The International Conference on Information Technology: New Generations
April 10-12, 2017
Tuscany Suites, Las Vegas, Nevada, USA

ITNG 2017
ADVANCE PROGRAM

April 9, 2017 - SUNDAY
5:00pm - 8:00pm: REGISTRATION (Convention Center- TBA)
6:00pm - 8:00pm: PRECONFERENCE RECEPTION (Florentine E)

April 10, 2017 - MONDAY
7:00am - 5:00pm: REGISTRATION (Convention Center- TBA)
7:00am - 8:30am: BREAKFAST (TBA)
8:00am - 8:10am: Conference Opening Remarks by Shahram Latifi, ITNG CHAIR: TBA, University of Nevada, LasVegas (Location: Florentine E)
8:10am - 9:00am: Keynote by Dr. Jean-Luc Gaudiot Professor, UC Irvine, President of the IEEE Computer Society (Location: Florentine E)
9:00 am - 9:10 am: Break

PARALLEL SESSIONS:

A SESSIONS (Florentine E)

SESSION MA1: Information Systems and Internet Technology I

CHAIR: Dr. Anthony K. Tsetse, Northern Kentucky University, USA
Co-CHAIR: Dr. Doina Bein, California State University, Fullerton, USA

9:10am - 10:10am

9:10-9:30 A Petri Net Design and Verification Platform based on The Scalable and Parallel Architecture: HiPS
Yojiro Harie and Katsumi Wasaki

9:30-9:50 A Cloud Service for Graphical User Interfaces Generation and Electronic Health Record Storage
André Araújo, Valéria Times and Marcus Silva
9:50-10:10  Event-based Anomalies in Big Data  
Yenumula Reddy

10:10-10:30  Coffee Break

SESSION MA2: Information Systems and Internet Technology II

CHAIR: Dr. Anthony K. Tsetse, Northern Kentucky University, USA  
Co-CHAIR: Dr. Anteneh Girma, Howard University, USA

10:30am - 11:50am

10:30-10:50 Optimally Compressed Digital Content Delivery Using Short Message Service  
Muhammad Fahad Khan, Mubashar Mushtaq and Khalid Saleem

10:50-11:10 A Rule-Based Relational XML Access Control Model in the Presence of Authorization Conflicts  
Ali Alwehaibi and Mustafa Atay

11:10-11:30 The Organisational Constraints of Blending E-learning Tools in Education: Lecturers’ Perceptions  
Sibusisiwe Dube and Elsje Scott

11:30-11:50 A New Proposed Unconditionally Secure Blind Proxy Signature Scheme Based on RSA  
Mohamed kouta, Abd Elftah Hegazy and Maged Elgendy

12:30-1:30  Lunch (on your own)

SESSION MA3: Networking and Wireless Communications I

CHAIR: Prof. Fazlullah Khan, Abdul Wali Khan University Mardan, Pakistan  
Co-CHAIR: Dr. Anteneh Girma, Howard University, USA

1:30pm - 3:30pm

1:30-1:50 Performance Enhancement of OMP Algorithm for Compressed Sensing Based Sparse Channel Estimation in OFDM Systems  
VahidVahidi and Ebrahim Saberinia

1:50-2:10 CARduino: A Semi-automated Vehicle Prototype to Stimulate Cognitive Development in A Learning-Teaching Methodology  
Everton Rafael da Silva and Breno Lisi Romano

2:10-2:30 ICI Mitigation for High-Speed OFDM Communications in High-Mobility Vehicular Channels  
VahidVahidi and Ebrahim Saberinia

2:30-2:50 Mobile Pay Center Protocol 3D by Using Cloud Messaging  
Mohammad Vahidalizadeh dizaj
2:50-3:10  Golden Linear Group Key Agreement Protocol  
Mohammad Vahidalizadehdizaj

3:10-3:30  Implementing an In-Home Sensor Agent in Conjunction with an Elderly Monitoring Network  
Katsumi Wasaki, Masaaki Niimura and Nobuhiro Shimo

3:30-4:00  Coffee Break

SESSION MA4: Networking and Wireless Communications II

CHAIR: Dr. Anteneh Girma, Howard University, USA  
Co-CHAIR: Prof. Fazlullah Khan, Abdul Wali Khan University Mardan, Pakistan

