TABLE OF CONTENTS

Registration Dates and Times + Dinner .......................... 2
Conferences Acronyms and Their Full Titles ......................... 3
Partial List of Additional Keynotes, Invited Talks & Panel Discussions and Tutorials .................................................. 4

Conference Programs and Schedules:

PDPTA, GCC, CSC ................................................................. 7
SAM, ICWN ........................................................................... 23
DMIN, ABDA, MSV, EEE ......................................................... 35
FECS, SERP, ICOMP, FCS ....................................................... 49
ICAI, ACC, IKE ................................................................... 65
IPCV, ESCS, BIOENG, BIOCOMP, HIMS ......................... 81
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)
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABDA'17</td>
<td>The 4th International Conference on Advances in Big Data Analytics</td>
</tr>
<tr>
<td>ACC'17</td>
<td>The 1st International Conference on Applied Cognitive Computing</td>
</tr>
<tr>
<td>BIOCOMP'17</td>
<td>The 18th International Conference on Bioinformatics &amp; Computational Biology</td>
</tr>
<tr>
<td>BIOENG'17</td>
<td>The 3rd International Conference on Biomedical Engineering and Sciences</td>
</tr>
<tr>
<td>CSC'17</td>
<td>The 15th International Conference on Scientific Computing</td>
</tr>
<tr>
<td>DMIN'17</td>
<td>The 13th International Conference on Data Mining</td>
</tr>
<tr>
<td>EEE'17</td>
<td>The 16th International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government</td>
</tr>
<tr>
<td>ESCS'17</td>
<td>The 15th International Conference on Embedded Systems, Cyber-physical Systems, and Applications</td>
</tr>
<tr>
<td>FCS'17</td>
<td>The 13th International Conference on Foundations of Computer Science</td>
</tr>
<tr>
<td>FECS'17</td>
<td>The 13th International Conference on Frontiers in Education: Computer Science and Computer Engineering</td>
</tr>
<tr>
<td>GCC'17</td>
<td>The 13th International Conference on Grid, Cloud, and Cluster Computing</td>
</tr>
<tr>
<td>HIMS'17</td>
<td>The 3rd International Conference on Health Informatics and Medical Systems</td>
</tr>
<tr>
<td>ICAI'17</td>
<td>The 19th International Conference on Artificial Intelligence</td>
</tr>
<tr>
<td>ICOMP'17</td>
<td>The 18th International Conference on Internet Computing and IoT</td>
</tr>
<tr>
<td>ICWN'17</td>
<td>The 16th International Conference on Wireless Networks</td>
</tr>
<tr>
<td>IKE'17</td>
<td>The 16th International Conference on Information &amp; Knowledge Engineering</td>
</tr>
<tr>
<td>IPCV'17</td>
<td>The 21st International Conference on Image Processing, Computer Vision, &amp; Pattern Recognition</td>
</tr>
<tr>
<td>MSV'17</td>
<td>The 14th International Conference on Modeling, Simulation and Visualization Methods</td>
</tr>
<tr>
<td>PDPTA'17</td>
<td>The 23rd International Conference on Parallel and Distributed Processing Techniques and Applications</td>
</tr>
<tr>
<td>SAM'17</td>
<td>The 16th International Conference on Security and Management</td>
</tr>
<tr>
<td>SERP'17</td>
<td>The 15th International Conference on Software Engineering Research and Practice</td>
</tr>
</tbody>
</table>
These talks are in addition to the focused keynotes/invited talks that appear in the individual conference schedules. The talks are open to all attendees and are scheduled in a way that various targeted attendees can attend/participate in them. Therefore, this list should be considered as a partial one.

0. **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

0. **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

0. **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

0. **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

0. **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 Gezcy
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)

1. 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

2. Design of a Tool for Analyzing Supercomputer Status
   using an Integrated Log Repository
   Sung-Jun Kim, Jae-Kook Lee, Tae-Young Hong
   Korea Institute of Science and Technology Information,
   Republic of Korea

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)
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 Wyszynski University, Warsaw, Poland  
July 18, 2017 (Tuesday); 01:20pm - 03:00pm  
(LOCATION: Ballroom ?)

