



## **ITNG 2023 PROGRAM**

### **April 24, 2023 - MONDAY**

- 8:00 - 8:10:     **Opening Remarks by Dr. Shahram Latifi**  
Conference Chair, University of Nevada Las Vegas
- 8:10 - 9:00:     **Invited Talk by Dr. Farjana Z. Eishita (Young Scholar)**  
Assistant Professor, Idaho State University  
    **“Serious Games in Mental Health : A Neoteric Approach to Ameliorate the  
    Aptitude of Psychotherapeutic Strategies ”**
- 9:00 - 9:15:     **Q&A by Audience**

### **Monday SESSIONS**

#### **SESSION M1: Machine Learning**

CHAIR: **Dr. Kashif, King Saud University, Saudi Arabia**

Co-CHAIR:

09:15 - 12:15 (4566 ,1223,2291,2685,7833,3266,8448,9361, ,9826)

09:15 - 09:35     Getting Local and Personal: Toward Building a Predictive Model for  
COVID in Three United States Cities  
**April Edwards**, Leigh Metcalf, William A. Casey, Shirshendu  
Chatterjee, Herralal Janwa and Ernest Battifarano

09:35 - 09:55     Truckfier - A multiclass vehicle detection and counting tool for real-  
world highway scenarios  
**Murilo Regio**, Gabriel Vaz, Roberto Rosa, Isabel Manssour, Rafael  
Bordini and Soraia Musse

09:55-10:15     A Deep Learning Approach for Sentiment and Emotional Analysis of  
Lebanese Arabizi Twitter Data  
**Haidar Harmanani** and Maria Raidy

- 10:15-10:35 A two-step approach to boost neural network generalizability in predicting defective software  
*Alexandre Nascimento, Vinicius Veloso de Melo, Marcio Basgalupp and Luis Alberto Vieira Dias*
- 10:35-10:55 A Principal Component Analysis-based Scoring Mechanism to Quantify Crime Hot Spots in a City  
*Yu Wu and Natarajan Meghanathan*
- 10:55-11:15 Tuning neural networks for superior accuracy on resource-constrained edge microcontrollers  
*Alexandre Nascimento, Vinicius Veloso de Melo and Márcio Basgalupp*
- 11:15-11:35 BigQuery Intersection Congestion Prediction  
*Haidar Harmanani*
- 11:35-11:55 Machine Learning – Fake Product Prediction System  
*Okey Igbonagwam*
- 11:55-12:15 Loop Closure Detection in Visual SLAM Based on Convolutional Neural Network  
*Fabiana Naomi Iegawa, Wagner Tanaka Botelho, Tamires dos Santos, Edson Pinheiro Pimentel and Flavio Shigeo Yamamoto*
- 12:15-12:30 **BREAK**

## **SESSION M2: Health Sciences**

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

Co-CHAIR:

- 12:30 - 14:30 (1935,2086,2904+9557+124+2826)
- 12:30-12:50 Predicting COVID-19 Occurrences from MDL-based Segmented Comorbidities and Logistic Regression  
*Ana Sousa, Valeria Cesario Times and André Araújo*
- 12:50-13:10 Internet of Things Applications for Cold Chain Vaccine Tracking: A Systematic Literature Review  
*Alex Fabiano Garcia and Wanderley Lopes de Souza*
- 13:10-13:30 GDPR and FAIR compliant decision support system design for triage and disease detection  
*Alper Karamanlioglu, Elif Tansu Sunar, Cihan Cetin, Gulsum Akca, Hakan Merdanoglu, Osman Tufan Dogan and Ferda Nur Alpaslan*

- 13:30-13:50 A Detection Method for Stained Asbestos Based on Dyadic Wavelet Packet Transform and a Locally Adaptive Method of Edge Extraction  
*Hikaru Tomita and Teruya Minamoto*
- 13:50-14:10 Analysis of News Article various countries on a specific event using Semantic Network Analysis  
*Hyun Park, Jinie Pak and Yanggon Kim*
- 14:10-14:30 An Approach to Assist Ophthalmologists in Glaucoma Detection Using Deep Learning  
*Tatiane Bistulfi, Marcelli Monteiro and Juliano Monte-Mor*
- 14:30-15:00 Break

### **SESSION M3: Data Sciences**

CHAIR: **Dr. Noha Hazzazi, Howard University, USA**

Co-CHAIR:

15:00 - 17:00 (3230,7808,9707,8664,714,4754,8402)

