:00 - 04:20pm: *A Repeated Sampling and Clustering Method for Intrusion Detection*
 K. Mwitondi, S. Zargari
 Sheffield Hallam University, Sheffield, United Kingdom

- 04:20 - 06:00pm: ---> (CONCURRENT SESSION WITH SESSION 5-EEE)**
TUTORIAL
Terrorists, Hackers, and Criminals: Understanding the Darknet
Prof. Gary M. Weiss and Andrew H. Johnston
Interim Chair, Associate Professor & Director of Wireless
Sensor Data Mining (WISDM) Lab, Department of Computer and
Information Science, Fordham University, Bronx, New York, USA;
WISDM Lab, Fordham University, Bronx, New York, USA
July 18, 2017 (Tuesday)
(LOCATION: Copper Room)
- SESSION 5-EEE: ---> (CONCURRENT SESSION WITH TUTORIAL)**
E-LEARNING, LEARNING METHODOLOGIES, AND EDUCATION
Chairs: Dr. Ying Liu* and Dr. Mohammad A. Rob**
***St. John's University, Queens, New York, USA;**
****University of Houston-Clear Lake, USA**
July 18, 2017 (Tuesday); 04:40pm - 06:00pm
(LOCATION: Platinum Room)
- 04:40 - 05:00pm: A Survey of Learning Management Systems and Synchronous*
Distance Education Tools
Khondkar Islam, Pouyan Ahmadi, Salman Yousaf
George Mason University, USA
- 05:00 - 05:20pm: Design of a Learning Management System for Small and Medium*
Sized Universities and Colleges
Marek Beranek, Vladimir Kovar, Vaclav Vacek
Information Technology Department, Unicorn College,
Prague, Czech Republic
- 05:20 - 05:40pm: Unified Blended Learning Student ID Allocation Based on*
IPv6 and Beyond 4G Technologies
Ali Alshahrani
Vice Rector for Academic Affairs & Director of Riyadh's
Regional Center, Arab open university, KSA, Saudi Arabia
- 05:40 - 06:00pm: Analysis of the Development Phases of the e-Government*
Local: Case of Mexico
Israel Patino Galvan
Research Division of the Innovation Park - University La
Salle Northwest, Obregon City, Sonora, Mexico
- XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program
book for details)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 6-ABDA: DATA SCIENCE, INTERNET OF THINGS, GAME TECHNOLOGIES, AND SECURITY APPLICATIONS
 Chairs: Dr. Haydar Teymourlouei* and Prof. Junfeng Qu**
 *Lincoln University, PA, USA;
 **Clayton State University, USA
 July 19, 2017 (Wednesday); 09:00am - 12:00pm
 (LOCATION: Copper Room)
- 08:40 - 09:00am: *Context-Based Collaborative Recommendation System to Recommend Music*
 Zapata C. Santiago, Escobar R. Luis, Aguila G. Elias
 Department of Computer Science, Engineering Faculty,
 Metropolitan Technological University, Santiago, Chile
- 09:00 - 09:20am: *An "Intelli-Fog" Approach to Managing Real Time Actionable Data in IoT Applications*
 Ekpe Okorafor, Mubarak Adetunji Ojewale
 Department of Computer Science, African University of
 Science and Technology, Abuja, Nigeria
- 09:20 - 09:40am: *Visual Analysis of Players' Activities in World of Warcraft Game*
 Junfeng Qu, Weihong Hong, Yinglei Song
 Department of CS & IT, Clayton State University, Morrow, Georgia, USA;
 Department of Mathematics, Clayton State University, Morrow, Georgia, USA;
 School of Electronics and Information Science, Jiangsu University of
 Science and Technology, Zhenjiang, China
- 09:40 - 10:00am: *Using Big Data to Defend Against Cyber Threats*
 Haydar Teymourlouei, Lethia Jackson
 Department of Computer Science, Lincoln University,
 Oxford, PA, USA;
 Department of Computer Science, Bowie State University,
 Bowie, Maryland, USA
- 10:00 - 10:20am: *Enhancing Big Data Security in Cloud Using Access Control*
 Yong Wang, Ping Zhang
 Department of Computer Science and Mathematics, Alcorn
 State University, Lorman, Mississippi, USA
- 10:20 - 10:40am: **BREAK**
- 10:40 - 11:00am: *Voice Recognition Research*
 F. Capuzo, L. S. Santos, M. L. Reis, T. S. Coutinho
 Centro de Pesquisa lab245, Edificio Comercio e Industria,
 Brazil
- 11:00 - 11:20am: *Table Based KNN for Text Summarization*
 Taeho Jo
 Department of Computer and Information Communication
 Engineering, Hongik University, Sejong, South Korea
- 11:20 - 11:40am: *Post Processing of Word2vec for Category Classification based on Semantic*
 SungEn Kim, SinYeong Ahn, GuiHyun Baek, SuKyoung Kim
 Computer Engineering, Hanbat National University;
 High Performance Computing Group, Electronics and
 Telecommunications Research Institute (ETRI), Republic
 of Korea

11:40 - 12:00pm: *A Predictive Analytics Approach to Project Management: Reducing Project Failures in Web and Software Development Projects*
Tazeen Fatima
National University of Sciences & Technology, Pakistan

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

SESSION 7-MSV: SIMULATION AND TOOLS + MODELING, VISUALIZATION AND NOVEL APPLICATIONS
Chairs: Prof. Peter Maurer
Department of Computer Science, Baylor University, Texas, USA
July 19, 2017 (Wednesday); 01:20pm - 03:00pm
(LOCATION: Copper Room)

01:20 - 01:40pm: *Generating Strongly Connected Random Graphs*
Peter M. Maurer
Department of Computer Science, Baylor University,
Waco, Texas, USA

01:40 - 02:00pm: *Traffic Re-Direction Simulation During a Road Disaster/Collapse on Toll Road 408 in Florida*
Craig Tidwell
Seminole State College, University of Central Florida, USA

02:00 - 02:20pm: *Autonomously Battery Charging Tires for EVs using Piezoelectric Phenomenon*
Muhammad Kamran, Raziq Yaqub, Azzam Ul Asar
CECOS University, Peshawar, Pakistan;
University of Tennessee, USA

02:20 - 02:40pm: *A Toolbox versus a Tool - A Design Approach*
Hans-Peter Bischof
Department of Computer Science, Rochester Institute of Technology Rochester, New York, USA;
Center for Computational Relativity and Gravitation,
Rochester Institute of Technology Rochester, New York, USA

02:40 - 03:00pm: *A Stochastic Method for Structural Degradation Modeling*
Peter Sawka, Sara Boyle, Jeremy Mange
US Army - TARDEC - Dynamics and Durability, USA;
US Army - TARDEC - Computational Methods and System Behavior, USA

03:00 - 03:40pm: POSTER SESSION C
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 19, 2017 (Wednesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *OLSH: Occurrence-based Locality Sensitive Hashing*
Mohammadhossein Toutiaee
Department of CS, University of Georgia, USA
- 0. *The Lithium-ion Battery Cell Analysis using Electrochemical-Thermal Coupled Model*
D. C. Lee, K. W. Kim, C. W. Kim
Department of Mechanical Design Engineering, Hanyang University; School of Mechanical Engineering, Konkuk University, Seoul, Republic of Korea
- 0. *Renfred-Okonigene Children Protection System Network: Where Is My Baby?*
Dorcas Okonigene, Robert Okonigene, Clement Ojieabu
Department of Physical and Health Education, Ambrose Alli University; Department of EEE, Ambrose Alli University, Ekpoma Edo State, Nigeria
- 0. ...

**SESSION 8-MSV: ---> (CONCURRENT SESSION WITH SESSION 9-EEE)
MODELING, VISUALIZATION AND NOVEL APPLICATIONS
Chairs: Dr. Sara Kambouris* and Prof. Ahmed Tarek**
*Chief of Operations, Infinite Dimensions Integration, Inc., USA;
**Engineering, Physical, and Computer Sciences Department,
Montgomery College, Rockville Campus, Maryland, USA
July 19, 2017 (Wednesday); 03:40pm - 05:20pm
(LOCATION: Copper Room)**

- 03:40 - 04:00pm: Increased Realism in Modeling and Simulation for Virtual Reality, Augmented Reality, and Immersive Environments
Jeffrey Wallace, Sara Kambouris
Infinite Dimensions Integration, Inc., West Plains,
Missouri, USA*
- 04:00 - 04:20pm: Performance Enhancement and Prediction Model of Concurrent Thread Execution in JVM
Khondker Shajadul Hasan
Computer Science Department, University of Houston-Clear Lake, Houston, Texas, USA*
- 04:20 - 04:40pm: Generating Shapes and Colors using Cell Developmental Mechanism
Sezin Hwang, Moon-Ryul Jung
Graduate School of Media, Sogang Univeristy, Seoul, Korea;
Faculty of Mobile Contents, Daegu Haany University,
Daegu, Korea*
- 04:40 - 05:00pm: Modeling Business Processes: Events and Compliance Rules
Sabah Al-Fedaghi
Computer Engineering Department, Kuwait University, Kuwait*
- 05:00 - 05:20pm: Constructing a T-S Fuzzy Model by a Fuzzy Data Sifter
Horng-Lin Shieh, Ying-Kuei Yang
Department of Electrical Engineering, St. John's University, New Taipei City, Taiwan;
Department of Electrical Engineering, National Taiwan University of Science & Technology, Taipei, Taiwan*

**SESSION 9-EEE: ---> (CONCURRENT SESSION WITH SESSION 8-MSV)
E-LEARNING, LEARNING METHODOLOGIES, AND EDUCATION
Chairs: Dr. Loyce Best Pailen, CISSP
Director, Center for Security Studies, Collegiate Professor,
University of Maryland University College, Graduate School
of Management and Technology, Maryland, USA
July 19, 2017 (Wednesday); 03:40pm - 04:40pm
(LOCATION: Platinum Room)**

- 03:40 - 04:00pm: Analyzing Post-Reading Questions from the Viewpoints of Cognitive Skills
Chiharu Nakanishi, Kaori Ando, Hodaka Nakanishi, Rie Suzuki
Kunitachi College of Music, Tokyo, Japan;
College of Engineering and Design, Shibaura Institute of Technology, Saitama City, Japan;
Technology Transfer Center, Teikyo University, Tokyo, Japan;
Department of Informatics, Tokyo University of Information Sciences, Chiba City, Japan*
- 04:00 - 04:20pm: A Solution to the Long-Hours Working of Self-Employed Teleworking or Crowdsourcing
Hodaka Nakanishi
Technology Transfer Center, Teikyo University, Tokyo, Japan*

04:20 - 04:40pm: *The Cybersecurity Enhanced Learning Model (ELM)*
Loyce Best Pailen
Collegiate Professor and Director of Center for Security
Studies, University of Maryland University College (UMUC),
Maryland, USA

05:20 - 06:20pm: **INVITED LECTURE**
Modification of Machine Learning Algorithms for Text
Categorization
Dr. Taeho Jo
Hongik University, Korea
July 19, 2017 (Wednesday)
(LOCATION: Copper Room)

XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program
book for details)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 10-MSV: NOVEL ALGORITHMS AND APPLICATIONS + IMAGING SCIENCE + SIGNAL ENHANCEMENT AND WIRELESS INFRASTRUCTURES

Chairs: Dr. Sakir Yuce1

NetApp, USA

July 20, 2017 (Thursday); 09:00am - 12:00pm

(LOCATION: Copper Room)

09:00 - 09:20am: Estimating Cost of Smart Community Wireless Platforms

Sakir Yuce1

NetApp, Cranberry Township, PA, USA

09:20 - 09:40am: Magnetic Resonance Image Applied to 3-Dimensional

Printing Utilizing Various Oils

Tyler Hartwig, Zeyu Huang, Sara Martinson, Keith Schubert, Jeff Olafsen

Department of ECE, Baylor University, Waco, Texas, USA;

Department of Physics, Baylor University, Texas, USA

09:40 - 10:00am: Measuring Benefits, Drawbacks and Risks of Smart

Community Wireless Platforms

Sakir Yuce1

NetApp, Cranberry Township, PA, USA

10:00 - 10:20am: Detection of Ultra High Frequency Narrow Band Signal

Using Nonuniform Sampling

Sung-Won Park, Raksha Kestur

Department of EE & CS, Texas A&M University-Kingsville, Texas, USA

10:20 - 10:40am: BREAK

10:40 - 11:00am: Smart Community Wireless Platforms

Sakir Yuce1

NetApp, Cranberry Township, PA, USA

11:00 - 11:20am: Smart City Wireless Platforms for Smart Cities

Sakir Yuce1

NetApp, Cranberry Township, PA, USA

11:20 - 11:40am: FREE SLOT

11:40 - 12:00pm: FREE SLOT

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

SESSION 11-EEE: E-BUSINESS, E-COMMERCE, ENTERPRISE INFORMATION SYSTEMS, AND RELATED MANAGEMENT ISSUES
Chairs: Prof. Jaehun Joo
Dongguk University at Gyeongju, Republic of Korea
July 20, 2017 (Thursday); 01:00pm - 02:00pm
(LOCATION: Copper Room)

01:00 - 01:20pm: Diffusion of Smart Grid in South Korea: The relationship between consumers' awareness and intention to use
Jaehun Joo, M. Minsuk Shin
Department of Management, College of Business Administration, Dongguk University, Gyeongju-si;
Department of International Trade, College of Commerce & Economics, Konkuk University, Seoul, South Korea

01:20 - 01:40pm: Financial Model for Pricing Decisions Support in SMEs in the Restaurant Sector in Mexico
Jorge Luis Fernandez, Cynthia B. Perez, Luis A. Castro
Department of Computing and Design, Sonora Institute of Technology (ITSON), Ciudad Obregon, Sonora, Mexico

01:40 - 02:00pm: Modeling and Analysis of Contagion Dynamics and Bank Risk Management using System Dynamics
Ramesh G. Kini, Kairat Tokpaev
ISM, Faculty of IT, Kazakh British Tech. U. in Almaty, Kazakhstan

SESSION 12-EEE: IT SERVICES, SECURITY ISSUES + MOBILE COMPUTING, E-GOVERNMENT, CROWDSOURCING, TOOLS AND APPLICATIONS
Chairs: Dr. Satish Penmatsa
Framingham State University, Massachusetts, USA
July 20, 2017 (Thursday); 02:00 - 04:00pm
(LOCATION: Copper Room)

02:00 - 02:20pm: Secure Queryable Dynamic Maps
Naresh Adhikari, Naila Bushra, Mahalingam Ramkumar
Department of Computer Science and Engineering, Mississippi State University, Mississippi, USA

02:20 - 02:40pm: A WCF and WPF Based Chat Application
Shilpa Narayanaswami, David Yoon
CIS Department, University of Michigan - Dearborn, Michigan, USA

02:40 - 03:00pm: Onto-ITSMD: an Essential Ontology for Decision-Making Support Systems in the IT Service Management Domain
M. Mora, J. Marx-Gomez, F. Wang
Department of Informatics, Autonomous University of Aguascalientes, Aguascalientes, Mexico; Department of Informatics, Carl von Ossietzky University Oldenburg, Oldenburg, Lower Saxony, Germany; Information Technology & Administrative Management, Central Washington University, Ellensburg, Washington, USA

03:00 - 03:20pm: BREAK

03:20 - 03:40pm: Digitization of Companies - Understanding IT as an Enabler
Isabell Schrader, Olaf Droegehorn
Best-Practice Innovations GmbH, Germany;
Department of Automation & Computer Science, University of Applied Sciences Harz, Germany

*03:40 - 04:00pm: UU5: Open Source Library for User Interface Development
Marek Beranek, Vladimir Kovar
Information Technology Department, Unicorn College,
Prague, Czech Republic*

04:00 - 04:20pm: FREE SLOT

04:20 - 04:40pm: FREE SLOT

04:40 - 05:00pm: FREE SLOT

**05:00 - 05:20pm: Congress Closing Remarks
(LOCATION: Ballroom 7)**

FECS'17 + SERP'17 + ICOMP'17 + FCS'17 **CONFERENCE SCHEDULES**

**The 2017 International Conference on Frontiers in Education:
Computer Science and Computer Engineering (FECS'17)**

+

**The 2017 International Conference on Software Engineering
Research and Practice (SERP'17)**

+

**The 2017 International Conference on Internet Computing
and IoT (ICOMP'17)**

+

**The 2017 International Conference on Foundations of
Computer Science (FCS'17)**

Because of partial topical and technical overlap between FECS'17, SERP'17, ICOMP'17, and FCS'17, the schedules 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 FECS'17, SERP'17, ICOMP'17, and FCS'17 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ABDA (Advances in Big Data Analytics), CSC (Scientific Computing), DMIN (Data Mining), EEE (e-Learning, e-Business, EIS, and e-Government), ESCS (Cyber-physical Systems), HIMS (Health Informatics), ICAI (Artificial Intelligence), ICWN (Networks), MSV (Modeling & Simulation), PDPTA (Parallel and Distributed Processing), and SAM (Security) conferences discuss topics that are within the scope of FECS'17, SERP'17, ICOMP'17, and FCS'17; these have been scheduled so that selected FECS'17, SERP'17, ICOMP'17, and FCS'17 attendees can also participate in them. Note that because of the merge, there are a number of concurrent sessions.

