



**The 16th International Conference on
Information Technology:
New Generations**

**April 1-3, 2019
The TuscanyHotel, Las Vegas, Nevada, USA**

**ITNG 2019
ADVANCED PROGRAM**

March 31, 2019 - SUNDAY

5:00pm - 8:00pm: REGISTRATION (Convention Center- TBA)
6:00pm - 8:00pm: PRE-CONFERENCE RECEPTION (Florentine E)

April 1, 2019 - MONDAY

7:00am - 5:00pm: REGISTRATION (Convention Center- TBA)
7:00am - 8:30am: BREAKFAST (TBA)
8:00am - 8:10am: Opening Remarks by **Dr. Shahram Latifi**
Conference Chair, University of Nevada Las Vegas
(Location: Florentine E)

8:10am - 9:00am: Keynote by **Dr. Tanveer Syeda-Mahmood, IBM Fellow**
IBM Almaden Research Center
(Location: Florentine E)

9:00 am - 9:10 am: Break

PARALLEL SESSIONS:

ASESSIONS (Florentine E)

SESSION MA1: Cybersecurity I

CHAIR: **Dr. Hossein Zare, University of Maryland University College, USA**
Co-CHAIR:

9:10am - 10:10am

9:10-9:30 Fast modular squaring with AVX512IFMA
Nir Drucker and Shay Gueron

9:30-9:50 Password Security in Organizations: User Attitudes and Behaviors
regarding Password Strength
Tahani Almeahmadi and Fahad Alsolami

9:50-10:10 Detecting and Preventing File Alterations In The Cloud Using A Distributed Collaborative Approach
Jose Antonio Cardenas-Haro and Maurice Dawson

10:10-10:30 Coffee Break

SESSION MA2: Cybersecurity II

CHAIR: **Dr. Hossein Zare, University of Maryland University College, USA**

Co-CHAIR:

10:30am - 12:30pm

10:30-10:55 Comparing Black Ridge Transport Access Control (TAC), Brain Waves Authentication Technology & Secure Sockets Layer Visibility Appliance (SSL-VA)
Hossein Zare, Mohammad J. Zare, MojganAzadi and Peter Olsen

10:55-11:20 Comparing Cellphones, Global Positioning Systems (GPSs), Email and Network and Cyber-Forensics
Hossein Zare, Peter Olsen, Mohammad J. Zare and MojganAzadi

11:20-11:45 Making AES Great Again: The Forthcoming Vectorized AES Instruction
Shay Gueron and Nir Drucker

11:45-12:10 OntoCexp: A Proposal for Conceptual Formalization of Criminal Expressions
Ricardo Resende de Mendonça, Ferruccio de Franco Rosa, Antonio Theophilo, Rodrigo Bonacin and Mario Jino

12:10-12:30 An Instrument for Measuring Privacy in IoT Environments
Bruno Lopes, Diego Pontes and Sergio Zorzo

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

SESSION MA3: Cybersecurity III

CHAIR: **Dr. Hossein Zare, University of Maryland University College, USA**

Co-CHAIR: **Dr. Ping Wang, Robert Morris University, USA**

1:30pm - 3:30pm

1:30-1:50 Forensic Analysis of LinkedIn's Desktop Application on Windows 10 OS
Saman Bashir, Haider Abbas, NarmeenShafqat and Waseem Iqbal

1:50-2:10 Analysis of Windows OS's Fragmented File Carving Techniques: A Systematic Literature Review
Noor Ul Ain, Waseem Iqbal and NarmeenShafqat

2:10-2:30 Cybersecurity Certification: Certified Information Systems Security

Professional (CISSP)
Ping Wang and Hubert D'Cruze

2:30-2:50 Discovering Student Interest and Talent in Graduate Cybersecurity Education
Sherri Aufman and Ping Wang

2:50-3:10 The Mirai Botnet & the Importance of IoT Device Security
Alexander Eustis

3:10-3:30 Analyzing D-Wave Quantum Macro Assembler Security
HeshamAlsaadi, MontherAldwairi and Eva-Marie Muller-Stuler