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)  

O. 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  

O. 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  

O. ...  

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.  

Nejla Rouissi, Hamza Gharsellaoui, Sadok Bouamama  
National Engineering School of Manouba, Manouba University, Tunisia; National Engineering School of Carthage, Carthage University, Tunisia; A1 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; Systems Control 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
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 Wyszynski 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, Sung hun 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)

O. BornAgain: An Open-source Framework to Simulate Grazing-incidence Small-angle Scattering
Juelich Centre for Neutron Science (JCNS), Heinz Maier-Leibnitz Zentrum (MLZ), Forschungszentrum Juelich GmbH, Garching, Germany

O. 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

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, Younchang Choi, Jinsong 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 Abolfotoh
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 Charsellaoui, 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 Microelectronicas de Sevilla (IMSE-CNMF), 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, Bokyong Kim
School of Electrical and Computer Engineering, Chungbuk National University, Republic of Korea
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 Engineering, 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)
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), HIMS (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.
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 Ertal
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, Dulal 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 Kattepura 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)
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, Miclain 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, Miclain 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
Daecheon 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)

O. Dynamic Scalable ECC Scheme and its Application to Encryption Workflow Design
   Jia Wang, Lee-Ming Cheng
   City University of Hong Kong, Hong Kong
O. 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
O. 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
O. 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
O. 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
O. ...

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)
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 - 10:40am: 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), DMN (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; IITRC 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)

O. 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

O. 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

O. The Proximity Communication Frameworks for Target Recognition Before Participating in a WLAN  
Jaebok Park, Sungho Im, Seungmok Yoo, Kyunghee Lee, Seokjin Yun, Changsik Cho  
Electronics and Telecommunications Research Institute (ETRI), Daejeon, Chungnam, South Korea

O. ...
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, Ekpoma, 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)
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; Abeil 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, Luleå 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, Miclain 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)

O. Design on Distributed Deep Learning Platform with Big Data
Mikyoung Lee, Sungho Shin, Sa-Kwang Song
Korea Institute of Science and Technology Information, Korea

O. ...

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, Weihu 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)

O. OLSH: Occurrence-based Locality Sensitive Hashing
Mohammadhossein Toutiaee
Department of CS, University of Georgia, USA

O. 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

O. 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

O. ...
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;
**Engineerin, 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 University, 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 begining of the program book for details)
SESSION 10-MSV: NOVEL ALGORITHMS AND APPLICATIONS + IMAGING SCIENCE + SIGNAL ENHANCEMENT AND WIRELESS INFRASTRUCTURES

Chairs: Dr. Sakir Yucel
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 Yucel
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 Yucel
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 Yucel
NetApp, Cranberry Township, PA, USA

11:00 - 11:20am: Smart City Wireless Platforms for Smart Cities
Sakir Yucel
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-ITSDM: 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)
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.

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 Tsaur
Computer Center, National Taipei University, Taiwan

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)

O. Design of a Laboratory Power Supply - a Capstone Research Project
Bassam Shaer, Andreas Fuchs, Nathaniel Morales
Engineering Department, University of West Florida, Florida, USA

O. 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

O. 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

O. ...
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
Geорgenes Lima, Gledson Elias
Informatics Center, Federal University of Paraiba, João 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)

   O.  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

   O.  A Mitigation Technique for Interference of Heterogeneous Networks for the IoT Device Domain
      Seung-Jun Yu, Won-Seok Lee, Sung-Soon Park, Hyoung-Kyu Song
      uT Communication Research Institute, Sejong University, Seoul, Republic of Korea

   O.  Software Architecture for OneM2M Based Gateway to Interwork with ZigBee Networks for Device Domain
      Won-Seok Lee, Sung-Soon Park, Chang-Hee Kang, and Hyoung-Kyu Song
      uT Communication Research Institute, Sejong University, Seoul, Republic of Korea

   O.  The Design of Interworking Architecture Between oneM2M Platform and OIC Platform
      Sung-Soon Park, Chang-Hee Kang, Won-Seok Lee, and Hyoung-Kyu Song
      uT Communication Research Institute, Sejong-University, Seoul, Republic of Korea