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 tracks they wish to attend; The conference room numbers (Locations) appear in this document.

July 16

03:00p - 07:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:30 - 08:50am: CONGRESS OPENING REMARKS - July 17, Monday:
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)
Department of Computer Science, University of Georgia, USA;
Editor-in-Chief, The Journal of Supercomputing (Springer);
Fellow, Center of Excellence in Terrorism, Resilience,
Intelligence & Organized Crime Research (CENTRIC).
(LOCATION: East Ballrooms 6 & 7)
- 08:50 - 09:00am: Announcement:
ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS
& PHD STUDENTS THROUGH COLLABORATION & BUILDING NETWORKS
Nnenna Christine Martin
Research Director, ResearchLink International, Greensboro,
North Carolina, USA
(LOCATION: East Ballrooms 6 & 7)
- 09:05 - 10:00am: KEYNOTE LECTURE - July 17, Monday:
ROBUST COMPUTING SYSTEMS
Prof. H. J. Siegel
IEEE Fellow; ACM Fellow; Founding Director of Information
Science and Technology Center; Abell Endowed Chair
Distinguished Professor of Electrical and Computer
Engineering and Professor of Computer Science; Department
ECE and CS, Colorado State University, Fort Collins, USA
(LOCATION: East Ballrooms 6 & 7)
- 10:05 - 10:50am: KEYNOTE LECTURE - July 17, Monday:
VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN
TRANSPORT AND INDUSTRY
Prof. Diego Galar
Professor & Former Director of Academic Innovation and
Subsequently Pro-Vice-Chancellor; Division of O&M Engineering,
Lulea University of Technology, Sweden; Head, Maintenance
and Reliability at TECNALIA, Spain; VOLVO Chair for
Reliability and Maintenance, Skovde University, Sweden
(LOCATION: East Ballrooms 6 & 7)
- SESSION 1-ICOMP: INTERNET OF THINGS + WEB-BASED APPLICATIONS AND ENVIRONMENTS
+ CYBERSPACE AND RELATED METHODS
Chairs: Dr. Lisa L. Lacher
University of Houston - Clear Lake, Texas, USA
July 17, 2017 (Monday); 11:00am - 12:20pm
(LOCATION: Platinum Room)
- 11:00 - 11:20am: *Efficient and Secure ECC-based Electronic Cash Payment
Applications for Internet Consumers*
Woei-Jiunn Tsaor
Computer Center, National Taipei University, Taiwan
- 11:20 - 11:40am: *Performance Evaluation of Path Planning Algorithms for
Autonomous Underwater Vehicles*
Elena Politi, George Dimitrakopoulos
Department of Informatics and Telematics,
Harokopio University of Athens, Greece
- 11:40 - 12:00pm: *An Empirical Study on Con Resistant Trust Algorithm for Cyberspace*
Md Minhaz Chowdhury, Kendall E. Nygard
Department of Computer Science, North Dakota State University,
Fargo, North Dakota, USA

12:00 - 12:20pm: *Automated Argumentation Among Internet of Things: A Case Study for Driverless Vehicles*
Kane Rodriguez, Henry Hexmoor
Computer Science Department, Southern Illinois University,
Carbondale, Illinois, USA

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

SESSION 2-FECS: TEACHING METHODOLOGIES AND STRATEGIES, ASSESSMENT
METHODS, AND RELATED STUDIES - I
Chairs: Dr. Leslie Claesson-Vert* and Prof. Bassam Shaer**
*Northern Arizona University, USA;
**University of West Florida, USA
July 17, 2017 (Monday); 01:20pm - 03:00pm
(LOCATION: Platinum Room)

01:20 - 01:40pm: *Integration of Agile Education Solutions for Teaching
Complex Subject Matter: AI System Design Case Study*
John N. Carbone, James A. Crowder
Southern Methodist University, Texas, USA;
Raytheon Company, USA

01:40 - 02:00pm: *Two Alternative Modules for Teaching Scheduling Algorithms
in Computer Science using Web Games and Kinesthetic
Learning Activities*
Alkhazl Fatimah, Alotiabi Norah, G. Young
Computer Science Department, California State Polytechnic
University, Pomona, California, USA

02:00 - 02:20pm: *Integrating Modern Software Tools into Online Database Course*
Hong Wang
The University Of Toledo, Toledo, Ohio, USA

02:20 - 02:40pm: *Class Behavior on Quizzes that include a Prisoner's Dilemma
Bonus Question*
Peter Jamieson
Electrical and Computer Engineering,
Miami University, Oxford, Ohio, USA

02:40 - 03:00pm: *A Study of Kinesthetic Learning Activities in Teaching
Computer Algorithms in Saudi Arabia*
Ashwag Gashgari, G. Young
California State Polytechnic University, Pomona, California, USA

03:00 - 03:40pm: POSTER SESSION A
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 17, 2017 (Monday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Design of a Laboratory Power Supply - a Capstone Research Project*
Bassam Shaer, Andreas Fuchs, Nathaniel Morales
Engineering Department, University of West Florida, Florida, USA
- 0. *Strategy Development on Disaster Information Integration
System in High-rise Buildings in Korea*
Chunjoo Yoon, Changhee Hong
Multi Disaster Countermeasure Organization, Korea;
Institute of Civil Eng. & Building Technology, Korea
- 0. *Enriching Information Technology Research for Each Video Contents
Scene Based on Semantic Social Networking Using Ontology Learning*
SungEn Kim, TaeGyun Lee, JaeDu Kim
Computer Engineering, Hanbat National University, Republic
of Korea; The Academic Affairs Office, Hanbat National
University, Republic of Korea
- 0. ...

- SESSION 3-FECS: TEACHING METHODOLOGIES AND STRATEGIES, ASSESSMENT METHODS, AND RELATED STUDIES - II**
Chairs: Prof. Hong Wang* and Dr. Ying Liu**
**The University of Toledo, USA*
***St. John's University, Queens, New York, USA*
July 17, 2017 (Monday); 03:40pm - 05:40pm
(LOCATION: Platinum Room)
- 03:40 - 04:00pm: Experiments for a Database Course: Access Path Selection by a Query Optimizer*
Jamal Alsabbagh
School of Computing and Information Systems,
Grand Valley State University, Allendale, Michigan, USA
- 04:00 - 04:20pm: Aptitude and Previous Experience in CS1 Classes*
Lisa L. Lacher, Albert Jiang, Yu Zhang, Mark C. Lewis
University of Houston at Clear Lake, Houston, Texas, USA;
Trinity University, San Antonio, Texas, USA
- 04:20 - 04:40pm: Teaching Parallel Programming Using CUDA: A Case Study*
Timothy O'Neil, Yingcai Xiao
Department of Computer Science, The University of Akron,
Akron, Ohio, USA
- 04:40 - 05:00pm: Setting MCQs that Adhere to Given Course Learning Outcomes for an Algorithms Class*
Charlie Obimbo
School of Computer Science, University of Guelph, Guelph,
Ontario, Canada
- 05:00 - 05:20pm: Increasing Awareness and Participation in Computer Science Education*
David Hicks, Jeong Yang
Electrical Engineering and Computer Science,
Texas A&M University - Kingsville, Texas, USA;
Computing and Cyber Security,
Texas A&M University - San Antonio, Texas, USA
- 05:20 - 05:40pm: Development of 21st Century Skills, and Engineering Confidence through Design: A Global Comparative Study*
Mahmoud Abdulwahed
College of Engineering, Qatar University, Doha, Qatar
- 05:40 - 06:20pm: KEYNOTE LECTURE**
THE ROLE OF TECHNOLOGY
(A version of this talk is scheduled for presentation at Ted.com)
Prof. Igor Schagaev
Director, ITACS Ltd, United Kingdom
July 17, 2017 (Monday)
(LOCATION: Platinum Room)
- 08:30 - 11:00pm: CONFERENCE RECEPTION DINNER / SOCIAL**
July 17 - Monday; 08:30pm - 11:30pm
(LOCATION: Ballrooms 6 & 7)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 4-SERP: TESTING, TEST GENERATION METHODS, FORMAL METHODS, VERIFICATION, BUG-FIXING TECHNIQUES AND SECURITY RELATED ISSUES
 Chairs: Dr. Lisa L. Lacher
 University of Houston - Clear Lake, Texas, USA
 July 18, 2017 (Tuesday); 08:40am - 10:20am
 (LOCATION: Platinum Room)
- 08:40 - 09:00am: *A Sound Operational Semantics for Circus*
 Samuel Lincoln Magalhaes Barrocas, and
 Marcel V. Medeiros Oliveira
 Departamento de Informatica e Matematica Aplicada,
 Universidade Federal do Rio Grande do Norte (UFRN), Brazil;
 Instituto Metropole Digital, Universidade Federal do Rio
 Grande do Norte (UFRN), Natal, RN, Brazil
- 09:00 - 09:20am: *Cybersecurity Practices from a Software Engineering
 Perspective*
 Aakanksha Rastogi, Kendall E. Nygard
 Department of Computer Science, North Dakota State
 University, Fargo, North Dakota, USA
- 09:20 - 09:40am: *The Impact of Test Case Prioritization on Test Coverage
 versus Defects Found*
 Ramadan Abdunabi, Yashwant K. Malaiya
 Computer Information Systems Department,
 Colorado State University, Fort Collins, Colorado, USA;
 Computer Science Department, Colorado State University,
 Fort Collins, Colorado, USA
- 09:40 - 10:00am: *Simple Promela Verification Model Translation Method based
 on Relative SysML State Machine Diagrams*
 Bo Wang, Takahiro Ando, Kenji Hisazumi, Weiqiang Kong,
 Akira Fukuda, Yasutaka Michiura, Keita Sakemi, and
 Michihiro Matsumoto
 Graduate School of Information Science and Electrical
 Engineering, Kyushu University, Fukuoka, Japan;
 System LSI Research Center, Kyushu University, Japan;
 School of Software, Dalian University of Technology,
 Dalian, China;
 Japan Manned Space Systems Corporation, Ibaraki, Japan
- 10:00 - 10:20am: *An Automated Approach for Selecting Bugs in Component-Based
 Software Projects*
 Georgenes Lima, Gledson Elias
 Informatics Center, Federal University of Paraiba,
 Joao Pessoa, PB, Brazil
- 10:20 - 10:40am: BREAK

SESSION 5-SERP: TESTING, TEST GENERATION METHODS, FORMAL METHODS, VERIFICATION, BUG-FIXING TECHNIQUES AND SECURITY RELATED ISSUES + CURRICULUM DESIGN
Chairs: Dr. Tauqeer Hussain
Kutztown University, USA
July 18, 2017 (Tuesday); 10:40am - 12:40pm
(LOCATION: Platinum Room)

10:40 - 11:00am: *Efficient Component Integration Testing of a Landing Platform for Vertical Take Off and Landing UAVs*
A. Andrews, A. Gannous, A. Gario, M. J. Rutherford
Department of Computer Science, University Of Denver,
Denver, Colorado, USA

11:00 - 11:20am: *Behavior Driven Test Automation Framework*
Ramaswamy Subramanian, Ning Chen, Miranda Zhu
Department of Computer Science, California State University,
Fullerton, California, USA

11:20 - 11:40am: *A Software Test Approach to Evaluate the Enforcement of a Workflow Engine*
Laurent Bobelin, Christian Toinard, Tuan Hiep Tran, and
Stephane Moinard
LIFO Computer Science Laboratory of Orleans, INSA Centre Val
de Loire, Bourges Cedex, France;
Qualnet, Vasselay, France

11:40 - 12:00pm: *A Comparison of Strategies to Generate Test Requirements for Fail-Safe Behavior*
Salah Boukhris, Ahmed Alhaddad, Anneliese Andrews
Department of Computer Science, University of Denver,
Colorado, USA

12:00 - 12:20pm: *Determining Degree of Allignment of Undergraduate Software Engineering Program with SWECOM*
Massood Towhidnejad, Mouza Al Blooshi
Embry-Riddle Aeronautical University, Daytona Beach,
Florida, USA

12:20 - 12:40pm: *A Comparison of Server Side Scripting Technologies*
Tyler Crawford, Tauqeer Hussain
Computer Science & Information Technology Department,
Kutztown University of Pennsylvania, USA

12:40 - 01:20pm: LUNCH (On Your Own)

SESSION 6-FECS: RESEARCH PROJECTS, CAPSTONE DESIGN PROJECTS, AND NOVEL ALGORITHMS
Chairs: Dr. Ching-yu Huang
Kean University, USA
July 18, 2017 (Tuesday); 01:20pm - 03:00pm
(LOCATION: Platinum Room)

01:20 - 01:40pm: *A Senior Research - An Integrated and Automated Submission System*
Kerules Fareg, Ching-Yu Huang
Department of Computer Science, Kean University, USA

01:40 - 02:00pm: *HomeUnit - An Internet of Things Air Quality Monitor*
Marian Grocholski, Nathan Moschler, Roslyn Debacker,
Winston Grocholski, Ken Ferens, Marcia Friesen
Department of Electrical and Computer Engineering,
University of Manitoba, Winnipeg, MB, Canada

02:00 - 02:20pm: *An Independent Study on Geographical Information and Online Map System*
 Jacob Quick, Ching-Yu Huang
 Department of Computer Science, Kean University, USA

02:20 - 02:40pm: *The Project Participation Tier Model: Bridging Perceptions of Computer Science Competency*
 Marlon Mejias, Keltly Jean-Pierre, Dwight Thomas, Gloria Washington, Peter Keiller, Legand Burge
 Department of Electrical Engineering and Computer Science, Howard University, Washington, DC, USA

02:40 - 03:00pm: *An Intelligent and Automated PDF Format Checker*
 Tsaihsuan Yang, Yu Sun
 Computer Science Department, California State Polytechnic University, Pomona, California, USA

03:00 - 03:40pm: **POSTER SESSION B**
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 18, 2017 (Tuesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *SW Test Automation System Implementation for Securing SW Quality and Stability*
 C. O. Jeong, B. S. Lee, I. J. Kim, Y. L. Hwang, S. J. Lee
 Unmanned Vehicle Systems Research Group, Electronics and Telecommunications Research Institute (ETRI), Korea
- 0. *A Mitigation Technique for Interference of Heterogeneous Networks for the IoT Device Domain*
 Seung-Jun Yu, Won-Seok Lee, Sung-Soon Park, Hyung-Kyu Song
 uT Communication Research Institute, Sejong University, Seoul, Republic of Korea
- 0. *Software Architecture for OneM2M Based Gateway to Interwork with ZigBee Networks for Device Domain*
 Won-Seok Lee, Sung-Soon Park, Chang-Hee Kang, and Hyung-Kyu Song
 uT Communication Research Institute, Sejong University, Seoul, Republic of Korea
- 0. *The Design of Interworking Architecture Between oneM2M Platform and OIC Platform*
 Sung-Soon Park, Chang-Hee Kang, Won-Seok Lee, and Hyung-Kyu Song
 uT Communication Research Institute, Sejong-University, Seoul, Republic of Korea
- 0. *The Frame Format for Interference Mitigation in Bluetooth Communication System Based OneM2M Platform*
 Chang-Hee Kang, Won-Seok Lee, Sung-Soon Park, and Hyung-Kyu Song
 uT Communication Research Institute, Sejong-University, Seoul, Republic of Korea
- 0. ...

