The 19th International Conference on Information Technology: New Generations
April 11-12, 2022
Virtual Conference
(All times are Pacific Standard Time: GMT-7)

ITNG 2022 PROGRAM

April 12, 2022 - MONDAY

8:00 - 8:10: Opening Remarks by Dr. Shahram Latifi
Conference Chair, University of Nevada Las Vegas

8:10 - 9:00: Keynote by Dr. Piyush Mehrotra
Chief, NASA Supercomputing Center
“High Performance Computing in Support of NASA’s Mission”

9:00 - 9:15: Q&A by Audience

Monday SESSIONS

SESSION M1: Software Engineering

CHAIR: Dr. Kashif Saleem, King Saud University, Saudi Arabia
Co-CHAIR:

09:15 - 11:15 (45,47,6,9,52,31)

09:15 - 09:35 A Tool for Syntactic Dependency Analysis on the Web Stack
Manit Singh Kalsi, Kevin Gary, Vasu Gupta and Suddhasvatta Das

09:35 - 09:55 Using Software for Computational Fluid Dynamics and Molecular Dynamics
Jeena Shetti, Doina Bein, Marian Sorin Nistor and Stefan Pickl

09:55-10:15 A Model-Based Approach for Quality Assessment of Insulin Infusion Pump Systems
Tássio Fernandes Costa, Álvaro Sobrinho, Lenardo Chaves E Silva, Leandro Dias da Silva and Angelo Perkusich
Narrowing the gap between Software Engineering teaching and corporate environment

API-First Design: A Survey of the State of Academia and Industry
Nicole Beaulieu, Sergiu Dascalu and Emily Hand

Virtual Reality Multiplayer Interaction and Medical Patient Handoff Training and Assessment
Christopher Lewis, Daniel Enriquez, Lucas Calabrese, Yifan Zhang, Steven Anbro, Ramona Houmanfar, Laura Croswell, Michelle Rebaleati, Luka Starmer and Fredrick Harris

SESSION M2: Data Science and Engineering
CHAIR: Dr. Kashif Saleem, King Saud University, Saudi Arabia
Co-CHAIR:

11:15 - 13:15  (50,53,12,33,19,3)

An Analysis of Quality Dimensions of Open Government Data related to Undergraduate Public Funding in Brazil
Marcelo West and Glauco Carneiro

A Survey of Real-time ETL Process Applied to Data Warehousing Environments
Flávio Vilela and Ricardo Ciferri

Participatory Modeling: A New Approach to Model Graph-Oriented Databases
Luis Augusto Neumann, Enzo Seraphim, Otávio A. O. Carpinteiro and Edmilson Marmo Moreira

Graph-based hierarchical record clustering for unsupervised entity resolution
Islam Akef Ebeid, John Talburt and Md Abdus Salam Siddique

Semantic-MDBScan: an Approach to Assign a Semantic Interpretation to Behavior Changes Detected in Data Stream Scenarios
Eldane Vieira, Rita Maria Silva Julia and Elaine Ribeiro Faria

A Study on Usability Assessment of Educational Systems
Heber Miranda Floriano, Mario Jino and Ferrucio de Franco Rosa
SESSION M3: Machine Learning

CHAIR: Dr. Poonam Dharam, Saginaw Valley State University, USA
Co-CHAIR:

14:00 - 16:00 (39,55,56,57,59,21)

14:00-14:20  Comparison between Machine Learning and Deep Learning Methods for Classification of Cancer Dataset
               *Fulya Kocaman, Doina Bein, Marian Sorin Nistor and Stefan Pickl*

14:20-14:40  Stock Backtesting Engine Using Pairs Trading
               *Rahul Chauhan, Doina Bein, Wolfgang Bein, Marian Sorin Nistor and Stefan Pickl*

14:40-15:00  Classifying Sincerity Using Machine Learning
               *Rachana Chittari, Doina Bein, Abhishek Verma, Marian Sorin Nistor and Stefan Pickl*

15:00-15:20  Recommendation System Using MixPMF
               *Rohit Gund, Doina Bein, Wolfgang Bein and James Andro-Vasko*

15:20-15:40  Abstractive Text Summarization using Machine Learning
               *Aditya Dingare, Doina Bein, Wolfgang Bein and Abhishek Verma*

15:40-16:00  Intelligent System for Detection and Identification of Ground Anomalies for Rescue
               *Antonio Josivaldo Dantas Filho, Leandro Diniz, Mauricio Almeida, Ella Olsson, Peter Funk and Alexandre Carlos Brandao Ramos*

SESSION M4: Potpourri

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

16:00- 17:00 (25,13,14)

16:00 - 16:20  Boundary Approximation and External Visibility
               *Laxmi Gewali and Samridhi Jha*
Yuta Yoshizawa and Katsumi Wasaki

16:40-17:00  Space Abstraction and Quasi-Home States of Petri Nets Using the Submarking Method
Tomoki Miura and Katsumi Wasaki

April 13, 2022- Tuesday

8:10 - 9:00:  Keynote by Dr. Danna Gurari, Assistant Professor, University of Colorado Boulder
“Describing Images with AI: Challenges and Opportunities for a Real-World Application”