4:00pm - 5:40pm

4:00-4:20  ACO-Discreet: An Efficient Node Deployment Approach in Wireless Sensor Networks  
Tehreem Qasim, Qurrat-ul-Ain Minhas, Hasan Mahmood, Mujahid Alam, Naeem Ali Bhatti, Mubashar Mushtaq, Khalid Saleem and M Shujah Islam Sameem

4:20-4:40  How Risk Tolerance Constrain Perceived Risk on Smartphone Users’ Risk Behavior  
Shwu-Min Horng, Chia-Ling Chao

4:40-5:00  When Asteroids Attack the Moon - Design and Implementation of an STK-based Satellite Communication Simulation for the NASA-led Simulation Exploration Experience  
Bingyang Wei, Amy Knowles, Christopher Silva, Christine Mounce and Anthony Enem

5:00-5:20  Wireless Body Sensor Network for Monitoring and Evaluating Physical Activity  
Leonardo Schick, Wanderley Lopes de Souza and Antonio Francisco do Prado

5:20-5:40  Performance Analysis of Transport Protocols for Multimedia Traffic over Mobile Wi-Max Network  
Faisal Rehman and Fazlullah Khan

5:40-6:00  Techniques for Secure Data Transfer  
Jeffery Gardner

6:00-6:20  Rate Adjustment Mechanism for Improving the TCP Throughput in Data Center Networks  
Prasanthi Sreekumari
B SESSIONS (Florentine F)

SESSION MB1: Data Mining I

CHAIR: Prof. Danilo Eler, Unesp, Universidade Estadual Paulista, Brazil
Co-CHAIR: TBA

9:10am - 10:10am

9:10-9:30 An Optimized Data Mining Method to Support Solar Flare Forecast
Sérgio Luisir Díscola Junior, José Roberto Cecatto, Márcio Merino Fernandes and Marcela Xavier Ribeiro

9:30-9:50 A New Approach to Classify Sugarcane Fields Based on Association Rules
Rafael João, Steve Mpinda, Ana Vieira, Renato João, Luciana Romani and Marcela Ribeiro

9:50-10:10 Visualizing the Document Pre-processing Effects in Text Mining Process
Danilo Eler, Ives Pola, Rogério Garcia and Jaqueline Teixeira

10:10-10:30 Coffee Break

SESSION MB2: Data Mining II

CHAIR: Dr. Doina Bein, California State University, Fullerton, USA
Co-CHAIR: TBA

10:30am - 12:30pm

10:30-10:50 Complex Network Tools to Understand the Behavior of Criminality in Urban Areas

10:50-11:10 Big Data: A Systematic Review
Antonio Fernando Cruz Santos, Ítalo Pereira Teles, Otávio Manoel Pereira Siqueira and Adicinéia Aparecida Oliveira

11:10-11:30 Evidences from the Literature on Database Migration to the Cloud
Antonio Carlos Marcelino de Paula, Glauco de Figueiredo Carneiro and Antonio Cesar Brandão Gomes da Silva

11:30-11:50 Improving Data Quality through Deep Learning and Statistical Model
Wei Dai, Kenji Yoshigoe and William Parsley

11:50-12:10 A Framework for Auditing XBRL Documents Based on the GRI Sustainability Guidelines
Daniela Costa Souza and Paulo Caetano da Silva
12:10-12:30 OPEN SLOT

12:30-1:30 Lunch (on your own)

SESSION MB3: Software Engineering I

CHAIR: Dr. Doina Bein, California State University, Fullerton, USA
Co-CHAIR: TBA

1:30pm - 3:30pm

1:30-1:50 Mining Historical Information to Study Bug Fixes
   *Eduardo Campos and Marcelo Maia*

1:50-2:10 An Empirical Study of Control Flow Graphs for Unit Testing
   *Frank Xu*

2:10-2:30 A New Approach to Evaluate the Complexity Function of Algorithms
   Based on Simulations of Hierarchical Colored Petri Net Models
   *Clarimundo Júnior, Rita Julia, Stéphane Julia and Luciane Silva*