- SESSION 7-ICOMP: COMMUNICATION ISSUES, INTERNET COMPUTING AND WEB PROGRAMMING + SECURITY RELATED ISSUES**
Chairs: Paul Seymer
Department of Computer Science, George Mason University, USA
July 18, 2017 (Tuesday); 03:40pm - 04:40pm
(LOCATION: Platinum Room)
- 03:40 - 04:00pm: Internet Of Things Security*
Kevin Berisso, James McGinnis
Department of Engineering Technology,
University of Memphis, Memphis, TN, USA
- 04:00 - 04:20pm: Optimization of Packet Cache Utilization of Network Node for Redundant Traffic Reduction*
Wataru Yokota, Kenji Ichijo, Akiko Narita
Graduate school of Science and Technology,
Hirosaki University, Aomori, Japan
- 04:20 - 04:40pm: Mean Web Object Size for Multiple User Access in M/G/1/Ps System*
Yong-Jin Lee
Department of Technology Education, Korea National
University of Education, Korea
- XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)

- 07:00a - 05:00p:** REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 8-FCS:** FOUNDATIONS OF COMPUTER SCIENCE: GRAPH & NETWORK BASED ALGORITHMS + SOFTWARE SYSTEMS & NOVEL METHODS
Chairs: Prof. Ahmed Tarek
 Engineering, Physical, and Computer Sciences Department,
 Montgomery College, Rockville Campus, Maryland, USA
 July 19, 2017 (Wednesday); 08:40am - 11:20am
 (LOCATION: Platinum Room)
- 08:40 - 09:00am: Some Hardness Results for Distance Dominating Set*
 Yong Zhang
 Department of Computer Science, Kutztown University of
 PA, Kutztown, PA, USA
- 09:00 - 09:20am: Critical Graphs for the Minimum-Vertex-Cover Problem*
 Andreas Jakoby, Naveen Kumar Goswami, Eik List, Stefan Luck
 Faculty of Media, Bauhaus-Universität Weimar, Bauhausstr.,
 Weimar, Germany
- 09:20 - 09:40am: User-level Deterministic Replay via Accurate
 Non-deterministic Event Capture*
 Jeongtaek Lim, Hosang Yoon, Hyunmin Yoon, Yoomee Ko, and
 Minsoo Ryu
 Department of Computer Science and Engineering, Hanyang
 University, Seoul, Korea;
 Department of Electronics and Computer Engineering,
 Hanyang University, Seoul, Korea
- 09:40 - 10:00am: Analysis and Evaluation of Locks Designed for NUMA System*
 JooHwan Hong, Seokyeong Jung, Kihyun Yun, Minsoo Ryu
 Department of Computer Science and Engineering,
 Hanyang University, Seoul, Korea
- 10:00 - 10:20am: A New Algorithm for Tiered Binary Search*
 Ahmed Tarek
 Engineering, Physical, and Computer Sciences Department,
 Montgomery College, Rockville Campus, Maryland, USA
- 10:20 - 10:40am: BREAK**
- 10:40 - 11:00am: Investigating the Benefits of Parallel Processing for
 Binary Search*
 Ronald Baldwin, Gennifer Elise Farrell, Paul Mullins
 Slippery Rock University, Slippery Rock, PA, USA
- 11:00 - 11:20am: Algorithms for the Majority Problem*
 Rajarshi Tarafdar, Yijie Han
 School of Computing and Engineering, University of
 Missouri at Kansas City, Kansas City, Missouri, USA

SESSION 9-ICOMP: INTERNET OF THINGS, SECURITY CONCERNS, AND WEB BASED APPLICATIONS AND SYSTEMS

Chairs: Paul Seymer

Department of Computer Science, George Mason University, USA

July 19, 2017 (Wednesday); 11:20am - 12:20pm

(LOCATION: Platinum Room)

11:20 - 11:40am: Towards an IoT Cooperation Model: Understanding how a sociotechnical approach matters
Robison Cris Brito, Jose Felipe Loureiro, Eduardo Todt, and Roberto Pereira
Federal University of Technology - Parana, Brazil;
Federal University of Parana, UFPR, Brazil

11:40 - 12:00pm: Transaction Security Begins with Chip-Level Identity
Nick Tredennick, Paul Wu, Rich Nathan
Jonetix Corp., Los Gatos, California, USA;
Jonetix Corp., Cupertino, California, USA

12:00 - 12:20pm: Dynamically Generating Virtual Reality Scenes Using Molly and A-Frame
Ronald P. Vullo, Michelle A. Catalfamo
Department of Information Sciences and Technologies,
Rochester Institute of Technology Center for Media,
Arts, Games, Interaction & Creativity (MAGIC), Rochester,
New York, USA;
Motion Picture Science, Rochester Institute of Technology,
Rochester, New York, USA

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

SESSION 10-FECS: SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS, STEM EDUCATION AND COMPUTATIONAL SCIENCE

Chairs: Dr. Daniel Ducharme

University of Rhode Island, USA

July 19, 2017 (Wednesday); 01:20pm - 03:00pm

(LOCATION: Platinum Room)

01:20 - 01:40pm: Effective Techniques for Student Engagement in Introductory Computing Courses
Sajid Hussain, Steven Morgan, Ziaul Haque
Department of Mathematics and Computer Science,
Fisk University, Nashville, Tennessee, USA;
Department of Physics, Fisk University, Nashville,
Tennessee, USA

01:40 - 02:00pm: Co-Curricular Industry Experiences to Promote Student Success
Meline Kevorkian, Greg Simco
College of Engineering, Nova Southeastern University,
Fort Lauderdale, Florida, USA

02:00 - 02:20pm: A Project-Driven Operating Systems Class: A Case Study
Timothy W. O'Neil
Department of Computer Science, The University of Akron, Akron, Ohio, USA

02:20 - 02:40pm: An Analysis of Student Success in Math, Physics, and Introductory Civil Engineering Courses
Jaime Raigoza
Computer Science Department, California State University,
Chico, California, USA

02:40 - 03:00pm: *Weaving STEM into the Design, Development and Delivery of our Curricula and Courses and our Research*
 Ramesh G. Kini, Timur F. Umarov, Faud Hajiev
 ISM at the Faculty of IT, Kazakh British Tech.
 U. in Almaty, Kazakhstan;
 Vice President Academic Affairs at KBTU;
 ADA in Baku, Azerbaijan

03:00 - 03:40pm: **POSTER SESSION C**
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 19, 2017 (Wednesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Streaming Service Enhancement on QUIC Protocol*
 Juhyun Choi, Changue Jung, Ikjun Yeom, Younghoon Kim
 Samsung Electronics, Suwon, South Korea;
 Sungkyunkwan University, Suwon, South Korea
- 0. *Dynamic Generation of App. UI Template Associated with IoT Device form Factor*
 Sung-Phil Heo, Heonyoung Lim, Sung-Chul Hur
 Department of Unmanned and Autonomous Vehicle Engineering,
 Kyungwoon University, Korea; Appomattox Hull Project,
 Samsung Heavy Industries Co., Ltd., Geoje-si, Korea
- 0. ...

03:40 - 04:40pm: During this period, FECS'17, SERP'17, ICOMP'17, and FCS'17 attendees are encouraged to participate in sessions belonging to ABDA (Advances in Big Data Analytics), CSC (Scientific Computing), DMIN (Data Mining), EEE (e-Learning, e-Business, EIS, and e-Government), ESCS (Cyber-physical Systems), HIMS (Health Informatics), ICAI (Artificial Intelligence), ICWN (Networks), MSV (Modeling & Simulation), PDPTA (Parallel and Distributed Processing), or SAM (Security) conferences. These sessions discuss topics that may be of interest to FECS'17, SERP'17, ICOMP'17, and FCS'17 attendees.

SESSION 11-SERP: SOFTWARE ENGINEERING AND APPLICATIONS
Chairs: Dr. Tauqeer Hussain
Kutztown University, USA
July 19, 2017 (Wednesday); 04:40pm - 05:20pm
(LOCATION: Platinum Room)

04:40 - 05:00pm: *KDD Extension Tool for Software Architecture Extraction*
 Mira Abboud, Hala Naja, Mourad Oussalah, Mohamad Dbouk
 Faculty of sciences, Lebanese University, Lebanon;
 LINA Laboratory, University of Nantes, Nantes, France

05:00 - 05:20pm: *Performance Investigation of Deep Neural Networks on Object Detection*
 Oluseyi Adejuwon, Hsiang-Huang Wu, Lijun Qian
 Prairie View A&M University, Prairie View, Texas, USA

XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

It is important to note that through out this day (July 20), there are two sets of concurrent sessions scheduled - one set of schedules appears in PLATINUM ROOM and the other in BALLROOM 6. Please make sure that you examine the whole sets of sessions that appear today. In summary, sessions 12-SERP and 13-SERP are being held concurrently with session 15-FECS; and session 14-ICOMP is being held concurrently with session 16-FECS.

SESSION 12-SERP: WEB-BASED TECHNOLOGIES AND APPLICATIONS + CLOUD & MOBILE COMPUTING

Chairs: Dr. Reza AbdoLee* and Dr. Kassim S. Mwitondi**

***California State University, Bakersfield, CA, USA;**

****Sheffield Hallam University, United Kingdom**

July 20, 2017 (Thursday); 08:40am - 10:40am

(LOCATION: Platinum Room)

*08:40 - 09:00am: IEEE 42010 and Agile Process - Create Architecture Description through Agile Architecture Framework
Shun Chi Lo, Ning Chen
Department of CS, California State University, Fullerton, CA, USA*

*09:00 - 09:20am: The Architecture of a Ride Sharing Application
Mao Zheng, Yifan Gu, Chaohui Xu
Department of Computer Science,
University of Wisconsin - La Crosse, Wisconsin, USA*

*09:20 - 09:40am: An Automated Input Generation Method for Crawling of Web Applications
Yuki Ishikawa, Kenji Hisazumi, Akira Fukuda
Graduate School and Faculty of Information Science and Electrical Engineering, Kyushu University, Japan;
System LSI Research Center, Kyushu University, Japan*

*09:40 - 10:00am: The Application of Software Engineering to Moving Goods Mobile App
Katherine Snyder, Kevin Daimi
Department of Mathematics, Computer Science and Software Engineering, University of Detroit Mercy, Detroit, Michigan, USA*

*10:00 - 10:20am: Development of Support Environment Towards Traffic Simulation for ITS Services
Ryo Fujii, Takahiro Ando, Kenji Hisazumi, Tsunenori Mine, Tsuneo Nakanishi, Akira Fukuda
Graduate School of Information Science and Electrical Engineering, Kyushu University, Japan;
System LSI Research Center, Kyushu University, Japan;
Department of Electronics Engineering and Computer Science, Faculty of Engineering, Fukuoka University, Japan*

*10:20 - 10:40am: Publishing and Consuming RESTful Web API Services
Yurii Boreisha, Oksana Myronovych
Department of Computer Science, Minnesota State University Moorhead, Minnesota, USA;
Department of Computer Science, North Dakota State University, Fargo, North Dakota, USA*

10:40 - 11:00am: BREAK

SESSION 13-SERP: PROGRAMMING ISSUES AND ALGORITHMS + SOFTWARE ARCHITECTURES AND SOFTWARE ENGINEERING + EDUCATION
Chairs: TBA

Volunteers needed to chair this session.

July 20, 2017 (Thursday); 11:00am - 01:00pm
(LOCATION: Platinum Room)

- 11:00 - 11:20am: *Aesthetics Versus Entropy in Source Code*
 Ron Coleman, Brendon Boldt
 Computer Science Department, Marist College,
 Poughkeepsie, New York, USA
- 11:20 - 11:40am: *Object Orientation: A Mathematical Perspective*
 Nelson Rushton
 Department of Computer Science, Texas Tech University,
 Lubbock, Texas, USA
- 11:40 - 12:00pm: *Version Control Open Source Software for Computer Science Programming Courses*
 Mesafint Fanuel, Tzusheng Pei, Ali Abu El Humos, Hyunju Kim
 Department of Computer Science, Jackson State University,
 Jackson, MS, USA;
 Department of Mathematics and Computer Science, Wheaton
 College, Wheaton, Illinois, USA
- 12:00 - 12:20pm: *Resilience Methods within the Software Development Cycle*
 Acklyn Murray, Marlon Mejias, Peter Keiller
 Department of Electrical Engineering and Computer Science,
 Howard University, Washington, DC, USA
- 12:20 - 12:40pm: *IEEE 42010 and Agile Process - Create Architecture Description through Agile Architecture Framework*
 Shun Chi Lo, Ning Chen
 Department of Computer Science, California State University,
 Fullerton, California, USA
- 12:40 - 01:00pm: *Implementation and Analysis of Autonomic Management SaaS-EHR System*
 Nadir Kamal Salih
 Electrical and Computer Engineering Department,
 Karary University, Sudan
- 01:00 - 01:40pm: **LUNCH (On Your Own)**

SESSION 14-ICOMP: COMMUNICATION SYSTEMS, HOME AUTOMATION, SMART CITIES AND SPACES, CLOUD AND MOBILE COMPUTING

Chairs: Prof. Jaime Raigoza
California State University, Chico, USA
July 20, 2017 (Thursday); 01:40pm - 05:00pm
(LOCATION: Platinum Room)

- 01:40 - 02:00pm: *Range of Bluetooth Low Energy Beacons in Relation to their Transmit Power*
 Q. A. Budan, A. Naderi, D. L. Deugo
 School of Computer Science, Carleton University, Ottawa,
 Ontario, Canada
- 02:00 - 02:20pm: *Front-End Development for Home Automation Systems Using Javascript Frameworks*
 Olaf Droegehorn, Marie Leslie Melanie Pittumbur, Jari Porras
 Harz University of Applied Sciences, Wernigerode Germany;
 Lappeenranta University of Technology, Lappeenranta, Finland

- 02:20 - 02:40pm: *Implementing Fair Wireless Interfaces with Off-The-Shelf Hardware in Smart Spaces*
 Paul Seymer, Duminda Wijesekera
 Department of Computer Science, George Mason University,
 Fairfax, Virginia, USA
- 02:40 - 03:00pm: *IoT Architecture for Home Automation by Speech Control Aimed to Assist People with Mobility Restrictions*
 Joceli Mayer
 Department of Electrical Engineering, Federal University of Santa Catarina, PSILAB - Research Laboratory on Signal Processing, Communication and Recognition, Santa Catarina, Brazil
- 03:00 - 03:20pm: BREAK**
- 03:20 - 03:40pm: *Floor Based Sensor System: Additional Intelligence, Gait Estimation, and Scavenging Charging Characteristics*
 Fadi Muheidat, Harry W. Tyrer
 Electrical Engineering and Computer Science Department,
 University of Missouri, Columbia, Missouri, USA
- 03:40 - 04:00pm: *Using USBIP to Create a Portable Remote USB Hub*
 Daniel Paradis, Bruce Segee
 ECE, University of Maine, Orono, Maine, USA
- 04:00 - 04:20pm: *Toward High Throughput Backend Provision for Mobile Apps with a Microservice Approach*
 He-Ming Ruan, Jen-Hao Kuo, Chun-Yi Chan, Chin-Laung Lei
 Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan;
 Taipei Research Center, Shanghai Droi Technology, Taiwan
- 04:20 - 04:40pm: *A Smart Multi-Agent Controller Model for Large Scale Network Management*
 Wafa Ghonaim, Ahmed Al-Ghamdi
 Faculty of Computing and Information Technology,
 University of Jeddah, Jeddah, KSA, Saudi Arabia
- 04:40 - 05:00pm: *IT Communication as Institutional Promotion for the Technological Realizations: Case of the Center for Informatics Studies and Information Systems and Communication*
 Mounia Boumediane
 Information Systems and Communication, Center of Computer Studies, Royal Institut of Amazigh Culture, Morocco
- SESSION 15-FECS: ACTIVE LEARNING, LEARNING STRATEGIES, TOOLS, ACCREDITATION AND RELATED ISSUES + EDUCATION AND VISUALIZATION METHODS**
Chairs: Prof. Donald R. Schwartz*, Prof. Yang Yi, Associate Prof. Hiroshi Dozono***, Vida Vakilian******
 *School of Computer Science and Mathematics,
 Marist College, Poughkeepsie, New York, USA;
 **Tsinghua University, China;
 ***Saga University, Japan;
 ****California State University, Bakersfield, CA, USA
July 20, 2017 (Thursday); 08:40am - 12:00pm
(LOCATION: Ballroom 6)
- 08:40 - 09:00am: *An Automated Tool for Individualized Guidance in a Large-Scale Course*
 Quoc-Viet Dang, Daniel Gajski
 Henry Samueli School of Engineering,
 University of California, Irvine, California, USA