9:00 - 9:15:  Q&A by Audience

Tuesday Sessions

SESSION T1: Cybersecurity and Blockchain Technology

CHAIR: Dr. Grzegorz Chmaj, University of Nevada, Las Vegas, USA
Co-CHAIR: Doina Bein, California State University, USA

9:15 – 11:15  (23, 1,7,37,29,34)

09:15 - 09:35  Novel Corporate Structure in World-Class Business, Merging Digital-Physical Environment in Hyper Famili Incorporation
Mohammad Khakzadeh, Seyed Milad Seyed Javadin and Fatemeh Saghafi

09:35 - 09:55  Performance Evaluation of Online Email and Website Safeguarding Tools Against Phishing Attacks; a comparative assessment
Ahmed Shatnawi, Rama Al-Share, Fatima Abu-Akleek and Eyad Taqieddin

09:55-10:15  Blockchain based Trust for the Internet of Things: A Review
Dina Shehada, Maryam Amour, Suadad Muammar and Amjad Gawanmeh

Azemour Saadia, Meryeme Ayache, Hanane El Bakkali and Amjad Gawanmeh

10:35-10:55  Software optimization of RIJNDAEL for modern x86-64 platforms
Shay Gueron and Nir Drucker
Cybersecurity Ethics Education: A Curriculum Proposal
Ping Wang

SESSION T2: Blockchain Technology, Health Informatics

CHAIR: Dr. Khandaker Abir Rahman, Saginaw Valley State University, USA
Co-CHAIR:

11:15 - 13:15 (28,18,58, 8,24,38)

11:15-11:35 Use of Blockchain Technology in the Electronic Health Record Management: An Analysis of the State of the Art and Practice
Henrique Couto, André Araújo, Rendrikson Soares and Gabriel Rodrigues

11:35-11:55 Gesturing with Smart Wearables: An Alternate Way to User Authentication
Khandaker Abir Rahman, Avishek Mukherjee and Kristina Mullen

11:55-12:15 Single Sign-on (SSO) Fingerprint Authentication Using Blockchain
Abhijeet Thakurdesai, Doina Bein, Wolfgang Bein, Marian Sorin Nistor and Stefan Pickl

12:15-12:35 Visualizing 3D Human Organs for Medical Training
Joshua Chen, Paul Cuaresma, Jennifer Chen, Fangyang Shen and Yun Tian

12:35-12:55 An Information Management System for the COVID-19 Pandemic Using Blockchain

12:55-13:15 Machine Learning for Classification of Cancer Dataset for Gene Mutation Based Treatment
Jai Santosh Mandava, Fulya Kocaman, Doina Bein, Abhishek Verma, Marian Sorin Nistor and Stefan Pickl

13:15-14:00 Break

SESSION T3: Human-Computer Interaction

CHAIR: Dr. Sergiu Dascalu, University of Nevada, Reno, USA
Co-CHAIR: Dr. Frederick C. Harris, Jr., University of Nevada, Reno, USA
14:00 - 16:00  (17,32,35,40,44,36)

14:00-14:20  Developing an Affective Audio Toolbox for Audio Post-Production
            Harrison Ridley, Stuart Cunningham and Rich Picking

14:25-14:40  An Application for Interaction Comparison Between Virtual Hands and
            Virtual Reality Controllers
            Daniel Enriquez, Christopher Lewis, Sergiu Dascalu and Frederick Harris

14:40-15:00  LDAT: A LIDAR Data Analysis and Visualization Tool
            Andrew Muñoz, Chase Carthen, Vinh Le, Sergiu Dascalu and Frederick Harris

15:00-15:20  Social Media User Study
            Autumn Cuellar, Yifan Zhang, Sergiu Dascalu and Fredrick Harris Jr.

15:20-15:40  Software Interfaces for New Vehicle Operating Cost Models Used in
            Economic Analysis of Transportation Investments: A User Study
            Arjun Gopinath, Hudson Lynam, Rami Chkaiban, Elie Hajj and Sergiu Dascalu

15:40-16:00  Microservice-Based System for Environmental Science Software
            Applications
            Vinh Le, Connor Scully-Allison, Mitchell Martinez, Sergiu Dascalu and Frederick Harris

**SESSION T4: Networks, Health Informatics**

CHAIR: Dr. Poonam Dharam, Saginaw Valley State University, USA

16:00 - 17:20  (54,20,51,15)

16:00-16:20  Semantic Interoperability in the Internet of Things: A Systematic
            Literature Review
            Pedro Lopes de Souza, Wanderley Lopes de Souza and Ricardo Rodrigues Ciferri

16:20-16:40  IoT Machine Learning based parking management system with
            anticipated prediction of available parking spots
            Grzegorz Chmaj and Michael Lazeroff

16:40- 17:00  Channel State Information Spectrum Gap Filling using Shallow Neural
            Networks
            Avishek Mukherjee, Beata Hejno and Manish Osti

17:00- 17:20  Detection Method for Early-stage Colorectal Cancer Using Dual-tree
            Complex Wavelet Packet Transform
            Daigo Takano and Teruya Minamoto

**Session TA5: Conference Concluding Remarks (Dr. Shahram Latifi)**
16:20-17:00 (2021 Awardees and Recognitions, ITNG 2022)

End of Schedule.................................................................