3:30-4:00 Coffee Break

SESSION MA4: Cybersecurity IV

CHAIR: **Dr. Yenumula Reddy, Grambling State University, USA**

Co-CHAIR: **Dr. Hossein Zare, University of Maryland University College, USA**

4:00pm - 6:00pm

4:00-4:20 The Study of the Effectiveness of the Secure Software Development Life-Cycle Models in IT Project Management
SanioraDuclervil and Jing-ChiouLiou

4:20-4:40 Access Controls in Internet of Things to Avoid Malicious Activity
Yenumula Reddy

4:40-5:00 SmartLock: Access Control Through Smart Contracts and Smart Property
Mauricio Xavier Zapparoli, Adler Diniz de Souza and Andre Henrique de Oliveira Monteiro

5:00-5:20 Biometric System: Security Challenges and Solutions
Bayan ALzahrani and Fahad Alsolami

5:20-5:40 Secure message Transfer through App.
Gary White

5:40-6:00 OPEN SLOT

B SESSIONS (Florentine F)

SESSION MB1: OPEN SLOT

CHAIR: **Dr.**

Co-CHAIR: **Dr.**

9:10am - 10:10 am

10:10-10:30 Coffee Break

SESSION MB2: Computer Vision, Image Processing/Analysis, Tracking

CHAIR: **Dr. Ramos Alexandre, Universidade Federal de Itajubá, Brazil**

Co-CHAIR:

10:30am - 12:30pm

10:30-11:00 CarVideos: A Novel Dataset for Fine-Grained Car Classification in Videos
Yousef Alsaafi, Daniel Lemmond, Jonathan Ventura and Terrance Boulton

11:00-11:30 A Technique about Neural Network and Image Processing for Passageway Detection
Pedro Lucas de Brito, Luiz Gustavo Miranda Pinto and Alexandre Carlos Brandão Ramos

11:30-12:00 A SSD - OCR Approach for Real-Time Active Car Tracking on Quadrotors
Luiz Gustavo Miranda Pinto, Pedro Lucas de Brito and Alexandre Carlos Brandão Ramos

12:00-12:30 Learning through Simulations: The Ship Simulator for Learning the Rules of the Road
Sonu Jose, Siming Liu and Sergiu Dascalu

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

SESSION MB3: GPU Computing, Algorithms I

CHAIR: **Dr. Luway Alawneh, Jordan University of Sc&Tech, Jordan**

Co-CHAIR: **Dr. Fred Harris, University of Nevada, Reno, USA**

1:30pm - 3:30pm

1:30-2:00 Data Imputation with an Improved Robust and Sparse Fuzzy K-Means Algorithm
Connor Scully-Allison, Rui Wu, Sergiu Dascalu, Lee Barford and Frederick Harris

2:00-2:30 Randomized Benchmarking of Quantum Gates on a GPU
Syed Zawad, Feng Yan, Rui Wu, Lee Barford and Frederick Harris

2:30-3:00 A Memory Layout for Dynamically Routed Capsule Layers
Daniel Lopez, Rui Wu, Lee Barford and Frederick Harris

3:00-3:30 Image Processing Using Multiple GPUs on Webcam Image Streams
Hannah Munoz, Sergiu Dascalu, Rui Wu, Lee Barford and Frederick Harris

3:30-4:00 Coffee Break

SESSION MB4: GPU Computing, Algorithms II

CHAIR: **Dr. Fred Harris, University of Nevada, Reno, USA**

Co-CHAIR: **Dr. Luway Alawneh, Jordan University of Sc&Tech, Jordan**

4:00pm - 6:00 pm

4:00-4:20 A Generator and Corrector of Parametric Questions in Hard Copy
Francisco Zampirolli, Fernando Teubl and Valério Batista

4:20-4:40 A graphical processing unit accelerated NORmal-To-Anything algorithm
for high dimensional multivariate simulation
Xiang Li, Grant Schissler, Rui Wu, Lee Barford and Frederick Harris

4:40-5:00 A GPU-based Smith-Waterman Approach for Genome Editing
*LuayAlawneh, Mohammad Shehab, Mahmoud Al-Ayyoub and
YaserJararweh*

5:00-5:20 Image Classification using TensorFlow with Linux
Kiran Seetala

5:20-5:40 Algorithms for Tower Placement on Terrain
LaxmiGewali and BinayDahal

5:40-6:00 OPEN SLOT

SESSION MC1 – POSTERS (Hallway)