- 09:00 - 09:20am: *A Study of Learning Effectiveness on the Dijkstra's Algorithm Modeled in an Interactive KLA Approach*
Peter P. Chen, Paul T. Chiou, Gilbert S. Young
Computer Science Department, California State Polytechnic University, Pomona, California, USA
- 09:20 - 09:40am: *Web-based Projects in Service Learning*
Donald R. Schwartz
School of Computer Science and Mathematics, Marist College, Poughkeepsie, New York, USA
- 09:40 - 10:00am: *Project-based Learning in Computer Science Education with Social Network Application Programming Interfaces*
Weidong Liao
Department of Computer Science, Mathematics and Engineering, School of Natural Sciences and Mathematics, Shepherd University, Shepherdstown, West Virginia, USA
- 10:00 - 10:20am: *Student Perspectives on Learning in a Course on Engineering Applications for Nanoscience and Nanotechnology*
Deborah Worley, Naima Kaabouch, Matt Cavalli, Kanishka Marasinghe, Nuri Oncel, David Pierce, Brian Tande, and Julia Zhao
University of North Dakota, North Dakota, USA
- 10:20 - 10:40am: **BREAK**
- 10:40 - 11:00am: *Interest-Based Learning for Teaching a Human-Computer Interaction Course: Media and Cognition Course*
Yang Yi, Wang Shengjin, Sun Jiasong, Zhong Xian
Department of Electronic Engineering, Tsinghua University, Beijing, China;
Intel Co., Beijing, China
- 11:00 - 11:20am: *ABET-CAC Accreditation at University of Petra - Assessment Plan for Continuous Improvement*
Shakir M. Hussain, Ghassan Issa, Nuha El-Khalili, Muhammad Abu Arqoub, Nesreen A. Otoum
Faculty of Information Technology, University of Petra, Jordan
- 11:20 - 11:40am: *Creative Coding for all Students*
M. R. Zargham, C. K. Danduri
Department of Computer Science, University of Dayton, Dayton, Ohio, USA
- 11:40 - 12:00pm: *Visualization of the Progress of the Exercises of Students in C Programming Class*
Hiroshi Dozono, Tomonori Enda, Hiroki Yoshioka, Masanori Nakakuni, Gen Niina
Department of Advanced Fusion, Saga University, Japan;
Information Technology Center, Fukuoka University, Japan
- 12:00 - 01:00pm: **LUNCH (On Your Own)**

- SESSION 16-FECS: NOVEL EDUCATIONAL DEGREE PROGRAMS, COURSES AND STRATEGIES + CAPSTONE DESIGN PROJECTS**
Chairs: Prof. Ramesh G. Kini
Kazakh British Technical University, (KBTU), Kazakhstan
July 20, 2017 (Thursday); 01:00pm - 03:20pm
(LOCATION: Ballroom 6)
- 01:00 - 01:20pm: *FREE SLOT*
- 01:20 - 01:40pm: *FREE SLOT*
- 01:40 - 02:00pm: *On the Development of Networking and Information Security Degree Programs in a Four Year University*
Weidong Liao, Osman Guzide
Department of Computer Science, Mathematics and Engineering,
School of Natural Sciences and Mathematics,
Shepherd University, Shepherdstown, West Virginia, USA
- 02:00 - 02:20pm: *Heuristic Function in an Algorithm of First-Best Search for the Problem of Tower of Hanoi: Optimal Route for n Disks*
Erick Berssain Garcia V., Norma Elva Chavez R.
School of Engineering, National Autonomous University of Mexico (UNAM), Mexico City, Mexico
- 02:20 - 02:40pm: *Evaluating Storage Performance: Activities to Simulate Storage Configurations*
Adam H. Villa
Providence College, Providence, Rhode Island, USA
- 02:40 - 03:00pm: *Capstone Projects: A Feedback Mechanism for Research and Design, Development and Delivery of Curricula and Courses*
Ramesh G. Kini, Timur F. Umarov, Faud Hajiev
ISM at the Faculty of IT, Kazakh British Tech. U. in Almaty, Kazakhstan;
Vice President, Academic Affairs at KBTU;
ADA in Baku, Azerbaijan
- 03:00 - 03:20pm: *Vectorization and Parallelization of Loops in C/C++ Code*
Xuejun Liang, Ali A. Humos
Department of Computer Science, Jackson State University, Jackson, MS, USA
- 03:20 - 05:00pm: **During this period, FECS'17, SERP'17, ICOMP'17, and FCS'17 attendees are encouraged to participate in sessions belonging to ICAI (Artificial Intelligence), EEE (e-Business, Enterprise IS, & e-Government), or IPCV (Image Processing, Computer Vision, & Pattern Recognition) conferences. These sessions discuss topics that may be of interest to FECS'17, SERP'17, ICOMP'17, and FCS'17 attendees.**
- 05:00 - 05:20pm: **Congress Closing Remarks**
(LOCATION: Ballroom 7)

ICAI'17 + ACC'17 + IKE'17 **CONFERENCE SCHEDULES**

**The 2017 International Conference on
Artificial Intelligence (ICAI'17)**

+

**The 2017 International Conference on Applied
Cognitive Computing (ACC'17)**

+

**The 2017 International Conference on Information &
Knowledge Engineering (IKE'17)**

Because of partial topical and technical overlap between ICAI'17, ACC'17, and IKE'17, the schedules 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 ICAI'17, ACC'17, and IKE'17 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ABDA (Advances in Big Data Analytics), BIOCAMP (Computational Biology), DMIN (Data Mining), EEE (e-Learning, e-Business, EIS, e-Government), ESCS (Cyber-physical Systems), FECS (Education), HIMS (Health Informatics), ICOMP (IoT), IPCV (Image Processing, Computer Vision, & Pattern Recognition), PDPTA (Parallel and Distributed Processing), and SAM (Security) conferences discuss topics that are within the scope of ICAI'17, ACC'17, and IKE'17; these have been scheduled so that selected ICAI'17, ACC'17, and IKE'17 attendees can also participate in them. Note that because of the merge, there are a number of concurrent sessions.

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 tracks they wish to attend; The conference room numbers (Locations) appear in this document.

July 16

03:00p - 07:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:30 - 08:50am: CONGRESS OPENING REMARKS - July 17, Monday:
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)
Department of Computer Science, University of Georgia, USA;
Editor-in-Chief, The Journal of Supercomputing (Springer);
Fellow, Center of Excellence in Terrorism, Resilience,
Intelligence & Organized Crime Research (CENTRIC).
(LOCATION: East Ballrooms 6 & 7)
- 08:50 - 09:00am: Announcement:
ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS
& PHD STUDENTS THROUGH COLLABORATION & BUILDING NETWORKS
Nnenna Christine Martin
Research Director, ResearchLink International, Greensboro,
North Carolina, USA
(LOCATION: East Ballrooms 6 & 7)
- 09:05 - 10:00am: KEYNOTE LECTURE - July 17, Monday:
ROBUST COMPUTING SYSTEMS
Prof. H. J. Siegel
IEEE Fellow; ACM Fellow; Founding Director of Information
Science and Technology Center; Abell Endowed Chair
Distinguished Professor of Electrical and Computer
Engineering and Professor of Computer Science; Department
ECE and CS, Colorado State University, Fort Collins, USA
(LOCATION: East Ballrooms 6 & 7)
- 10:05 - 10:50am: KEYNOTE LECTURE - July 17, Monday:
VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN
TRANSPORT AND INDUSTRY
Prof. Diego Galar
Professor & Former Director of Academic Innovation and
Subsequently Pro-Vice-Chancellor; Division of O&M Engineering,
Lulea University of Technology, Sweden; Head, Maintenance
and Reliability at TECNALIA, Spain; VOLVO Chair for
Reliability and Maintenance, Skovde University, Sweden
(LOCATION: East Ballrooms 6 & 7)
- SESSION 1-ICAI: HCI + FUZZY LOGIC, BAYESIAN METHODS + IoT & APPLICATIONS
Chairs: Prof. Dr. Oscar Castillo
Tijuana Institute of Technology, Mexico
July 17, 2017 (Monday); 11:00am - 12:20pm
(LOCATION: Ballroom 8)
- 11:00 - 11:20am: *Research in Posterior ASR Grammar Modification*
Hassan Alam, Aman Kumar, Manan Vyas, Tina Werner,
and Rachmat Hartono
BCL Technologies, San Jose, California, USA
- 11:20 - 11:40am: *A Gravitational Search Algorithm using Fuzzy Adaptation
of Parameters for Optimization of Ensemble Neural
Networks in Medical Imaging*
Beatriz Gonzalez, Patricia Melin, Fevrier Valdez,
and German Prado-Arechiga
Tijuana Institute of Technology, Mexico;
Cardio-Diagnostico, Tijuana, Mexico

- 11:40 - 12:00pm: *Fuzzy Logic-Based Load Frequency Control in a Nonlinear Deregulated Multi-Source Power System*
H. A. Shayanfar, H. Shayeghi, A. Younesi
Center of Excellence for Power System Automation and Operation, School of Electrical Engineering, Iran
University of Science & Technology, Tehran, Iran;
School of Electrical Engineering, University of Mohaghegh Ardabili, Ardabil, Iran
- 12:00 - 12:20pm: *Method for Improved IoT Prognostics and Improved Prognostic Cyber Security for Enterprise Computing Systems*
Kenny C. Gross, Mengying Li
Oracle Physical Sciences Research Center, Oracle Corporation, San Diego, California, USA
- 12:20 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 2-ICAI: BIO-INSPIRED COMPUTING, AGENT TECHNOLOGIES, SWARM INTELLIGENCE, AND OPTIMIZATION**
Chairs: Prof. Dr. Oscar Castillo
Tijuana Institute of Technology, Mexico
July 17, 2017 (Monday); 01:20pm - 03:00pm
(LOCATION: Ballroom 8)
- 01:20 - 01:40pm: *Comparative Analysis of Swarm Intelligence Techniques for Data Classification*
Devinder Kaur, Ashray Bhandare
Department of Electrical Engineering and Computer Science Engineering, University of Toledo, Toledo, Ohio, USA
- 01:40 - 02:00pm: *Optimization of Mathematical Functions using the Algorithm Self-Defense of the Plants*
Camilo Caraveo, Fevrier Valdez, Oscar Castillo
Tijuana Institute of Technology Tijuana, Mexico
- 02:00 - 02:20pm: *Multi-Objective Allocation of DG Simultaneous with Capacitor and Protective Device Including Load Model*
H. A. Shayanfar, H. Shayeghi, M. Alilou, and R. Dadkhah Dolatabadi
College of Technical & Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran; EE Department, University of Mohaghegh Ardabili, Ardabil, Iran; EE Department, University of Urmia, Iran; Technical & Vocational Institute Razi, Technical and Vocational University, Ardabil, Iran
- 02:20 - 02:40pm: *Genetic Algorithm Based Discriminant Feature Selection for Improved Fault Diagnosis of Induction Motor*
Young-Hun Kim, M. M. Manjurul Islam, Rashedul Islam, and Jong-Myon Kim
Department of Electrical, Electronic, and Computer Engineering, University of Ulsan, South Korea; Department of Computer Science and Engineering, University of Asia Pacific, Bangladesh; School of Electrical Engineering, University of Ulsan, Ulsan, South Korea
- 02:40 - 03:00pm: *An Integrated Automatic Station for Reconfiguration and Scheduling the Manufacturing Systems based on Multi-agent System*
Wiem Mrabet, Talel Ladhari
Institut Supérieur d'Informatique, Université Tunis El Manar - Tunisie, Tunisia;
College of Business, Umm Al-Qura University, Saudi Arabia

**03:00 - 03:40pm: POSTER SESSION A
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 17, 2017 (Monday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)**

- 0. *Multi-Step Genetic Algorithms*
Hirokazu Watabe, Misako Imono, Seiji Tsuchiya
Department of Intelligent Information Engineering and
Science, Doshisha University, Kyotanabe, Kyoto, Japan;
Department of Information Systems, Daido University,
Nagoya, Japan
- 0. *Planning of Circular Motion of Mobile Robot by
Complex-Valued Neural Network*
Takehiko Ogawa, Yoshihito Kagawa
Department of Electronics and Computer Systems,
Takushoku University, Tokyo, Japan; Department of
Mechanical System Engineering, Takushoku University,
Tokyo, Japan
- 0. *Application of Quaternion Neural Network to EMG-Based
Estimation of Forearm Motion*
Hafizzuddin Firdaus Hashim, Takehiko Ogawa
Mechanical and Electronic Systems Engineering Course,
Takushoku University, Tokyo, Japan; Department of
Electronics and Computer System, Takushoku University,
Tokyo, Japan
- 0. ...

**SESSION 3-ACC: MULTI-AGENT TECHNOLOGIES, HUMANIZED SOFTWARE AGENTS,
ROBOTICS, HUMAN MACHINE INTERACTION, & APPLICATIONS
Chairs: Prof. Ken Ferens * and Prof. Robert Ehimen Okonigene**
*University of Manitoba, Winnipeg, MB, Canada;
**Ambrose Alli University, Ekpoma, Edo State, Nigeria
July 17, 2017 (Monday); 03:40pm - 05:20pm
(LOCATION: Ballroom 8)**

**03:40 - 04:00pm: *Robby the Soda-can-collecting Robot: a Reinforcement
Learning Case Study***
Hamid Reza Nasrinpour, Robert D. Mcleod
Department of Electrical and Computer Engineering,
University of Manitoba, Winnipeg, MB, Canada

04:00 - 04:20pm: FREE SLOT

04:20 - 04:40pm: *A Simple Example of Emergence*
Robert D. Mcleod, M. R. Friesen
Electrical & Computer Engineering, University of Manitoba,
Winnipeg, MB, Canada

**04:40 - 05:00pm: *A Cognitive Approach to Unsupervised Feature Extraction
and Classification for Network Intrusion Detection***
Kaiser Nahiyen, Samilat Kaiser, Ken Ferens
Department of Electrical and Computer Engineering,
University of Manitoba, Canada

05:00 - 05:20pm: *Multi-Attribute Task Battery for Human-Machine Teaming*
Mohammed I. Thanoon, M. Saleh Zein-Sabatto, and
Charles D. McCurry
Department of Electrical and Computer Engineering,
Tennessee State University, Nashville, Tennessee, USA

XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions
(Please refer to the lists at the beginning of the program book for details)

08:30 - 11:00pm: CONFERENCE RECEPTION DINNER / SOCIAL
July 17 - Monday; 08:30pm - 11:30pm
(LOCATION: Ballrooms 6 & 7)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 4-ICAI: COGNITIVE COMPUTING, LEARNING METHODOLOGIES + NEURAL NETWORKS AND APPLICATIONS
 Chairs: Prof. Sang-Woon Kim* and Charaf Eddine Bailoul**
 *Myongji University, South Korea;
 **University Caddi Ayyad, Marrakesh, Morocco
 July 18, 2017 (Tuesday); 08:40am - 12:20pm
 (LOCATION: Ballroom 8)
- 08:40 - 09:00am: *Loading Discriminative Feature Representations in Hidden Layer*
 Daw-Ran Liou, Yang-En Chen, Cheng-Yuan Liou
 Department of Computer Science and Information
 Engineering, National Taiwan University, Taipei, Taiwan
- 09:00 - 09:20am: *Transformation Based Methods Extracting Multiple Views
 for Co-training Algorithms*
 Thanh-Binh Le, Sang-Woon Kim
 The Insight Centre for Data Analytics, University College
 Dublin, Ireland;
 Department of CE, Myongji University, Yongin, South Korea
- 09:20 - 09:40am: *Abductive Artificial Intelligence Learning Models*
 James A. Crowder
 Raytheon Intelligence, Information and Services, Aurora,
 Colorado, USA
- 09:40 - 10:00am: *TensorDB: Database Infrastructure for Continuous Machine
 Learning*
 Fangde Liu, Axel Oehmichen, Jingqing Zhang, Kai Sun,
 Hao Dong, Yunhan Mo, Yike Guo
 Data Science Institute, Imperial College, London, UK
- 10:00 - 10:20am: *An Empirical Characterization of Parsimonious Intention
 Inference for Cognitive-Level Imitation Learning*
 Garrett Katz, Di-Wei Huang, Rodolphe Gentili, James Reggia
 Department of CS, University of Maryland, College Park, USA;
 Department of Kinesiology, University of Maryland,
 College Park, USA;
 Institute for Advanced Computer Studies, University of
 Maryland, College Park, USA
- 10:20 - 10:40am: **BREAK**
- 10:40 - 11:00am: *Investigation of Machine Learning Algorithms for the
 Classification of Atmospheric Measurements*
 David Hamblin, Dali Wang, Gao Chen, Ying Bai
 Christopher Newport University, Newport News, Virginia, USA;
 Science Directorate, NASA Langley Research Center, Hampton,
 Virginia, USA;
 Johnson C. Smith University, Charlotte, North Carolina, USA
- 11:00 - 11:20am: *The Design of Predictive Model for the Academic Performance
 of Students at University Based on Machine Learning*
 Barnabas Gatsheni, Olga Katambwa
 University Of Johannesburg, South Africa
- 11:20 - 11:40am: *A CRF Machine Learning Model Reinforced by Ontological
 Knowledge for Multi-Document Summarization*
 Jesus Antonio Motta, Jacques Ladouceur
 Language, Linguistic and Translation Department,
 Universite Laval, Quebec City, Canada