2:30-2:50 Detection Strategies for Modularity Anomalies: An Evaluation with
   Software Product Lines
   *Eduardo Fernandes, Priscila Souza, Kecia Ferreira, Mariza Bigonha and
     Eduardo Figueiredo*

2:50-3:10 Randomized Event Sequence Generation Strategies for Automated
   Testing of Android Apps
   *David Adamo and Renee Bryce*

3:10-3:30 Generating Sequence Diagram and Call Graph Using Source Code
   Instrumentation
   *Mustafa Hammad and Muna Al-Hawari*

3:30-4:00 Coffee Break

SESSION MB4: Software Engineering II

CHAIR: Dr. Doina Bein, California State University, Fullerton, USA
Co-CHAIR: TBA

4:00pm - 6:40pm

4:00-4:20 Design Observer: A Framework to Monitor Design Evolution
   *Maen Hammad*

4:20-4:40 Extending Automotive Legacy Systems with Existing End-to-End Timing
   Constraints
   *Matthias Becker, Saad Mubeen, Moris Behnam and Thomas Nolte*

4:40-5:00 Modeling of Vehicular Distributed Embedded Systems: Transition from
Single-core to Multi-core
Saad Mubeen and Alessio Bucaioni

5:00-5:20 On the Impact of Product Quality Attributes on Open Source Projects Evolution
Antonio Silva, Glaucio Carneiro, Miguel Monteiro, Fernando Abreu, Eduardo Figueiredo and Kattiana Constantino

5:20-5:40 AD-Reputation – A Reputation-based Approach to Support Effort Estimation
Claudio Lelis, Marcos Miguel, Marco Araújo, José David and Regina Braga

5:40-6:00 PMBENCH: AMicro-benchmark for Profiling Paging Performance on ASystem with Low-latency SSDs
Jisoo Yang and Julian Seymour

SESSION MC1 – POSTERS (Hallway)
CHAIR: TBA
Co-CHAIR: TBA
9:10am - 12:30pm (Location: Hallway)
Usability in Security Systems
Claudio Casado, Miguel Palma, Cristian Barria and Cristian Rusu

Techniques of Detection, Prevention and Mitigation of DDoS Attacks
Judith Clarisse Essome Epoh

DDoS Attacks: Defending Cloud Environments
Michele Cotton

SESSION MC2 – POSTERS (Hallway)
1:30pm - 3:30pm (Location: Hallway)

DDoS Countermeasures
Michael Wisthoff

The Implementation of the Document Management System “DocMan” as An Advantage for the Acceleration of Administrative Work in Macedonia
Burhan Rahmani, Daut Hajrullahi and Florim Idrizi

April 11, 2017 - Tuesday
7:00am - 5:00pm: REGISTRATION (TBA)
7:00am - 8:30am: BREAKFAST (TBA)
8:00am - 9:00am:  **Keynote by Dr. Kohei Arai, Saga University, Japan**

**Human Computer Interaction: Next Generation**
(Location: Florentine E)

**PARALLEL SESSIONS:**

**A SESSIONS (Florentine E)**

**SESSION TA1: Computer Vision, HCI and Image Processing/Analysis**

CHAIR:  **Dr. Chyi-Ren Dow, Feng Chia University, Taiwan**  
Co-CHAIR: TBA

9:00am - 10:00am

9:00- 9:20  
Handwritten Feature Descriptor Methods Applied to Fruit Classification  
*Priscila Macanhã, Danilo Eler, Rogério Garcia and Wilson Marcílio*

9:20-9:40  
Help HEMOCS Application for Helping Disabled People Communicate by Head Movement Control  
*Herman Tolle and Kohei Arai*

9:40-10:00  
An Adaptive Sensor Management System  
*Chyi-Ren Dow, Yaun-Zone Wu Wu, Bonnie Lu, Shiow-Fen Hwang and Fongray Frank Young*

10:00-10:30  
Coffee Break

**SESSION TA2: High Performance Computing Architectures**

CHAIR: TBA  
Co-CHAIR:  **Dr. Fangyan Shen, New York City Technology of Technology**

10:30am - 12:30pm

10:30-10:50  
Data Retrieval and Parsing of Form 4 from the Edgar System using Multiple CPUs  
*Raja Singh, Nolan Burfield and Frederick Harris Jr.*