CHAIR: **Dr. Doina Bein, California State University, USA**

Co-CHAIR:

10:10am - 12:30pm (Location: Florentine G)

Using the Naive Bayes Classifier to Improve the Project's Cost Predictability in the
Earned Value Management — An Empirical Study
Ana Carolina Silva Fernandes and Adler Diniz de Souza

A Proposal To Improve The Earned Value Management Technique Using Quality Data
in Software Projects
Christopher Lima

Market Prediction in Cryptocurrency: A Systematic Literature Mapping
*André Henrique de Oliveira Monteiro, Adler Diniz de Souza, Bruno Guazzelli Batista
and Mauricio Zapparoli*

Implementation of an Acknowledgment and Signature Based Intrusion Detection
System for MANETS
PrasanthiSreekumari

Using Agile Testing in an Academic Health System Case Study
Daniela América da Silva, Samara Cardoso dos Santos, Rodrigo Monteiro de Barros Santana, Filipe Santiago Queiroz, Gildarcio Sousa Goncalves, Victor Ulisses Pugliese, Luiz Alberto Vieira Dias, Adilson Marques da Cunha, Johnny Marques, Paulo Marcelo Tasinaffo and Alexandre Nascimento

April 2, 2019- Tuesday

7:00am - 5:00pm: REGISTRATION (TBA)

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

8:00am - 9:00am: **Keynote by Dr. Huan Liu, IEEE Fellow
Arizona State University**
(Location: Florentine E)

PARALLEL SESSIONS:

A SESSIONS (Florentine E)

SESSION TA1: OPEN

CHAIR: **Dr.**

Co-CHAIR: **Dr.**

9:10am - 10:10am

10:00-10:30 Coffee Break

SESSION TA2: Data Mining, Big Data Analytics I

CHAIR: **Dr. Doina Bein, California State University, USA**

Co-CHAIR:

10:30am - 12:30pm

10:30-10:50 Survey on Algorithmic Approaches on Electric Vehicle Adaptation in a Smart Grid: An Introduction to Battery Consolidation System
Dara Nyknahad, Wolfgang Bein and RojinAslani

10:50-11:10 Handling imbalanced time series through Ensemble of Classifiers: a Multi-class Approach for Solar Flare forecasting
SérgioLuisirDíscola Junior, José Roberto Cecatto, Marcela Xavier Ribeiro and Márcio Merino Fernandes

11:10-11:30 Fault Diagnostics for Multivariate Non-normal Processes
DenwickMunjeri, Mali Abdollahian and NadeeraGunaratne

11:30-11:50 Online Competitive Control of Power-Down Systems with Adaptation
James Andro-Vasko and Wolfgang Bein

11:50-12:10 Data Integrity Model for Environmental Sensing
Daniel Siegel, Leanne Keeley, PoorvaShelke, AndreeaCotoranu and Matt Ganis

12:10-12.30 OPEN SLOT

12.30-1.30 Lunch (on your own)

SESSION TA3: Data Mining, Big Data Analytics I

CHAIR: **Dr. Yenumula Reddy, Grambling State University, USA**

Co-CHAIR:

1:30pm - 3:30pm

1:30-1:55 The Importance of Bell States to Quantum Computing
George Samuels II, Lewis Westfall, Debarshi Dutta, Paul Mahon and Sheetal Vasant Nikam

1:55-2:20 Analyzing the Similarity-based Clusterability of the Vertices in a Complex Network
Md Rahman and Natarajan Meghanathan

2:20-2:45 RUM++: A log mining approach to classify users based on data profile
Helton Franco Sousa, Leandro GuarinoVasconcelos and Laercio Augusto Baldochi

2:45-3:10 Smart Food Security System Using IoT and Big Data Analytics
SaziaParvin, SitalakshmiVenkatraman, Tony de Souza-Daw, Kiran Fahd, Joanna Jackson, Samuel Kaspi, Nicola Cooley, KashifSaleem and AmjadGawanmeh

3:10-3:30 OPEN SLOT

3:30-4:00 Coffee Break

SESSION TA4: Next Generation Infrastructures: Health, Automotive, Mobility

CHAIR: **Dr. Sung-Hoon Park, Chungbuk National University, S. Korea**

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

4:00pm - 5:00pm

4:00-4:20 Use of Eigenvector Centrality to Rank the Vertices in a Disease-Disease Network
Md Rahman, Mahzabin Akhter and Natarajan Meghanathan