- 11:40 - 12:00pm: *Implementation of a Tensorflow Convolutional Network to Discriminate Similar Gene Functions*
 Rory Butler, Ralph Butler, Chrisila Pettey
 Department of Computer Science, Middle Tennessee State University, Murfreesboro, Tennessee, USA
- 12:00 - 12:20pm: *A Model to Forecast Wind Speed Through Singular Spectrum Analysis and Artificial Neural Networks*
 Cabral Lima, Valk Castellani, Francisco Pessanha, Adriana Soares
 CS Department, Federal University of Rio de Janeiro UFRJ, Brazil;
 Electric Energy Research Center CEPEL, Federal University of Rio de Janeiro UFRJ, Rio de Janeiro, Brazil;
 Psychology Department, Universo University, Rio de Janeiro, Brazil

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

SESSION 5-ACC: MACHINE LEARNING, DEEP LEARNING, REINFORCEMENT LEARNING, NEURAL NETWORKS, FUZZY SYSTEMS, AND APPLICATIONS
Chairs: Prof. Arshia A. Khan* and Prof. Robert Ehimen Okonigene**
 *University of Minnesota Duluth, Minnesota, USA;
 **Ambrose Alli University, Ekpoma, Edo State, Nigeria
July 18, 2017 (Tuesday); 01:00pm - 03:00pm
(LOCATION: Ballroom 8)

- 01:00 - 01:20pm: *An Adaptive IPFC Damping Controller Design for Low-Frequency Oscillation Enhancement: A Q-Learning Strategy*
 H. Shayeghi, H. A. Shayanfar, A. Younesi
 Technical Engineering Department, University of Mohaghegh Ardabili, Iran; Center of Excellence for Power System Automation and Operation, School of Electrical Engineering, Iran University of Science & Technology, Tehran, Iran
- 01:20 - 01:40pm: *A Computational Approach for Detecting Intrusion in Communication Network Using Machine Learning*
 Md Nasimuzzaman Chowdhury, Ken Ferens
 University Of Manitoba, Canada
- 01:40 - 02:00pm: *Automatic Ontology Generating Based on Multi-Domain Matrix*
 SuKyoung Kim, Wan Choi, KiHyoungh Kim, YoungTaek Jin, KeeHong Ahn
 Computer Engineering, Hanbat National University, Republic of Korea;
 High Performance Computing Group, Electronics and Telecommunications Research Institute, Republic of Korea
- 02:00 - 02:20pm: *A Modified Speech Enhancement Model Based on Deep Neural Networks*
 C. H. Lin, Bo-Wei Chen, De-Sheng Chen, Yiwen Wang
 Department of Information Engineering and Computer Science, Feng Chia University, Taichung, Taiwan
- 02:20 - 02:40pm: *A Cognitive Multi-agent Model to Detect Malicious Threats*
 Danish Kaleem, Ken Ferens, Robert D. Mcleod, Marcia Friesen
 Department of Electrical and Computer Engineering, University of Manitoba, Winnipeg, MB, Canada
- 02:40 - 03:00pm: *NSGAI-III-Based Fuzzy PID Controller for Load Frequency Control of Multi-Microgrids*
 H. Shayeghi, H. A. Shayanfar, M. Esmaeili
 College of Technical & Engineering, University of Mohaghegh Ardabili, Iran; College of Technical & Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran

**03:00 - 03:40pm: POSTER SESSION B
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 18, 2017 (Tuesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)**

- 0. *Judging Emotion from EEGs Using Convolutional Neural Network*
Seiji Tsuchiya, Mayo Morimoto, Misako Imono, and Hirokazu Watabe
Department of Intelligent Information Engineering and Science, Doshisha University, Kyotanabe, Kyoto, Japan;
Department of IS, Daido University, Nagoya, Japan
- 0. *A Study on Effective R&D Analysis Using Fuzzy Engineering and Cognitive Inference Systems*
Jaehyuk Cho
Next Growth Engine R&D Coordination Division, Korea Institute of S&T Evaluation and Planning, South Korea
- 0. ...

**SESSION 6-IKE: KNOWLEDGE EXTRACTION, KNOWLEDGE MANAGEMENT, AND NOVEL APPLICATIONS
Chairs: Prof. Dr. Azhar Ul-Haq
National University of Sciences and Technology (NUST),
Pakistan
July 18, 2017 (Tuesday); 03:40pm - 05:20pm
(LOCATION: Ballroom 8)**

03:40 - 04:00pm: A Knowledge Management Framework for Sustainable Rural Development: the case of gilgit-baltistan, Pakistan
Liaqut Ali, Anders Avdic
Orebro University, Sweden;
Dalarna University, Sweden

04:00 - 04:20pm: Knowledge Management and WfMS Integration
Ricardo Anderson, Gunjan Mansingh
The University of the West Indies, Mona-Western,
Jamaica Campus, Jamaica

04:20 - 04:40pm: A Lexicon-based Method for Sentiment Analysis using Social Network Data
Linh Vu, Thanh Le
School of Business Information Systems, University of Economics, Ho-Chi-Minh City, Vietnam

04:40 - 05:00pm: Building a Learning Machine Classifier with Inadequate Data for Crime Prediction
Trung T. Nguyen, Amartya Hatua, Andrew H. Sung
School of Computing, The University of Southern Mississippi,
Hattiesburg, Mississippi, USA

05:00 - 05:20pm: Innovation Description Languages, IDLs and Knowledge Representations, KR - Easily Drafting and Testing Patents for Their Total Robustness
Sigram Schindler
TELES Patent Rights International GmbH, Germany;
Technical University of Berlin, Germany

- 05:20 - 06:20pm: INVITED LECTURE - TUTORIAL:
Big Data Analytics with Spark
Dr. Mark C. Lewis
Trinity University, San Antonio, Texas, USA;
Author of several textbooks on Scala (CRC Press)
July 18, 2017 (Tuesday)
(LOCATION: Ballroom 8)**
- XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions
(Please refer to the lists at the beginning of the program
book for details)**

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 7-ICAI: INTELLIGENT LINGUISTIC TECHNOLOGIES, ILINTEC'17 + NATURAL LANGUAGE PROCESSING, MACHINE TRANSLATION, TEXT AND WORD CATEGORIZATION, AND RELATED TOPICS
Chair: Dr. Elena B. Kozerenko
 Institute of Informatics Problems, Federal Research Center, Computer Science and Control, Russian Academy of Sciences, Moscow, Russia
 July 19, 2017 (Wednesday); 08:40am - 10:20am
 (LOCATION: Ballroom 8)

08:40 - 09:00am: Semantic Proximity Establishment in the Tasks of Knowledge Extraction and Named Entities Recognition
 Elena B. Kozerenko, Konstantin I. Kuznetsov,
 Dmitriy A. Romanov, Yulia I. Morozova
 Institute of Informatics Problems, Federal Research Center, Computer Science and Control, Russian Academy of Sciences, Moscow, Russia; National Research University Higher School of Economics, Moscow, Russia

09:00 - 09:20am: Introduction of New Translation Directions in the Phrase-Based Machine Translation System
 Yuri P. Kalinin, Elena B. Kozerenko,
 Alexander A. Khoroshilov, Alexei A. Khoroshilov
 Institute of Informatics Problems, Federal Research Center, Computer Science and Control, Russian Academy of Sciences, Moscow, Russia; Institute for Informatics Problems of the Russian Academy of Sciences, Moscow, Russia; Centre of IT & Systems for Executive Power Authorities, Institute of Informatics Problems, Federal Research Center, Computer Science and Control, Russian Academy of Sciences, Moscow, Russia; Institute for Informatics Problems of the Russian Academy of Sciences, Moscow, Russia

09:20 - 09:40am: Heuristic Textology Methods for Plagiarism Detection
 Michael Yu. Mikheev, Elena B. Kozerenko
 Institute of Informatics Problems, Federal Research Center, Computer Science and Control, Russian Academy of Sciences, Moscow, Russia

09:40 - 10:00am: Machine Learning with Selective Word Statistics for Automated Classification of Citation Subjectivity in Online Biomedical Articles
 Incheol Kim, George R. Thoma
 Lister Hill National Center for Biomedical Communications, National Library of Medicine, National Institutes of Health (NIH), Bethesda, Maryland, USA

10:00 - 10:20am: Table based KNN for Article Classification
 Taeho Jo
 Department of Computer and Information Communication Engineering, Hongik University, Sejong, South Korea

10:20 - 10:40am: BREAK

SESSION 8-ICAI: ----> (CONCURRENT SESSION WITH SESSION 9-IKE)
KNOWLEDGE DISCOVERY AND MACHINE LEARNING
Chairs: Dr. Raymond A. Liuzzi, Dr. Roger Dzegiel, Dr. Todd Waskiewicz,
 Dr. Peter M. LaMonica
 Raymond Technologies, New York, USA
 US Air Force Research Lab, AFRL/RIEA, USA
 US Air Force Research Lab, AFRL/RIED, USA
 US Air Force Research Lab, AFRL/RIEBB, USA
July 19, 2017 (Wednesday); 10:40am - 12:20pm
(LOCATION: Ballroom 8)

10:40 - 11:00am: *Mining Commit Log Messages to Identify Risky Code*
 Greg Barish, Matthew Michelson, Steven N. Minton
 InferLink Corporation, El Segundo, California, USA

11:00 - 11:20am: *Rapid Information Discovery System (RAID)*
 B. Gopal, P. Benjamin, K. Madanagopal
 Knowledge Based Systems, Inc. (KBSI), College Station,
 Texas, USA

11:20 - 11:40am: *Synergy of AI Projects in Undergraduate Student Research*
 Sambit Bhattacharya, Bogdan Czejdo
 Department of Mathematics and Computer Science,
 Fayetteville State University, USA

11:40 - 12:00pm: TBA

12:00 - 12:20pm: TBA

SESSION 9-IKE: ----> (CONCURRENT SESSION WITH SESSION 8-ICAI)
**NATURAL LANGUAGE PROCESSING + TEXT MINING + INFORMATION
 EXTRACTION & ENGINEERING + PREDICTION METHODS & DATA MINING**
Chairs: Prof. Weidong Liao* and Dirk Snyman**
 *Shepherd University, USA;
 **North-West University, South Africa
July 19, 2017 (Wednesday); 10:40am - 12:20pm
(LOCATION: Ballroom 6)

10:40 - 11:00am: *Content Based Segmentation of Texts using Table Based KNN*
 Taeho Jo
 Department of Computer and Information Communication
 Engineering, Hongik University, Sejong, South Korea

11:00 - 11:20am: *A Verb-based Algorithm for Multiple-Relation Extraction
 from Single Sentences*
 Qi Hao, Jeroen Keppens, Odinaldo Rodrigues
 Department of Informatics, King's College London, UK

11:20 - 11:40am: *Simplified Long Short-term Memory Recurrent Neural
 Networks (I)*
 Atra Akandeh, Fathi M. Salem
 Circuits, Systems, and Neural Networks (CSANN) Laboratory,
 CSE, Michigan State University, East Lansing, Michigan, USA;
 ECE, Michigan State University, East Lansing, Michigan, USA

11:40 - 12:00pm: *Simplified Long Short-term Memory Recurrent Neural
 Networks (II)*
 Atra Akandeh, Fathi M. Salem
 Circuits, Systems, and Neural Networks (CSANN) Laboratory,
 CSE, Michigan State University, East Lansing, Michigan, USA;
 ECE, Michigan State University, East Lansing, Michigan, USA

12:00 - 12:20pm: *Simplified Long Short-term Memory Recurrent Neural Networks (III)*
 Atra Akandeh, Fathi M. Salem
 Circuits, Systems, and Neural Networks (CSANN) Laboratory,
 CSE, Michigan State University, East Lansing, Michigan, USA;
 ECE, Michigan State University, East Lansing, Michigan, USA

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

SESSION 10-ICAI: NEURAL NETWORKS AND NOVEL APPLICATIONS
 Chairs: Charaf Eddine Bailoul
 University Caddi Ayyad, Faculty of Sciences and
 Technologies, Marrakesh, Morocco
 July 19, 2017 (Wednesday); 01:20pm - 03:00pm
 (LOCATION: Ballroom 8)

01:20 - 01:40pm: *Commercial Vehicle Scheduling with Time Window by a New Kind of Hopfield Neural Network*
 Arezoo Mohandessi, Mehdi Ghatte, Gilbert S. Young
 Computer Science Department, California State Polytechnic
 University, Pomona, California, USA

01:40 - 02:00pm: *Soil Moisture Modeling Using Artificial Neural Networks*
 Jayachander R. Gangasani, Monday Mabila, Yinshu Wu, Jian Fu
 Alabama A&M University, Normal, Alabama, USA

02:00 - 02:20pm: *Binarizing Neural Networks by Regularizing Moments*
 Jason Jennings, Farhad Kamangar
 University of Texas at Arlington, Texas, USA

02:20 - 02:40pm: *Using Multi-Layer Perceptrons for Analysis of Labour Data*
 Anatoli Nachev
 Business Information Systems, National University of
 Ireland, Galway, Ireland

02:40 - 03:00pm: *Modelization of Crab Classification by Neural Networks*
 Alaa Nour Eddine, Bailoul Charaf Eddine
 Laboratory LAMAI, Faculty of Sciences and Technologies,
 Marrakesh, Morocco

03:00 - 03:40pm: POSTER SESSION C
 (INCLUDES POSTER + SHORT & POSITION PAPERS)
 July 19, 2017 (Wednesday)
 (LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Multi-Source Identity Tracking*
 Gurpreet Singh Bawa, Shashidhar Shenoy
 Accenture Company, Global Professional Services and
 Consulting Company
- 0. *A Steganographic Scheme Implemented on BTC-Compressed Image by Histogram Modification*
 Shih-Chieh Shie
 Department of Computer Science and Information
 Engineering, National Formosa University, Taiwan
- 0. ...