10:50-11:10  
A New Approach for STEM Teacher Scholarship Implementation  
*Fangyang Shen and Janine Roccosalvo*

11:10-11:30  
Sumudu Transform for Automatic Mathematical Proof and Identity Generation  
*Jun Zhang and Fangyang Shen*
11:30-11:50  A Multiobjective Optimization Method for the SOC Test Time, TAM, and Power Optimization Using a Strength Pareto Evolutionary Algorithm
Wissam Marrouche, Rana Farah and Haidar Harmanani

12:30-1:30  Lunch (on your own)

SESSION TA3: Entertainment Technology and Education

CHAIR: Prof. Fazlullah Khan, Abdul Wali Khan University Mardan, Pakistan
Co-CHAIR: TBA
1:30pm - 3:30pm

1:30-1:50  A Practical Approach to Analyze Logical Thinking Development with Computer Aid
Breno Lisi Romano and Adilson Marques da Cunha

1:50-2:10  A Transversal Sustainability Analysis of the Teaching-learning Process in Computer Students and Groups
Fernanda Carla de Oliveira Prado and Luciel Henrique de Oliveira

2:10-2:30  Cloud Computing: A paradigm shifts for Central University of Technology, Welkom
Moloiyatsana Dina Moloja and Moretlo Celia Tiale

2:30-2:50  Hadoop as a Learning Tool
Gabriel Spadon, Danilo M. Eler, Celso Olivete-Jr, Rogério E. Garcia and Ronaldo C. M. Correia

2:50-3:10  MUSE: A Music Conducting Recognition System
Chase Carthen, Cris Ruggieri, Justice Colby, Richard Kelley, Sergiu Dascalu and Frederick Harris

3:30-4:00  Coffee Break

SESSION TA4: Health, Biomedical, Pattern Recognition

CHAIR: Dr. Christoph Thuemmler, Edinburgh Napier University, UK
Co-CHAIR: TBA
4:00pm - 5:20pm

4:00-4:20  Testing Cloud Services using the TestCast tool
Stelios Sotiriadis, Andrus Lehmets, Euripides Petrakis and Nik Bessis

4:20-4:40  The Evaluation of High-fidelity Mannequins in Simulations of Convulsions and Pediatric CPR
Paôla de Oliveira Souza, Alexandre Carlos Brandao Ramos, Leticia Helena Januario, Ana Angelica Lima Dias, Helen Cristiny Teodoro Couto Ribeiro, Julio Cesare Veloso, Heber Paulino Pena, Milla Wildemberg Fiedler and Cristina Rabelo Flôr

4:40-5:00 Visual Approach to Boundary Detection of Clusters Projected in 2D Space Lenon Silva and Danilo Eler

5:00-5:20 The Impact of 5G on the Evolution of Health and Care Services Christoph Thuemmler, Alois Paulin, Thomas Jell and Ai Keow Lim

5:20-5:40 Approaches for Clustering Polygonal Obstacles Laxmi Gewali and Sabbir Manandhar

6:00-7:00 ITNG Committee Meeting (By Invitation Only)

7:30-8:00 Award Ceremony (Florentine E)

8:00-9:30 Conference Dinner Reception (Tuscany)

B SESSIONS (Florentine F)

SESSION TB1: Cybersecurity I

CHAIR: Dr. Ping Wang, Robert Morris University, USA
Co-CHAIR: Dr. Raed Sbeit, Verizon Wireless, USA

9:10am - 10:10am


9:30-9:50 Router Security Penetration Testing in a Virtual Environment Christian Scully and Ping Wang

9:50-10:10 Advanced Machine Language Approach to Detect DDoS Attack Using DBSCAN Clustering Technology with Entropy Anteneh Girma, Moses Garuba and Rajini Goel

10:10-10:30 Coffee Break

SESSION TB2: Cybersecurity II

CHAIR: Dr. Ping Wang, Robert Morris University, USA
Co-CHAIR: Dr. Raed Sbeit, Verizon Wireless, USA
10:30am - 12:30pm

10:30-10:50  A Novel Regular Format for X.509 Digital Certificates
Alessandro Barenghi, Nicholas Mainardi and Gerardo Pelosi