4:20-4:40 Effects of TCP Transfer Buffers and Congestion Avoidance Algorithms on

the End-to-End Throughput of TCP-over-TCP Tunnels
Russell Harkanson, Yoohwan Kim, Ju-Yeon Jo and Khanh Pham

4:40-5:00 About Relationship between Intersection Traffic Control and Mutual Exclusion Algorithm
Sung Hoon Park and Yong Cheol Seo

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

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

B SESSIONS (Florentine F)

SESSION TB1: Software Engineering

CHAIR: **Dr. Glauco Carneiro, Universidade Salvador (UNIFACS), Brazil**

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

9:10am - 10:10am

9:10- 9:40 Using Symbolic Dates of the Linear Logic to Verify Performance Requirements in SOA Models
Kênia Oliveira and Stéphane Julia

9:40-10:10 Lessons Learned from the Migration of Legacy Software Systems to Microservice based Architecture
Hugo Silva, Glauco Carneiro and Miguel Monteiro

10:10-10:30 OPEN SLOT

10:10-10:30 Coffee Break

SESSION TB2: Software Testing

CHAIR: **Dr. Glauco Carneiro, Universidade Salvador (UNIFACS), Brazil**

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

10:30am - 12:30pm

10:30-10:55 A Systematic Review Based on Earned Value Management and Quality
Christopher Lima

10:55-11:20 Urgent and Emergency Care: An Academic Application System Case Study
Daniela America da Silva, Fabio Kfour, Samara Cardoso dos Santos, Luiz Coura, Wilson Cristoni, Gildarcio Sousa Goncalves, Leonardo Guimarães

dos Santos, José Crisóstomo Ozório Júnior, Jean Carlos Lourenço Costa, Breslei Max Reis da Fonseca, Alexandre Nascimento, Johnny Marques, Luiz Alberto Vieira Dias, Adilson Marques da Cunha, Paulo Marcelo Tasinaffo, Beatriz Perondi, Anna Miethke-Morais, Amanda Cardoso Montal, Solange Regina Giglioli Fusco and Thiago Sakamoto

- 11:20-11:45 Decentralizing Rehabilitation: Using Blockchain to Store Exoskeletons Movement's
Daniela América da Silva, Claudio Lelis, Luiz Coura, Samara Cardoso dos Santos, Leticia Yanaguya, José Crisóstomo Ozório Júnior, Isaias Silva, Gildarcio Sousa Goncalves, Breslei Max Reis da Fonseca, Alexandre Nascimento, Johnny Marques, Luiz Alberto Vieira Dias, Adilson Marques da Cunha, Paulo Marcelo Tasinaffo, Thais Tavares Terranova, Marcel Simis and Linamara Rizzo Batistela
- 11:45-12:10 Analysis and Comparison of Frameworks Supporting Formal System Development based on Models of Computation
Augusto Y. Horita, Ricardo Bonna and Denis S. Loubach
- 12:10-12:30 Strategies to Migrate to Microservices based Architecture: Lessons Learned from the Literature
Heleno Filho and Glauco Carneiro

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

SESSION TB3: Potpourri I

CHAIR: **Dr. Duncan Peacock, Qatar University, Qatar**

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

1:30pm - 3:30pm

- 1:30- 1:50 Effectiveness Of Social Media Sentiment Analysis Tools With The Support Of Emoticon/Emoji
Duncan Peacock and Habib Ullah Khan
- 1:50-2:10 Deep CNN-LSTM with Word Embeddings for News Headline Sarcasm Detection
Paul Mandal and Rakeshkumar Mahto
- 2:10-2:30 Game based learning using Unreal Engine
Ruth Obidah and Doina Bein
- 2:30-2:50 Using the Google Web 1T 5-Gram Corpus for OCR Error Correction
Jorge Ramon Fonseca Cacho, Kazem Taghva and Daniel Alvarez
- 2:50-3:10 MeasureOP- Sentiment Analysis of Movies Text Data
Prabhdeep Kaur Bhullar, Chary Vielma, Doina Bein and Vlad Popa
- 3:10-3:30 OPEN SLOT