- SESSION 11-IKE: INFORMATION EXTRACTION AND ENGINEERING, PREDICTION METHODS AND DATA MINING, AND NOVEL APPLICATIONS**
Chairs: Dr. Mohammad A. Rob
University of Houston-Clear Lake, USA
July 19, 2017 (Wednesday); 03:40pm - 05:40pm
(LOCATION: Ballroom 8)
- 03:40 - 04:00pm: Optical Polling for Behavioural Threshold Analysis in Information Security*
 Dirk Snyman, Hennie Kruger
 School of Computer, Statistical and Mathematical Sciences, North West University, South Africa
- 04:00 - 04:20pm: Business and Techninal Characteristics of the Bid-Process Information System (B.P.I.S.)*
 Sahbi Zahaf, Faiez Gargouri
 Higher Institute of Computer and Multimedia, MIRACL Laboratory, Sfax University, Tunisia
- 04:20 - 04:40pm: Deep Convolutional Neural Networks for Spatiotemporal Crime Prediction*
 Lian Duan, En Cheng, Tao Hu, Jianfeng Zhu, Chao Gao
 Geography Science and Planning School, Guangxi Teachers Education University, Nanning, China; Education Ministry Key Laboratory of Environment Evolution and Resources Utilization in Beibu Bay, Guangxi Teachers Education University, Nanning, China; College of Arts and Sciences, University of Akron, Ohio, USA; State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, Wuhan, China; School of Resource and Environment Sciences, Wuhan University, Wuhan, China; School of Library and Information Science, Kent State University, Ohio, USA; Key Laboratory of Police Geographic IT, Ministry of Public Security, Changzhou Municipal Public Security Bureau, Changzhou, China
- 04:40 - 05:00pm: The Semantic Structure of Query Search Results*
 Ying Liu
 Division of CS, Mathematics and Science, College of Professional Studies, St. John's University, Queens, New York, USA
- 05:00 - 05:20pm: Extraction of Spam and Promotion Campaigns Using Social Behavior and Similarity Estimation from Compromised Accounts*
 K. Selvamani, S. Nathiya, I. R. Divya Sree, S. Kanimozhi
 Department of CSE, CEG, Anna University, Chennai, India; Department of IST, CEG, Anna University, Chennai, India
- 05:20 - 05:40pm: Migration of Relational Databases RDB to Database for Objects db4o for Schema and Data*
 Youness Khourdifi, Mohamed Bahaj
 Department of Mathematics and CS, Faculty of Science and Technology, University Hassan I, Settat, Morocco
- XX:XX - 07:00pm: Keynotes, Invited Lectures, Tutorials, Discussions (Please refer to the lists at the beginning of the program book for details)**

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- SESSION 12-ICAI: ARTIFICIAL INTELLIGENCE, NOVEL APPLICATIONS AND CONCEPTS
 Chairs: Dr. Kenneth M'Bale* and Prof. Jong-Myon Kim**
 *Bowie State University, Bowie, Maryland, USA
 **University of Ulsan, South Korea
 July 20, 2017 (Thursday); 08:40am - 12:20pm
 (LOCATION: Ballroom 8)
- 08:40 - 09:00am: FREE SLOT
- 09:00 - 09:20am: SNR-multicondition Approaches of Robust Speaker Model Compensation Based on PLDA in Practical Environment
 Xin Li, Lei Wang, Jie Zhu
 Department of Electronic Engineering, Shanghai Jiao Tong University, Shanghai, China
- 09:20 - 09:40am: Human-AI Collaboration Concepts
 James A. Crowder
 Raytheon Intelligence, Information and Services, Aurora, Colorado, USA
- 09:40 - 10:00am: Diagrammatic Representation of Some Aspects of the Notion of Causation
 Sabah Al-Fedaghi
 Computer Engineering Department, Kuwait University, Kuwait
- 10:00 - 10:20am: An Application of Automatic Presence / Absence Operation by BLE Beacon Carried by Worker to Intelligent Lighting System
 Toshiki Yamashita, Mitsunori Miki, Sota Nakahara, Yuki Takaya, Ryoto Tomioka, Hiroto Aida
 Department of Science and Engineering, Doshisha University, Kyoto, Japan;
 Graduate School of Science and Engineering, Doshisha University, Kyoto, Japan
- 10:20 - 10:40am: BREAK
- 10:40 - 11:00am: Method to Add New Concepts to Concept-Base using Wikipedia
 Misako Imono, Seiji Tsuchiya, Hirokazu Watabe
 Department of Information Systems, Daido University, Japan;
 Department of Intelligent Information Engineering and Science, Doshisha University, Kyotanabe, Kyoto, Japan
- 11:00 - 11:20am: Optimized Mobile Robotic Navigation Based on Fuzzy Logic Control
 Inkyu Jeong, Dileep Kumar Appana, Manjuru1 Islam, Choel-Hong Kim, Jong-Myon Kim
 Department of EE & CE, University of Ulsan, South Korea;
 School of ECE, Chonnam National University, South Korea
- 11:20 - 11:40am: Artificial Intelligence in Robotic Communications, Integration, and Interoperability to Improve Situational Awareness
 Jeffrey W. Wallace, Sara J. Kambouris
 Infinite Dimensions Integration, Inc., Washington, DC, USA

11:40 - 12:00pm: *Filter and Wrapper-based Feature Selection Using Mutual Information for Rolling Elements Bearing Diagnostic*
Sang-Min Lee, M. M. Manjurul Islam, Jaeyoung Kim,
Yu-Hyun Kim, Inkyu Jeong, Jong-Myon Kim
Department of EE & CE, University of Ulsan, South Korea;
School of EE, University of Ulsan, Ulsan, South Korea

12:00 - 12:20pm: *Combined Heat and Power Economic Dispatch Solution Using Iterative Cultural Algorithm*
Heidarali Shayanfar, Reza Dadashzadeh Bonab, Navid Tabrizi,
and Mehdi Mehdinejad
Center of Excellence for Power Systems Automation and
Operation, School of EE, Iran University of Science and
Technology, Tehran, Iran; Faculty of ECE, University of
Tabriz, Iran

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

SESSION 13-ICAI: PATTERN SELECTION, DETECTION AND RECOGNITION + XVII TECHNICAL SESSION ON APPLICATIONS OF ADVANCED AI TECHNIQUES TO INFORMATION MANAGEMENT FOR SOLVING COMPANY-RELATED PROBLEMS
Chairs: Dr. David de la Fuente and Dr. Jose A. Olivas
University of Oviedo, Spain;
University of Castilla - La Mancha, Spain
July 20, 2017 (Thursday); 01:20pm - 04:20pm
(LOCATION: Ballroom 8)

01:20 - 01:40pm: *FREE SLOT*

01:40 - 02:00pm: *The Kasai Algorithm*
Kenneth Mbale, Darsana Josyula
Department of Computer Science, Bowie State University,
Bowie, Maryland, USA

02:00 - 02:20pm: *Application of Soft-Computing Techniques for Analysis of External Influential Factors in the Emotional Interpretation of Visual Stimuli*
A. Peralta, A. Fernandez, J. M. Latorre, J. A. Olivas,
and E. Conde
Department of Information Technologies and Systems,
University of Castilla La Mancha, Ciudad Real, Spain

02:20 - 02:40pm: *An Entity Profile Approach for Source Integration in Academic Information Retrieval Systems*
M. Rey, H. Kuna, A. Rambo, A. Cantero, A. Canteros,
E. Martini, C. Biale
Faculty of Exact, Chemical and Natural Sciences National
University of Misiones, Posadas, Argentina

02:40 - 03:00pm: *Solving Vehicle Routing Problem with Multiple Trips using Iterative Local Search with Variable Neighbourhood Search*
M. Belver, A. Gomez, J. Lopez, D. De la Fuente, B. Ponte
Escuela Politecnica de Ingenieria de Gijon, Campus de
Viesques s/n, Gijon (Asturias), Spain

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

- 03:20 - 03:40pm: *New Challenges of Copyright Authorship in Artificial Intelligence*
C. Ruiperez, E. Gutierrez, C. Puente, J. A. Olivas
Law & Economics Department, TAI University of Arts,
Madrid, Spain
- 03:40 - 04:00pm: *Weighted Graphs to Model Causality*
C. Puente, M. D. Lopez, J. Rodrigo, J. A. Olivas
Telecommunications and Computing Department, ICAI,
Pontifical Comillas University, Madrid, Spain
- 04:00 - 04:20pm: *Rolling Genetic Support Vector Regressions: An Inflation Forecasting Application in Germany and Greece*
C. Stasinakis, F. Fernandez, G. Serpini, R. Rosillo,
and D. De la Fuente
Escuela Politecnica de Ingenieria de Gijon, Campus de
Viesques s/n, Gijon (Asturias), Spain
- 05:00 - 05:20pm: **Congress Closing Remarks**
(LOCATION: Ballroom 7)

IPCV'17 + ESCS'17 + BIOENG'17 + BIOCOMP'17 + HIMS'17 **CONFERENCE SCHEDULES**

**The 2017 International Conference on Image Processing,
Computer Vision, & Pattern Recognition (IPCV'17)**

+

**The 2017 International Conference on Embedded Systems,
Cyber-physical Systems, and Applications (ESCS'17)**

+

**The 2017 International Conference on Biomedical Engineering
and Sciences (BIOENG'17)**

+

**The 2017 International Conference on Bioinformatics &
Computational Biology (BIOCOMP'17)**

+

**The 2017 International Conference on Health Informatics
and Medical Systems (HIMS'17)**

Because of partial topical and technical overlap between IPCV'17, ESCS'17, BIOENG'17, BIOCOMP'17, and HIMS'17, the schedules 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 IPCV'17, ESCS'17, BIOENG'17, BIOCOMP'17, and HIMS'17 participants (sessions belonging to other joint conferences.) Therefore, you are encouraged to also check the schedules of other joint conferences. In particular, sessions in ABDA (Advances in Big Data Analytics), ACC (Cognitive Computing), DMIN (Data Mining), FECS (Education), ICOMP (IoT), ICAI (Artificial Intelligence), MSV (Modeling & Simulation), PDPTA (Parallel and Distributed Processing), and SAM (Security) conferences discuss topics that are within the scope of IPCV'17, ESCS'17, BIOENG'17, BIOCOMP'17, and HIMS'17; these have been scheduled so that selected IPCV'17, ESCS'17, BIOENG'17, BIOCOMP'17, and HIMS'17 attendees can also participate in them. Note that because of the merge, there are a number of concurrent sessions.

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 tracks they wish to attend; The conference room numbers (Locations) appear in this document.

July 16

03:00p - 07:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

- 07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)
- 08:30 - 08:50am: CONGRESS OPENING REMARKS - July 17, Monday:
Prof. Hamid R. Arabnia (Chair, Steering Committee & Coordinator)
Department of Computer Science, University of Georgia, USA;
Editor-in-Chief, The Journal of Supercomputing (Springer);
Fellow, Center of Excellence in Terrorism, Resilience,
Intelligence & Organized Crime Research (CENTRIC).
(LOCATION: East Ballrooms 6 & 7)
- 08:50 - 09:00am: Announcement:
ALLEVIATING THE CHALLENGES FACED BY AFRICAN RESEARCHERS
& PHD STUDENTS THROUGH COLLABORATION & BUILDING NETWORKS
Nnenna Christine Martin
Research Director, ResearchLink International, Greensboro,
North Carolina, USA
(LOCATION: East Ballrooms 6 & 7)
- 09:05 - 10:00am: KEYNOTE LECTURE - July 17, Monday:
ROBUST COMPUTING SYSTEMS
Prof. H. J. Siegel
IEEE Fellow; ACM Fellow; Founding Director of Information
Science and Technology Center; Abell Endowed Chair
Distinguished Professor of Electrical and Computer
Engineering and Professor of Computer Science; Department
ECE and CS, Colorado State University, Fort Collins, USA
(LOCATION: East Ballrooms 6 & 7)
- 10:05 - 10:50am: KEYNOTE LECTURE - July 17, Monday:
VIRTUAL ASSETS & VIRTUAL COMMISSIONING: DIGITIZATION IN
TRANSPORT AND INDUSTRY
Prof. Diego Galar
Professor & Former Director of Academic Innovation and
Subsequently Pro-Vice-Chancellor; Division of O&M Engineering,
Lulea University of Technology, Sweden; Head, Maintenance
and Reliability at TECNALIA, Spain; VOLVO Chair for
Reliability and Maintenance, Skovde University, Sweden
(LOCATION: East Ballrooms 6 & 7)
- SESSION 1-IPCV: IMAGE PROCESSING + FEATURE EXTRACTION AND CLASSIFICATION +
TOOLS AND DATASETS + APPLICATIONS
Chairs: Prof. Sung-won Park
Texas A&M University-Kingsville, Texas, USA
July 17, 2017 (Monday); 11:00am - 12:40pm
(LOCATION: Gold Room)
- 11:00 - 11:20am: *Automated Identification of Colorectal Glands Morphology
from Benign Images*
Ammara Nasim, Taimur Hassan, Muhammad Usman Akram,
Bilal Hassan, Muhammad Ali Shami
Department of Electrical Engineering, Bahria University,
Islamabad, Pakistan;
Department of Computer Engineering, College of EME, NUST
Rawalpindi, Pakistan;
Department of Electrical Engineering, University of
Engineering and Technology, Taxila, Pakistan
- 11:20 - 11:40am: *An Improved Tin-based Classification Approach*
Shijun Tang, Emily Hunt, Matt Jackson
School of Engineering, Computer Science and Mathematics,
West Texas A&M University, Canyon, Texas, USA

11:40 - 12:00pm: *ANLBF-GNS Mapping: An Automated Feature Extraction Method*
 Jaeyoung Kim, Md Junayed Hasan, Cheol-Hong Kim, Jong-Myon Kim
 Department of EE & CE, University of Ulsan, Ulsan, South Korea;
 School of ECE, Chonnam National University, Gwangji, South Korea;
 School of EE, University of Ulsan, Ulsan, South Korea

12:00 - 12:20pm: *Edge Detection Based on Kernel Density Estimation*
 Osvaldo Pereira, Esley Torre, Yasel Garces, Roberto Rodriguez
 Salesian Polytechnica University (UPS), Institute of
 Cybernetics, Mathematics and Physics (ICIMAF), Ecuador

12:20 - 12:40pm: *3D Heart Reconstruction using Thoracic Computer Tomography
 for Computational Holography Applications*
 Arthur BucioLi, Gerson Lima, Edgard Lamounier, Isabela Peres,
 Alexandre Cardoso, Roberto Vieira Botelho
 Federal University of Uberlandia, Minas Gerais, Brazil;
 Triangulo Heart Institute, Minas Gerais, Brazil

12:40 - 01:20pm: **LUNCH (On Your Own)**

SESSION 2-ESCS: EMBEDDED SYSTEMS, FPGA, NOVEL APPLICATIONS AND TOOLS
Chairs: Dr. Luisito Lolong Lacatan* and Dr. B. Senouci**
 *Adamson University, Philippines;
 **Embedded Systems Department, LACSC Laboratory,
 Central EE School - ECE Paris, France
July 17, 2017 (Monday); 01:20pm - 03:00pm
(LOCATION: Gold Room)

01:20 - 01:40pm: *Prototype System of Low-cost LED Lighting Vision Inspection
 Based on Image Processing*
 Sungho Ahn, Yoonjeong Song
 SMEs Support Section, Daegu-Gyeongbuk Research Center,
 Electronics and Telecommunications Research Institute
 (ETRI), South Korea

01:40 - 02:00pm: *Transforming Ladder Logic to Verilog For FPGA Realization
 of Programmable Logic Controllers*
 Giancarlo Corti, Drake Brunner, Naoki Mizuno, Peter Jamieson
 Department of ECE, Miami University, Oxford, Ohio, USA;
 Department Mechanical and Manufacturing Engineering,
 Miami University, Oxford, Ohio, USA

02:00 - 02:20pm: *RPM Measurement using 3-Axis Digital Magnetometer*
 Tongjun Ruan, Robert Balch
 Reservoir Evaluation and Advanced Computational Technologies
 Group of Petroleum Recovery Research Center,
 New Mexico Tech., Socorro, New Mexico, USA

02:20 - 02:40pm: *Multi-FPGA Platform for Smart Automobiles Embedded
 Electronics Design and Prototyping*
 A. Guillot, A. Jallouli, A. Ly, A. Sayarath, L. Rezakhanlou,
 Q. Cabannes, B. Senouci
 Central Electronic Engineering School, Embedded Systems
 Department, LACSC Laboratory, Quai de Grenelle,
 Paris, France

02:40 - 03:00pm: *Smart Communication System for Deaf-Dumb People*
 Mina Magdy Abdel-Masieh, Manuel Maged Nasif, Maher Mansour Abdel-Aziz
 Electronics & Communication Dept., MSA University, Cairo, Egypt;
 Electronics, Communication and Computer Department,
 Helwan University, Cairo, Egypt

03:00 - 03:40pm: POSTER SESSION A
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 17, 2017 (Monday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *HABase a Web-Application for the Analysis of Protein Spectra and Identification of Microbial Species*
 Michael G. Lamontagne, Thrishala Shetty, Tilak K. Gajjar, Chandana Kayyuru, Sachin Sriram, Chunlong Zhang, and Pradeep Buddharaju
 Biological and Environmental Sciences, University of Houston Clear Lake, Houston, Texas, USA;
 Computer Science and Computer Information Systems, University of Houston Clear Lake, Houston, Texas, USA
- 0. *A Simulation Study on the Safety of Brain During Ocular Iontophoresis*
 S. Lee, C. Lee, C. H. Lim
 Department of Biomedical Engineering, Hanyang University, Seoul, Republic of Korea
- 0. *Conductive Cottons for Patch Type Wearable Bio Potential Monitoring*
 H. C. Jung, S. H. Lee, D. H. Kwon, J. H. Moon
 Osong Medical Innovation Foundation, Medical Device Development Center, Korea
- 0. *A Study on Brain Activation by Addition Task with Driving*
 Woo-Ram Kim, Ji-Hun Jo, Mi-Hyun Choi, Hyung-Sik Kim, and Soon-Cheol Chung
 Department of Biomedical Engineering, Research Institute of Biomedical Engineering, College of Biomedical & Health Science, Konkuk University, Chungju, South Korea
- 0. *Drug Delivery for Colon Cancer Therapy by Doxorubicin with Oligonucleotide Modified Gold-Nanoparticles*
 Moo-Jun Baek, Dongjun Jeong, Hyung Ju Kim
 Department of Surgery, Soonchunhyang University College of Medicine, Republic of Korea
- 0. *Wide Dynamic Range CMOS Image Sensor Using Dual-Sensitivity Photodiodes and Switching Circuit*
 Jimin Lee, Byoung-Soo Choi, Sang-Hwan Kim, Jang-Kyoo Shin
 School of Electronics Engineering, Kyungpook National University, Buk-gu, Daegu, South Korea
- 0. ...