Hubert D’Cruze, Ping Wang, RaedSbeit and Andrew Ray

11:10-11:30  Integrated Methodology for Information Security Risk Assessment
Ping Wang and MelvaRatchford

11:30-11:50  Techniques for detecting and preventing Denial of Service Attack (A Systematic Review Approach)
Hossein Zare

11:50-12:10  OPEN SLOT

12:30-1:30  Lunch (on your own)

SESSION TB3: Cybersecurity III

CHAIR: Dr. Anteneh Girma, Howard University, USA
Co-CHAIR: Dr. Ping Wang, Robert Morris University, USA

1:30pm - 3:30pm

1:30- 1:50  Evaluation of Cybersecurity Threats on Smart Metering System
Samuel Tweneboah-Koduah, Anthony K. Tsetse, Julius Quashie Azasoo and Barbara Endicott-Popovsky

1:50-2:10  SCORES: Smart Cloud Optimal Resource Selection
Nawal Almuzaini, Isaac Sayid, YaqoobSayid, Iman Ismail and Fahad Alsolami

2:10-2:30  Towards the Memory Forensics of MS Word Documents
Ziad Al-Sharif, Hasan Bagci, ToqaAbuzaitoun and AseelAsad

2:30-2:50  Two are Better than One: Software Optimizations for AES-GCM Over Short Messages
Shay Gueron and RegevShemy

2:50-3:10  BYOD: Security Risks and Mitigations
Melva Ratchford, Ping Wang and RaedSbeit

3:10-3:30  OPEN SLOT

3:30-4:00  Coffee Break
SESSION TB4: Cybersecurity IV

CHAIR: Dr. Anteneh Girma, Howard University, USA
Co-CHAIR: Dr. Ping Wang, Robert Morris University, USA

4:00pm - 5:20pm

4:00-4:20  A Novel Information Privacy Model: A Layered Approach
          Aftab Ahmad and raviMukkamala

4:20-4:40  Towards the Security of Big Data: Building a Scalable Hash Scheme
          for Big Graph
          Yu Lu, Fei Hu and Xin Li

4:40-5:00  On Information Privacy Metrics
          Aftab Ahmad and Ravi Mukkamala

5:00-5:20  An Integrated Framework for Evaluating the Security Solutions to IP-
          based IoT Applications
          Gayathri Natesan, Jigang Liu, and YanjunZuo

5:20-5:40  OPEN SLOT

6:00-7:00  ITNG Committee Meeting (By Invitation Only)

7:30-8:00  Award Ceremony (Florentine E)

8:00-9:30  Conference Dinner Reception (Tuscany)

SESSION TC1 – Posters (Hallway)

9:00am -12:30pm  (Location: Hallway)

Removal of Impulsive Noise from Long Term Evolution Handset
Lina Pawar, Dilip Khairnar and Akhil Kulkarni

SESSION TC2 – POSTERS (Hallway)

1:30pm - 4:30pm  (Location: Hallway)

Applying Collective Intelligence in the Evolution of a Project Architecture Using Agile
Methods
Ciro Matrigrani, Talita Santos, Lineu Mailaret, Adilson Cunha and Luiz Dias

Development of Human Faces Retrieval in a Big Photo Database with Agile Methodologies: A
Case Study
An Agile Developed Interdisciplinary Approach for Safety-Critical Embedded System
Gildarcio Sousa Goncalves, Rafael Augusto Lopes Shigemura, Paulo Diego Barbosa da Silva, Rodrigo Monteiro de Barros Santana, Eron Silva, AlheriDakwat, Fernando Jose Miguel, Luiz Alberto Vieira Dias, Paulo Marcelo Tasinaffo and Adilson Marques da Cunha

April 12, 2017 - Wednesday

7:00am-8:30am: REGISTRATION (TBA)
7:00am - 8:30am: BREAKFAST(TBA)

8:30a-10:00: Tutorial: H2O Deep Learning
Prof. Yenumula Reddy
(Florentine E)

10:00–10:30: Coffee Break

SESSION WA1: Agile Software Testing and Development I
CHAIR: Dr. L. A. Vieira Dias, ITA, Brazil
Co-CHAIR: TBA