   O.  The Frame Format for Interference Mitigation in Bluetooth Communication System Based OneM2M Platform
      Chang-Hee Kang, Won-Seok Lee, Sung-Soon Park, and Hyoung-Kyu Song
      uT Communication Research Institute, Sejong-University, Seoul, Republic of Korea

   O.  ...
SESSION 7-ICOMP: COMMUNICATION ISSUES, INTERNET COMPUTING AND WEB PROGRAMMING + SECURITY RELATED ISSUES
Chairs: Paul Seymour
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 begining 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 Lucks
Faculty of Media, Bauhaus-Universitat 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, Seokyong 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 Felippe 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)

O. Streaming Service Enhancement on QUIC Protocol
Juhyun Choi, Changue Jung, Ikjun Yeom, Younghoon Kim
Samsung Electronics, Suwon, South Korea;
Sungkyunkwan University, Suwon, South Korea

O. 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

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. Tauqueer 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)
It is important to note that throughout 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 SaaSEHR
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 Univeristy of Technology, Leppeenrante, Finland
02:20 - 02:40pm: Implementing Fair Wireless Interfaces with Off-The-Shelf Hardware in Smart Spaces
Paul Seymour, 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)
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), BIOCOMP (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 Doltabadi
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 Superieur d'Informatique, Universite 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)

O. 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

O. 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

O. 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. ...
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)
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, Univerro 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, Kihyoung 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: NSGAII-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

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
Liaquat 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 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, KRs - 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)
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

09:40 - 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 Dziegiel, 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. Benjamín, K. Madanagopalan
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 Ghatee, 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 Mbila, 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)

O. Multi-Source Identity Tracking
Gurpreet Singh Bawa, Shashidhar Shenoy
Accenture Company, Global Professional Services and Consulting Company

O. 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

O. ...
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 Technical 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, Manjurul 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
July 20

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
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. Fernadez, G. Sermpini, 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)
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 Gareces, 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)

O. 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

O. 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

O. Conductive Cottons for Patch Type Wearable Bio Potential Monitoring
Osong Medical Innovation Foundation, Medical Device Development Center, Korea

O. 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

O. 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

O. 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

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

08:40 - 09:00am: Cellular Automata Design for Digital Ornaments
Hyeri Rhee, Moon-Ryul 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

86
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., Jiu-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)

O. Color Detection using Color Feature Clustering
   Dongkeun Kim
   Division of Computer Science and Engineering, Kongju National University, Republic of Korea

O. 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

O. 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

O. 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

O. Remote Measurement of Infant Emotion via Heart Rate Variability
   Guang-Feng Deng, Yu-Shiang Hung, Hsiao-Hung Lin
   Innovative DigiTech-Enabled Applications & Services Institute Institute for Information Industry, Taipei City, Taiwan

O. ...

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 Pachiello, 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 HL7 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, Gabriellian Andrei, Engle Eric, and Rosenthal Alex
OCICB/OSMO/00/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

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

O. 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-Orikos, 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 ArtHeart 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 III, Kharagpur, India; Executive President WABT - ICET-WEIL, HealthLife Creative Enterprise Ltd, London, UK & World Academy of Biomedical Sciences and Technologies - WABT, Paris, France, EU

O. Visualizing Healthcare Fraud Detection - Doctor Patient Network - Demo
Javed Iqbal, Saba Riaz, M. Kamran, Franklin Din
FraudLens Inc., Pakistan; FraudLens Inc., USA

O. Visualizing the Effectiveness of Behavior Change in Combating 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

---

**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)
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. Pernalete, 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, Bassey 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 Oftalmology - Keratoconus detect
Rafael S. Ishibe, Maximiliam Luppe, Jean Jacques Groote
University of Sao Paulo, Sao Carlos School of Engineering, Department of Eletrical 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. Jarng, Y. Kwon, D. Jarng
Department of Electronics Engineering, Chosun University, Gwangju, Republic of Korea;
Heaing 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)