SESSION 3-BIOENG: BIOMEDICAL ENGINEERING, METHODOLOGIES, & APPLICATIONS
Chairs: Dr. Steve Richfield
President, FixLowBodyTemp.com, DrEliza.com, and FurutistTechnologies.com, USA
July 17, 2017 (Monday); 03:40pm - 06:00pm
(LOCATION: Gold Room)

03:40 - 04:00pm: *Analysis of 3D Cone-Beam CT Image Reconstruction Performance on a FPGA*
 Devin Held, Michael Bauer
 Department of Computer Science, The University of Western Ontario, London, Ontario, Canada

04:00 - 04:20pm: *A Review of Brain Signal Processing Methods*
 Selena Snyder, Xiaoping A. Shen
 Department of Mathematics, Ohio University, Athens, Ohio, USA

04:20 - 04:40pm: FREE SLOT

04:40 - 05:00pm: *Using a Non-invasive Approach to Evaluate the Effects of Smoking on Swallowing and Respiration Coordination*
Wann-Yun Shieh, Chin-Man Wang, Hsin-Yi Kathy Cheng
Department of Computer Science and Information Engineering,
College of Engineering, Chang Gung University, Taiwan;
Department of Physical Medicine and Rehabilitation,
Chang Gung Memorial Hospital, Taiwan;
Department of Medicine, College of Medicine,
Chang Gung University, Taiwan;
Graduate Institute of Early Intervention, College of
Medicine, Chang Gung University, Taiwan

05:00 - 05:20pm: *An Ultra-low Power Modified SERF Adder in Sub-threshold Region for Bio-medical Applications*
Pradeep Sarva, Santosh Koppa, Eugene John
Department of Electrical and Computer Engineering,
University of Texas at San Antonio, San Antonio, Texas, USA

05:20 - 06:00pm: **Invited Lecture:**
Discovery of a Naturally Occurring Temperature Scale
Dr. Steve Richfield
President, FixLowBodyTemp.com & DrEliza.com, USA

XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program book for details)

08:30 - 11:00pm: **CONFERENCE RECEPTION DINNER / SOCIAL**
July 17 - Monday; 08:30pm - 11:30pm
(LOCATION: Ballrooms 6 & 7)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 4-IPCV: IMAGING SCIENCE AND NOVEL APPLICATIONS

Chairs: Dr. Mark Fienup* and Beatrice Cerda**

***University of Northern Iowa, Iowa, USA;**

****University of Houston, Downtown, USA**

July 18, 2017 (Tuesday); 08:40am - 10:20am

(LOCATION: Gold Room)

08:40 - 09:00am: *Cellular Automata Design for Digital Ornaments*
Hyeri Rhee, Moon-Ryu Jung
Social Media Management Software, Software Convergence
Oriented College, Sejong University, Seoul, Korea;
Graduate School of Media, Art Technology, Sogang University, Seoul, Korea

09:00 - 09:20am: *Manifold Transfer Subspace Learning (MTSL) for High Dimensional Data-Applications to Handwritten Digits and Health Informatics*
Olga Mendoza-Schrock, Mateen M. Rizki, Michael Raymer, Vincent J. Velten
US Air Force Research Laboratory, Sensors Directorate,
Wright-Patterson Air Force Base, WPAFB, Ohio, USA;
Department of Engineering and Computer Science,
Wright State University, Dayton, Ohio, USA

09:20 - 09:40am: *Estimation of 2D and 3D Texture at Microscale using Independent Component Analysis*
Abolfazl Ravanshad, Reynaldo Roque, Mehrnaz Khodam Hazrati
Department of Civil and Coastal Engineering, University of
Florida, Gainesville, Florida, USA;
Intel Corp., USA

09:40 - 10:00am: *Surveillance using Thermal-Imaging Sensors*
Leonidas Deligiannidis
Department of Computer Science and Networking,
Wentworth Institute of Technology, Boston, MA, USA

10:00 - 10:20am: *A Variable Circular-Shift Image-Encryption Algorithm*
Abdelfatah A. Tamimi, Ayman M. Abdalla
Al-Zaytoonah University of Jordan

10:20 - 10:40am: BREAK

SESSION 5-BIOCOMP: BIOINFORMATICS, NOVEL ALGORITHMS AND APPLICATIONS

Chairs: Dr. Hao Zheng* and Prof. Ramesh G. Kini**

***Georgia Institute of Technology, Atlanta, Georgia, USA;**

****Kazakh British Technical University, (KBTU), Kazakhstan**

July 18, 2017 (Tuesday); 10:40am - 12:40pm

(LOCATION: Gold Room)

10:40 - 11:00am: *Advanced Agglomerative Clustering Technique for Phylogenetic Classification Using Manhattan Distance*
Md Abdul Mottalib, Md Redwan Karim Sony,
Raihan Islam Arnob, Lipi Aktar
Department of CSE, Islamic University of Technology, Bangladesh

11:00 - 11:20am: *Genomic Data Mining Reveals a Rich Repertoire of Transporters in Pathogenic Fungi Fusarium*
Abdulwahab Alghazali, Hong Cai, Yufeng Wang, Jianying Gu
Department of Biology, College of Staten Island, CUNY,
Staten Island, New York, USA;
Department of Biology and South Texas Center for Emerging
Infectious Diseases, University of Texas at San Antonio,
San Antonio, Texas, USA

- 11:20 - 11:40am: *An in silico Construction of Plausible Trans-elements and Cis-elements of Non-housekeeping Genes*
Edward A. Salinas, Amitava Karmaker
Independent Researcher, Cambridge, Massachusetts, USA;
University of Wisconsin-Stout, Menomonie, Wisconsin, USA
- 11:40 - 12:00pm: *Sequence-based Deep Learning Reveals the Bacterial Community Diversity and Horizontal Gene Transfer*
Hao Zheng, Yin Jie, Jieruo Gu, David Xingfei Deng
School of Electrical and Computer Engineering,
Georgia Institute of Technology, Atlanta, Georgia, USA;
Department of Horticulture and Landscape Architecture,
Purdue University, West Lafayette, Indiana, USA;
Internal Medicine, The 3rd Hospital of Sun Yat-Sen
University, Guangzhou, China;
Ardent BioMed Guangzhou Inc., Guangzhou, China
- 12:00 - 12:20pm: *A Comparison of Methods for Classifying Promoter Regions in E.coli Based on Structural Properties of DNA*
Carmen M. Wright, Jasleen Kaur, Charles Bland
Jackson State University, Jackson, Mississippi, USA;
Mississippi Valley State University, Itta Bena, Mississippi, USA
- 12:20 - 12:40pm: *Classifying Clinical Citations based on Semantic Polarity*
Hassan Alam, Aman Kumar, Tina Werner, Manan Vyas, and
Rachmat Hartono
BCL Technologies, San Jose, California, USA
- 12:40 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 6-IPCV: RECOGNITION SYSTEMS, TRACKING, DETECTION, VISION & APPLICATIONS**
Chairs: Dr. Hsiang-Huang Wu*, Beatrice Cerda, B. Senouci*****
*Prairie View A&M University, Prairie View, Texas, USA;
**University of Houston, Downtown, USA;
***Embedded Systems Department, LACSC Laboratory,
Central EE School - ECE Paris, France
July 18, 2017 (Tuesday); 01:20pm - 03:00pm
(LOCATION: Gold Room)
- 01:20 - 01:40pm: *Triangular Road Signs Detection and Recognition Algorithm and its Embedded System Implementation*
Ting Chou, Ssu-Yuan Chang, Vinay M.S., Jiun-In Guo
Department of Electronics Engineering,
National Chiao Tung University, Taiwan, R.O.C.
- 01:40 - 02:00pm: *Extraction of Textual Information from Images using Mobile Devices*
Vijay Agamamidi, Dulal Kar, Ajay Katangur
Texas A&M University-Corpus Christi, Corpus Christi,
Texas, USA
- 02:00 - 02:20pm: *Face Recognition with Connecting Uniform and Center-Symmetric Local Binary Patterns in a Support Vector Machine*
Dongjoon Lee, Sungho Kim
School of Computer Science and Engineering,
Kyungpook National University, Daegu, Republic of Korea
- 02:20 - 02:40pm: **FREE SLOT**

02:40 - 03:00pm: *Automated Color Variation Flaw Inspection of LCD Panels Using Computer Vision*
 Hong-Dar Lin, Chih-Hao Chien
 Department of Industrial Engineering and Management,
 Chaoyang University of Technology, Taiwan

03:00 - 03:40pm: **POSTER SESSION B**
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 18, 2017 (Tuesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)

- 0. *Color Detection using Color Feature Clustering*
 Dongkeun Kim
 Division of Computer Science and Engineering,
 Kongju National University, Republic of Korea
- 0. *Image Feature Point Matching for Indoor Positioning*
 Chi-Hung Chuang, Ying-Nong Chen, Kuo-Chin Fan
 Department of Applied Informatics, Fo Guang University,
 ILan, Taiwan; Institute of Computer Science and
 Information Engineering, National Central University,
 Chung-Li, Taiwan
- 0. *Segmentation of Corpus Callosum in Midsagittal using
 Convolutional Neural Networks with Anatomical Information*
 Gilsoon Park, Jong-Min Lee
 Department of Biomedical Engineering, Hanyang University,
 Seoul, Republic of Korea
- 0. *Automatic Optical Inspection and Classification System
 of LED Chip using the Two-Way Lighting*
 Chung-Feng Jeffrey Kuo, Han-Cheng Wu, Tzu-Yuan Liang
 Graduate Institute of Automation and Control, National
 Taiwan University of Science & Technology, Taipei, Taiwan
- 0. *Remote Measurement of Infant Emotion via Heart Rate
 Variability*
 Guang-Feng Deng, Yu-Shiang Hung, Hsiao-Hung Lin
 Innovative DigiTech-Enabled Applications & Services
 Institute for Information Industry,
 Taipei City, Taiwan
- 0. ...

**SESSION 7-HIMS: HEALTH INFORMATICS, HEALTHCARE AND PUBLIC HEALTH
 RELATED SYSTEMS + VISUALIZATION AND MODELING**
Chairs: Michael B. O'Hara
CEO, KB Computing, LLC, USA
July 18, 2017 (Tuesday); 03:40pm - 05:40pm
(LOCATION: Gold Room)

03:40 - 04:00pm: *Prediction of Dengue Cases in Paraguay Using Artificial
 Neural Networks*
 Yohanna Lisnichuk, Victor Ughelli, Julio Paciello, Juan Pane
 Facultad Politecnica, Universidad Nacional de Asuncion,
 San Lorenzo, Paraguay

04:00 - 04:20pm: *Examining Locking Down of Electronic Medical Records*
 Ryan Carr, Sudip Chakraborty, Leah Johnson, Jasmin Miravete,
 and Joshua Vega
 Department of Computer Science, Valdosta State University,
 Valdosta, Georgia, USA

- 04:20 - 04:40pm: *An H17 v2 Platform for Standards Development and Testing*
Sandra Martinez Robles, Robert Snelick
National Institute of Standards and Technology (NIST),
Gaithersburg, Maryland, USA
- 04:40 - 05:00pm: *Infrastructure for Health Care Simulation Recommendations
from the Model for Telecare Alarm Services Project*
Berglind Fjola Smaradottir, Rune Werner Fensli,
Elin Sundby Boysen, Santiago Gil Martinez
Department of Information and Communication Technology,
Faculty of Engineering & Science, University of Ager, Norway;
SINTEF, Oslo, Norway;
Department of Health and Nursing Science, Faculty of Health
and Sports Sciences, University of Ager, Norway
- 05:00 - 05:20pm: *Targeted Data Swapping and K-Means Clustering for Healthcare
Data Privacy and Usability*
Kato Mivule
Department of Computer Science, Norfolk State University,
Virginia, USA
- 05:20 - 05:40pm: *Risk Factors and Prediction of Non-alcoholic Fatty Liver
Disease using Machine Learning Methods*
Yu-Han Cheng, Cheng-Ying Chou, Yvonne Hsiung
National Taiwan University, Taiwan;
Mackay Medical College, Taiwan
- XX:XX - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
**(Please refer to the lists at the beginning of the program
book for details)**

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 8-HIMS: TOOLS FOR DECISION MAKING AND DIAGNOSTICS
 Chairs: Michael B. O'Hara
 CEO, KB Computing, LLC, USA
 July 19, 2017 (Wednesday); 08:40am - 10:20am
 (LOCATION: Gold Room)

08:40 - 09:00am: *Digital Compensation Method for Enhancing the Blood Pressure Estimation Based on the Arterial Pulse Waveform*
 Boyeon Kim, Yunseok Chang
 Division of CSE, Hanyang University, Seoul, Korea;
 Department of CE, Daejin University, Pocheon, Korea

09:00 - 09:20am: *Prediction with Multiple, Multi-class Models and Dempster-Shafer Theory*
 Michael Bauer
 Department of Computer Science, The University of Western Ontario, London, Ontario, Canada

09:20 - 09:40am: *E-HandicapScale: An Open and Secure Way to Promote and Improve Diagnostics of Disabled Patients*
 Laurent Bobelin, Andres Gil, Christian Toinard, Marie-Elisabeth Labat
 LIFO Computer Science Laboratory of Orleans, INSA Centre Val de Loire, Bourges Cedex, France;
 Institute of Education and Motricity LADAPT, Trouy Nord, France

09:40 - 10:00am: *Machine Learning for Autism Diagnostics: Applying Support Vector Classification*
 Florian Hauck, Natalia Kliewer
 Department of Information Systems, Freie Universitat Berlin, Germany

10:00 - 10:20am: *Predicting Cardiovascular Events - sensitivity and specificity*
 Nishigandha Kale, Joshua Thomas, Rupesh Agrawal, Bruce Benjamin, and Johnson P. Thomas
 Computer Science Department, Oklahoma State University, USA;
 College of Medicine, University of Oklahoma, Oklahoma, USA;
 Department of Management Science and Information Systems, Spears School of Business, Oklahoma State University, USA;
 College of Osteopathic Medicine, Oklahoma State University, USA

10:20 - 10:40am: BREAK

SESSION 9-HIMS: HEALTH INFORMATICS, HEALTHCARE AND PUBLIC HEALTH RELATED SYSTEMS
 Chairs: Michael B. O'Hara
 CEO, KB Computing, LLC, USA
 July 19, 2017 (Wednesday); 10:40am - 12:40pm
 (LOCATION: Gold Room)