3:30-4:00 Coffee Break

SESSION TB4: Biostatistical and Wavelet Analysis

CHAIR: **Dr. Teruya Minamoto, Saga University, Japan**

Co-CHAIR: **Dr. Atsushi Kawaguchi, Saga University, Japan**

4:00pm - 6:00pm

4:00-4:20 The $SMP(x \text{ or } y; PX_{min}, X_{max}, ML, p_1, p_2, Max)$ a probabilistic distribution, or a probability density function of a random variable X
TermanFrometa-Castillo

4:20-4:40 Application of the multi-dimensional hierarchical mixture model to cross-disorder genome-wide association studies
Takahiro Otani, Jo Nishino, Ryo Emoto and Shigeyuki Matsui

4:40-5:00 A Model-Based Framework for Voxel and Region Level Inferences in Neuroimaging Disease-Association Studies
Ryo Emoto, Atsushi Kawaguchi, Takahiro Otani and Shigeyuki Matsui

5:00-5:20 Automatic detection of early gastric cancer from endoscopic images using fast discrete curvelet transform and wavelet transform modulus maxima
Yuya Tanaka, KoheiWatarai and Teruya Minamoto

5:20-5:40 Gait feature extraction using dyadic wavelet transform and structural similarity for gait recognition
Hajime Omura and Teruya Minamoto

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

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

SESSION TC1 – Posters (Hallway)

10:30am -12:30pm (Location: Hallway)

Leadership Ethics Conduct: A Viable View on Project Management in Defense and Aerospace Industry
Joseph Ojo

Increased autonomy for UAV using solar panels and take advantage of updrafts through algorithm
Leandro Diniz de Jesus, Luciano V. Ribeiro, Alexandre C. B. Ramos, Felix Mora-Camino and José Renato Gracia Braga

VazaZika: A Software Platform for Surveillance and Control of Mosquito-Borne Diseases
Eduardo Fernandes, Anderson Uchôa, Leonardo Sousa, Anderson Oliveira, Rafael de Mello, Luiz Paulo Barroca, Diogo Carvalho, Alessandro Garcia, Balduino Fonseca and Leopoldo Teixeira

The Development of a Software System for Solving the Problem of Data Classification and Data Processing
Askar Boranbayev, Seilkhan Boranbayev, Askar Nurbekov and Roman Taberkhan

Comparison of Transnational Education Delivery Models
Tony Souza-Daw

April 3, 2019 - Wednesday

8:00am- 9:00am: REGISTRATION (TBA)

8:00am - 9:00am: BREAKFAST(TBA)

9:00-10:00: **Tutorial: Deep Learning with TensorFlow (Object Detection)**
Prof. Yenumula Reddy
(Florentine E)

10:00–10:30: Coffee Break

10:30-11:30 **ITNG Committee Meeting (Rotunda, By Invitation Only)**

SESSION WA1: Potpourri II

CHAIR: **Dr. Haidar Harmanani, Lebanese American University, USA**
Co-CHAIR:

10:30 am- 12:30 pm

10:30-10:50 Humanoid Soccer Player and Educational Robotic: Development an Architecture to Connect the Dynamixel AX-12A Servo Motor from ROBOTIS to the Raspberry Pi 3B
Gilmar CorreiaJeronimo, Paulo Eduardo Bertolucci Consoni, Rodrigo Luis FialhoGonçalves, Wagner Tanaka Botelho and Maria das Graças Bruno Marietto

- 10:50-11:10 A Genetic Algorithm for the Maximum Clique Problem
HaidarHarmanani
- 11:10-11:30 Switchable Single/Dual Edge Registers for Pipeline Architecture
Suyash Singh and RakeshkumarMahto
- 11:30-11:50 System Architecture for an in-House Developed Admission System
Intended for Higher Education
Askar Boranbayev, Ruslan Baidyussenov and Mikhail Mazhitov
- 11:50-12:10 A New Efficient Power Management Interface for Hybrid
Electromagnetic-Piezoelectric Energy Harvesting System
*Sara Zolfaghar Tehrani, Hossein Ranjbar, Peter Vial and Prashan
Premaratne*
- 12:10-12:30 OPEN SLOT

Conference Conclusion

End of Schedule.....