10:30am - 12:30am

10:30-10:50 Using Big Data, Internet of Things, and Agile for Crises Management

10:50-11:10 An Agile and Collaborative Model-Driven Development Framework for Web Applications
Breno Lisi Romano and Adilson Marques da Cunha

11:10-11:30 Generating Control Flow Graphs from NATURAL
Strauss Cunha Carvalho, Rene Esteves, Leonardo Schmitt and Luiz Alberto Vieira Dias

11:30-11:50 Requirements Prioritization in Agile: Use of Planning Poker for Maximizing Return On Investment
Vaibhav Sachdeva
**SESSION WA2: Agile Software Testing and Development II**

**CHAIR:** Dr. L. A. Vieira Dias, ITA, Brazil  
Co-CHAIR: TBA

1:30pm - 3:30pm

1:30-1:50  Enhancing Range Analysis in Software Design Models by Detecting Floating-Point Absorption and Cancellation  
**Marcus Kimura Lopes, Ricardo Bedin França, Luiz Alberto Vieira Dias and Adilson Marques Cunha**

1:50-2:10  An Integrated Academic System Prototype using Accidents and Crises Management as PBL  
**Lais Siles, Mayara Moraes, Romulo Rodrigues, Lineu Lima, João Siles, Rene Maria, Johnny Marques, Luiz Dias and Adilson Cunha**

2:10-2:30  Agile Testing Quadrants on Problem-Based Learning involving Agile Development, Big Data, and Cloud Computing  
**James Martins, Adriano Pinto, Gildarcio Goncalves, Rafael Shigemura, Adilson Cunha and Luiz Dias**

2:30-2:50  Integrating NoSQL, Relational Database, and the Hadoop Ecosystem in an Interdisciplinary Project involving Big Data and Credit Card Transactions  

2:50-3:10  Requirements Prioritization Using Hierarchical Dependencies  
**Luay Alawneh**

**B SESSIONS (Florentine F)**

**SESSION WB1: Education, Applications and Systems**

**CHAIR:** Dr. Samir Hamade, Kuwait University, Kuwait  
Co-CHAIR: TBA
10:30am - 12:30pm

10:30-10:50  Recruitment Drive Application  
*Raghavendar Cheruku, Doina Bein, Wolfgang Bein and Vlad Popa*

10:50-11:10  Evaluating Assignments using Grading App  
*Nikyle Nguyen and Doina Bein*

11:10-11:30  A Heuristic for State Power down Systems with Few States  
*James Andro-Vasko, Wolfgang Bein, Hiro Ito and Govind Pathak*

11:30-11:50  Internet Addiction in Kuwait and Efforts to Control it  
*Samir N. Hamade*

11:50-12:30  Multi-Camera Occlusion and Sudden-Appearance-Change Detection Using Hidden Markovian Chains  
*Xudong Ma*

12:30-1:30  Lunch (on your own)

**SESSION WB2: Signal Processing, UAVs**

CHAIR: TBA  
Co-CHAIR:*Dr. Marc Karam, Tuskegee University, USA*

1:30pm - 3:30pm

1:30-1:50  Development of a Portable, Low-Cost System for Ground Control Station for Drones  
*Douglas Soares, Alexandre Ramos and Roberto Junior*

1:50-2:10  Collision Avoidance Based on Reynolds Rules: A Case Study using Quadrotors  
*Rafael Braga, Roberto Silva, Alexandre Ramos and Felix Mora-Camino*

2:10-2:30  Evaluation of Audio Denoising Algorithms for Application of Unmanned Aerial Vehicles in Wildlife Monitoring  
*Yun Long Lan, Ahmed Sony Kamal, Carlo Lopez-Tello, Ali Pour Yazdanpanah, Emma Regentova and Venkatesan Muthukumar*

2:30-2:50  PID Speed Control of a DC Motor Using Particle Swarm Optimization  
*Marc Karam and Benedicta Obeng*
2:50-3:10  Use of Intelligent Water Drops (IWD) for Intelligent Autonomous Force Deployment  
Jeremy Straub and Eunjin Kim

3:10-3:30  Match-the-Sound CAPTCHA  
Noshina Tariq and Farrukh Aslam Khan

Conference Conclusion

END OF SCHEDULE