10:40 - 11:00am: FREE SLOT

- 11:00 - 11:20am: *Mobile Rescue Management for Medical Emergencies: Introducing a Novel Application Framework*
 Martin Zsifkovits, Madalina Stefania Toader, and Stefan Wolfgang Pickl
 Department of Computer Science, University of Federal Armed Forces Munich, Neubiberg, Germany
- 11:20 - 11:40am: *What Do College Undergraduates Know about Zika and What Precautions are they Willing to take to Prevent its Spread?*
 Michele E. Miller, William L. Romine, Megan A. Rua
 Department of Biological Sciences,
 Wright State University, Dayton, Ohio, USA
- 11:40 - 12:00pm: *The Data Donation Pass: Enabling Sovereign Control of Personal Healthcare Data*
 Matthieu-P. Schapranow, Janos Brauer, Hasso Plattner
 Hasso Plattner Institute, Enterprise Platform and Integration Concepts, Potsdam, Germany
- 12:00 - 12:20pm: *TB Portals Program Image Analysis: Can chest X-ray similarity identify drug resistant Tuberculosis patients?*
 Juarez-Espinosa Octavio, Gabrielian Andrei, Engle Eric, and Rosenthal Alex
 OCICB/OSMO/OD/NIAID/NIH,
 National Institutes of Health, Rockville, Maryland, USA
- 12:20 - 12:40pm: **PROVISIONAL:**
Health Technomics and Social Determinants in Global Health - Strategies for Health Providers, Operators and Target Populations for Human Safety and Homeland Security
 Giuseppe Tritto, Andrew Marsh, Denis Carroll, Alice Karoubi Nordon, Matthew Tritto, Alexander Marsh-Drikos, and Ingrid Vaileanu
 Executive President WABT - ICET-WWO, WABT European Institute for Life - WEIL, HealthLife Creative Enterprise Ltd, London, UK; World Academy of Biomedical Sciences and Technologies - WABT, Paris, France, EU; CEO HoIP Telecom Ltd, London, UK; NHS Health Education England, Strategic Procurement Manager, London, UK; Ascott Associates, Paris, France, EU; WABT Academy, Paris, France, EU; HoIP Telecom Ltd, UK; Secretary-General XValuator, Paris, France, EU
- 12:40 - 01:20pm: **LUNCH (On Your Own)**
- SESSION 10-IPCV: VIDEO PROCESSING + COMPRESSION & APPLICATIONS + TARGET CLASSIFICATION + GESTURE RECOGNITION**
Chairs: Dr. Satish Penmatsa
 Framingham State University, Massachusetts, USA
 July 19, 2017 (Wednesday); 01:20pm - 03:00pm
 (LOCATION: Gold Room)
- 01:20 - 01:40pm: *A Novel Video Matting Approach Based on Closed-Form Solutions and Probability Density Functions*
 K. L. Hung, W. T. Liou
 Department of Information Management, Chaoyang University of Technology, Taichung, Taiwan, R.O.C.
- 01:40 - 02:00pm: *A Multithreaded Robust C/C++ Implementation of Video Data Compression*
 Tong Lai Yu
 School of Computer Science and Engineering,
 California State University, San Bernardino, California, USA

- 02:00 - 02:20pm: *Probability Based Fast Prediction by Using Inter-View Correlation for 3D Video Coding*
Yu-Ting Chen, Jie-Ru Lin, Mei-Juan Chen, Jeng-Wei Chen
Department of Electrical Engineering,
National Dong Hwa University, Hualien, Taiwan
- 02:20 - 02:40pm: *An Extension to the INCA Model for Probabilistic Gestural Recognition*
G. Newell, B. Konzman, B. Bourgeois
Department of Computer Science,
Northern Kentucky University, Kentucky, USA
- 02:40 - 03:00pm: *Multi-level Fusion Scheme for Target Classification using Camera and Radar Sensors*
Eugin Hyun, Young-Seok Jin
Advanced Radar Technology (ART)) Laboratory, Convergence
Research Center for Future Automotive Technology, DGIST,
Daegu Gyeongbuk Institute of Science and Technology, Daegu,
South Korea
- 03:00 - 03:40pm: **POSTER SESSION C
(INCLUDES POSTER + SHORT & POSITION PAPERS)
July 19, 2017 (Wednesday)
(LOCATION: Hallways of Ballrooms 6, 7, & 8)**
0. *The Challenge of Technological Generation of Young Creative Entrepreneurs in Global New Economy - Entrepreneurship Creativity of Youth and its Impact on Global Social Welfare*
Matthew Tritto, Alexander Marsh-Drikos, Sumana Das, Sohini Roy, Pradeep Jha, Rakhi Jha, Alice Karoubi Nordon, Olivier Younes, Andrew Marsh, Sujoy Guha, Giuseppe Tritto
CPGE, MPSI, Paris, WWO-NGTP Fellow WABT Academy, Paris, France, EU; WWO-NGTP Fellow, WABT Academy, Paris, France, EU; HoIP Telecom Ltd, UK; Indian Institute of Technology Kharagpur, India; Postdoctoral Researcher, University of California, Los Angeles, California, USA; Indian Inst. of Technology Kharagpur, India; Vidyasagar University, India; Scientific Consultant, IcubedG Ideas Pvt Ltd., SG ArHeart Pvt., Indian Inst. of Technology, Kharagpur, India; International Lawyer, Partner, Ascott Associes, Paris, France, EU; WABT Board Member and Legal Advisor; Founding CEO EXPEN, Professor, HEC Paris & University of California, Berkeley, California, USA; CEO, HoIP Telecom Ltd, London, UK & WABT-ICET Board Member & Secretary-General WABT; Vice-President WABT, IcubedG Ideas Pvt Ltd, RISUG Laboratory IIT, Kharagpur, India; Executive President WABT - ICET-WWO, WABT European Institute for Life - WEIL, HealthLife Creative Enterprise Ltd, London, UK & World Academy of Biomedical Sciences and Technologies - WABT, Paris, France, EU
0. *Visualizing Healthcare Fraud Detection - Doctor Patient Network - Demo*
Javed Iqbal, Saba Riaz, M. Kamran, Franklin Din
FraudLens Inc., Pakistan; FraudLens Inc., USA
0. *Visualizing the Effectiveness of Behavior Change in Combatting Fraudulent Healthcare Claims - Demo*
Javed Iqbal, Saba Riaz, Franklin Din
FraudLens Inc., Pakistan; FraudLens Inc., USA

- 0. *Intra-Body Communication Using Ultrasonic Wave Propagation*
Meina Li, Youn Tae Kim
College of Instrumentation and Electrical Engineering,
Jilin University, Jilin, China; IT Fusion Technology
Research Center, Chosun University, Gwangju, Korea
- 0. *Physical Fitness Assessment by Using Heart Rate and
Physical Activity Sensor*
Meina Li, Youn Tae Kim
College of Instrumentation and Electrical Engineering,
Jilin University, Jilin, China; IT Fusion Technology
Research Center, Chosun University, Gwangju, Korea
- 0. *Detection of Epileptic Seizure Channel from EEG Signal*
Jinhyuck Kim, Jeongung Kim, Seungbum Shim, Mi-Sun Yum, Sunwoong Choi
Department of Secured Smart Electric Vehicle, Kookmin University,
Seoul, Korea; Department of Pediatrics, Asan Medical Center,
University of Ulsan, College of Medicine, Seoul, Korea
- 0. *Digital Arterial Pulse Waveform Measurement System with the PPG Sensor*
Yunseok Chang, Munseong Jeong, Boyeon Kim
Division of CSE, Hanyang University, Seoul, Korea; Department of
CE, Daejin University, Kyunggi, Korea
- 0. ...

**SESSION 11-ESCS: CYBER-PHYSICAL SYSTEMS AND APPLICATIONS + SOFTWARE
TOOLS & SYSTEMS, & REAL-TIME SYSTEMS**
Chairs: **Dr. Daniel Ducharme**
University of Rhode Island, USA
July 19, 2017 (Wednesday); 03:40pm - 05:20pm
(LOCATION: Gold Room)

- 03:40 - 04:00pm: *Modeling Scheduling Policy with Constraint Satisfaction Problem Approach*
Hyuk Lee, Jin-Young Choi
Department of CS, Korea University, Korea; Graduate School of Information
Security, Korea University, Seoul, Korea
- 04:00 - 04:20pm: *Analyzing Real-Time Java: Deadline Experiments and Comparison with C*
Fernando G. Tinetti, Demian Klc, Fernando L. Romero
III-LIDI, Fac. de Informatica, Universidad Nacional de La
Plata, Argentina;
Comision de Investigaciones Cientificas Prov. de Bs. As.,
La Plata, Argentina
- 04:20 - 04:40pm: *Embedded Databases*
David Cox
ABB Corporation Research, USA
- 04:40 - 05:00pm: *Electronic Water Billing System*
Mark Ehab Shoukry, Michael Maher Ibrahim, Maher Mansour Abdel-Aziz
Electronics and Communication Department, MSA University, Cairo, Egypt;
Electronics, Communication & Computer Dept., Helwan University, Egypt
- 05:00 - 05:20pm: *Shortest Job First Scheduling for Reducing Jitter in Cyber
Physical Systems*
JiYoung Heo, Moonju Park
Department of Computer Science and Engineering,
Incheon National University, Incheon, Korea
- 05:20 - 07:00pm: **Keynotes, Invited Lectures, Tutorials, Discussions**
(Please refer to the lists at the beginning of the program
book for details)

07:00a - 05:00p: REGISTRATION (2nd Floor, East Ballrooms 6-8; Registration Counter/Desk)

SESSION 12-BIOCOMP: COMPUTATIONAL BIOLOGY, NOVEL ALGORITHMS, APPLICATIONS & TOOLS
Chairs: Dr. Fabian Garcia-Nocetti
Universidad Nacional Autonoma de Mexico, Mexico
July 20, 2017 (Thursday); 08:40am - 11:20am
(LOCATION: Gold Room)

08:40 - 09:00am: *Three-State Protein Stability Prediction from Sequence-Based Features*
Jose A. Guevara-Coto, Liangjiang Wang
Department of Genetics and Biochemistry,
Clemson University, Clemson, South Carolina, USA

09:00 - 09:20am: *Using Computerized ECG Measurements in the Bayesian Analysis of Heart Disease*
Robert A. Warner
Tigard Research Institute, Tigard, OR, USA

09:20 - 09:40am: *Analysis of Brain Scans from Live Zebrafish*
Richard S. Guidetti, Charles D. Eichstaedt, Julie L. Mustard,
and Norbert W. Seidler
Department of Anesthesiology, UMKC -SOM/Saint Luke's
Hospital, Kansas City, MO, USA;
Division of Basic Science, KCU-COM, Kansas City, MO, USA

09:40 - 10:00am: *Classification of Diseases with Imbalanced Samples in Traditional Chinese Medicine*
Zhu-Qiang Pan, Mary Qu Yang, Lin Zhang, Guo-Zheng Li
School of Computer Science, Southwest Petroleum University,
Chengdu, China;
MidSouth Bioinformatics Center, University of Arkansas
Little Rock, College of Engineering & IT, University of
Arkansas for Medical Sciences, Arkansas, USA;
China Academy of Chinese Medical Science , Beijing, China

10:00 - 10:20am: *Fluorescence Microscopy Noise Model: Estimation of Poisson Noise Parameters from Snap-shot Image*
Yannis Kalaidzidis
Max Planck Institute of Molecular Cell Biology and Genetics,
Dresden, Saxony, Germany;
Faculty of Bioengineering and Bioinformatics,
Moscow State University, Moscow, Russia

10:20 - 10:40am: BREAK

10:40 - 11:00am: *Towards a Method for the Assessment of Cerebral Arteriovenous Malformations Surgery with a Bi-Directional Doppler System for Blood Flow Measurement*
E. Rubio-Acosta, D. F. Garcia-Nocetti, P. Acevedo Contla,
M. Fuentes-Cruz, J. A. Contreras-Arvizu
Instituto de Investigaciones en Matematicas Aplicadas y en
Sistemas, Universidad Nacional Autonoma de Mexico, Mexico

11:00 - 11:20am: *Para-Seqs: Parallel Next Generation Sequencing Pattern Match Tools*
Abhishek Narain Singh
University of Virginia, Charlottesville, Virginia, USA

SESSION 13-HIMS: MEDICAL SYSTEMS, DEVICES & SERVICES + MONITORING SYSTEMS AND TOOLS FOR REHABILITATION

Chairs: Dr. Fadi Muheidat* and Michael B. O'Hara**

***EECS Department, University of Missouri, USA;**

****CEO, KB Computing, LLC, USA**

July 20, 2017 (Thursday); 11:20am - 03:00pm

(LOCATION: Gold Room)

- 11:20 - 11:40am: *Integration of Haptic Rendering with Eye-Gaze Tracking using a Multi-Platform GUI*
M. Segura, N. Pernaletе, A. Raheja
California State Polytechnic University, Pomona, California, USA
- 11:40 - 12:00pm: *IoT Support for Dementia Patients*
Bernd Muller
Faculty of Computer Science, Ostfalia University, Wolfenbuttel, Germany
- 12:00 - 12:20pm: *A Treatment Adherence Mobile Application Designed Specifically for Patients after Open-Heart Surgery*
Arshia Khan, Nam Phung, Janna Madden
University of Minnesota Duluth, Minnesota, USA
- 12:20 - 12:40pm: **PROVISIONAL:**
The Use of and Adoption of HIS and EMR in Botswana
Lilybert Machacha, Moses Kanjadza, Babli Kumari
Allied Health Sciences, Faculty of Health and Education,
Botho University, Gaborone, Botswana
- 12:40 - 01:20pm: **LUNCH (On Your Own)**
- 01:20 - 01:40pm: *HFinder: Anti-Emergency Medical Service Late Response Time System*
Boloka Jonathan, Basseу Isong, Thuso Moemi
Computer Science Department, North-West University,
Mafikeng, South Africa
- 01:40 - 02:00pm: *Counting Multiple People on a Floor Based Array Sensor System*
Fadi Muheidat, Harry W. Tyrer
Electrical Engineering and Computer Science Department,
University of Missouri, Columbia, Missouri, USA
- 02:00 - 02:20pm: *Open System for Monitoring Vital Signs of Babies to Help in the Prevention and Diagnosis of Sudden Death*
Robison Cris Brito, Kleisson Tedesco, Eduardo Todt, Fabio Bertoti
Federal University of Technology, Parana, Brazil;
Federal University of Parana (UFPR), Brazil;
Federal University of Technology - Parana (UTFPR), Brazil
- 02:20 - 02:40pm: *Smartphones Application in Ophthalmology - Keratoconus detect*
Rafael S. Ishibe, Maximilian Luppe, Jean Jacques Groote
University of Sao Paulo, Sao Carlos School of Engineering,
Department of Electrical Engineering and Computing,
Sao Carlos, Brazil;
Moura Lacerda Center University, Ribeirao Preto, SP, Brazil
- 02:40 - 03:00pm: *Digital Filter Array Optimization for Directivity Pattern*
S. Jarnг, Y. Kwon, D. Jarnг
Department of Electronics Engineering, Chosun University,
Gwangju, Republic of Korea;
Hearing Impairment and Hearing Rehabilitation Research
Institute, AlgorKorea Co. Ltd, Seoul, Republic of Korea;
Department of Computer Science, Biola University,
Los Angeles, California, USA
- 03:00 - 03:20pm: **BREAK**

SESSION 14-IPCV: COMPUTER VISION + IMAGING SCIENCE & NOVEL APPLICATIONS

Chairs: TBA

Volunteers needed to chair this session.

July 20, 2017 (Thursday); 03:20pm - 05:00pm

(LOCATION: Gold Room)

- 03:20 - 03:40pm: *Dense Pixel Correspondence Based Gender Recognition of Facial Images*
 Yu-Hyun Kim, Dileep Kumar Appana, Cheol-Hong Kim, Jong-Myon Kim
 Department of Electrical, Electronic, and Computer
 Engineering, University of Ulsan, Ulsan, South Korea;
 School of Electronics and Computer Engineering,
 Chonnam National University, Gwangji, South Korea;
 School of Electrical Engineering, University of Ulsan,
 Ulsan, South Korea
- 03:40 - 04:00pm: *FREE SLOT*
- 04:00 - 04:20pm: *Localization of Moving Robot on Known Terrain Based on Stereo Vision*
 Mateusz Jozefowicz, Sebastian Meszynski, Krzysztof Rydel,
 and Oleksandr Sokolov
 ABM Space;
 Faculty of Physics, Astronomy and Informatics of Nicolaus
 Copernicus University in Toru, Poland
- 04:20 - 04:40pm: *AVRDB: Annotated Dataset for Vessel Segmentation and
 Calculation of Arteriovenous Ratio*
 Shahzad Akbar, Taimur Hassan, M. Usman Akram,
 Ubaid Ullah Yasin, Imran Basit
 Department of Computer Science, COMSATS Institute of
 Technology, Pakistan;
 Department of Computer Engineering, National University of
 Sciences and Technology, Islamabad, Pakistan;
 Department of Ophthalmology, Armed Forces Institute of
 Ophthalmology, Rawalpindi, Pakistan
- 04:40 - 05:00pm: *Real Time Classification of Marbles with Decision Tree Method*
 Erhan Turan, Koray S. Parlak
 Computer Engineering, Firat University,
 Technical Vocational High School, Turkey
- 05:00 - 05:20pm: **Congress Closing Remarks**
(LOCATION: Ballroom 7)