- 15:00-15:20 A Process to Support Heuristic Evaluation and Tree Testing from a UX Integrated Perspective  
*Freddy Paz, Fiorella Falconi Trauco, Joel Aguirre, Adrian Lecaros, Alejandro Tapia and Arturo Moquillaza*
- 15:20-15:40 Multtestlib: An Approach to Unit Testing Using Parallel Processing in Python  
*Ricardo Ribeiro De Alvarenga, Luiz Alberto Vieira Dias, Adilson Marques da Cunha and Lineu Fernando Stege Mialaret*
- 15:40-15:55 *DEFD : Adapted decision tree ensemble for financial fraud detection*  
*Hamza Chergui, Lylia Abrouk, Nadine Cullot and Nicolas Cabioch*
- 15:55-16:10 *Prediction of Bike Sharing Activities using Machine Learning and Data Analytics*  
*Shushuang Man, Ryan Zhou, Ben Kam and Wenying Feng*
- 16:10-16:25 A Performance Analysis of Different MongoDB Consistency Levels  
*Caio Morceli, Valeria Times and Ricardo Ciferri*
- 16:25-16:40 Information extraction and ontology population using car insurance reports  
*Hamid Ahaggach, Lylia Abrouk and Eric Lebon*
- 16:40-17:00 Explaining Multimodal Image Retrieval Using A Vision and Language Task Model  
*Md Imran Sarker, Mariofanna Milanova and John Talburt 8402*

## **SESSION M4: Potpourri I**

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

Co-CHAIR:

- 17:00 - 18:40 (5644 ,9109,7771,1041,6998)  
17:00-17:20 Complex Network Analysis of the US Marine Highway Network  
**Natarajan Meghanathan**
- 17:20-17:40 An Efficient Approach to Wireless Firmware Update Based on Erasure Correction Coding  
**Berk Kivilcim**, Daniel Zhou, Zhijie Shi and Kaleel Mahmood
- 17:40- 18:00 A Demographic Model to Predict Arrests by Race: An Exploratory Approach  
**Alice Nneka Ottah**, Yvonne Appiah Dadson and Kevin Matthe Caramancion
- 18:00- 18:20 Directed Acyclic Network and Turn Constraint Paths  
**Laxmi Gewali** and Sabrina Wallace
- 18:20- 18:40 Description of Restricted Object Reservation System using Specification and Description Language VDM++  
**Aoto Makita** and Katsumi Wasaki

**April 25, 2023- Tuesday**

### **Tuesday Sessions**

#### **SESSION T1: Cybersecurity and Blockchain Technology**

CHAIR: **Dr Kashif Saleem, King Saud University, Saudi Arabia**

Co-CHAIR:

- 9:00 – 12:00 (2035,2793,5643,6452,8784,525,891,8016+6538)
- 09:00 - 09:20 *Ontology of Vulnerabilities and Attacks on VLAN*  
**Marcio Silva Cruz**, Ferruccio de Franco Rosa and Mario Jino
- 09:20 - 09:40 *Verifying X.509 Certificate Extensions*  
**Cody Welu**, Kyle Cronin and Michael Ham
- 09:40-10:00 Extensions by Combining Machine Learning and Feature Selection  
Jacob Rydecki, **Jizhou Tong** and Jun Zheng
- 10:00-10:20 A Lightweight Mutual Authentication and Key Generation Scheme in IoV Ecosystem  
**Samah Mansour**, Adrian Lauf and Mostafa El-Said

- 10:20-10:40 To reject or not reject - that is the question, the case of BIKE post quantum KEM  
*Nir Drucker, **Shay Gueron** and Dusan Kostic*
- 10:40-11:00 IoT forensics: Machine to Machine Embedded with SIM Card  
***Istabraq Mohammed Alshenaifi**, Qazi Emad Ul Haq and Abdulrazaq Almorjan*
- 11:00-11:20 Streaming Platforms Based on Blockchain Technology: A Business Model Impact Analysis  
***Rendrikson Soares**, André Araújo, Gabriel Rodrigues and Charles Alencar*
- 11:20-11:40 Digital Forensic Investigation Framework for Dashcam  
***Saad Alboqami**, Huthifah Alkurdi, Nawar Hinnawi, Qazi Emad Ul Haq and Abdulrazaq Almorjan*
- 11:40-12:00 Applying Scrum in an Interdisciplinary Project for Fluency Analysis Literacy  
***Matheus Silva Martins Mota**, Gildarcio Sousa Goncalves, Breslei Max Reis da Fonseca, Jean Claudio de Souza, Vitor Eduardo Sabadine da Cruz, Odair Oliveira de Sá, **Adilson Marques da Cunha**, Luiz **Alberto Vieira Dias**, Lineu Fernando Stege Mialaret and Johnny Cardoso Marques*

Break

## **SESSION T2: Software Engineering**

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

Co-CHAIR:

12:30 - 14:30 (5SE: 2432,4294,5965,7493,7675,863)

- 12:30-12:50 Supporting Technical Adaptation and Implementation of Digital Twins in Manufacturing  
***Enxhi Ferko**, Alessio Bucaioni and Moris Behnam*
- 12:50-13:10 Conflicts between UX designers, front-end and back-end software developers: good or bad for productivity?  
*Tea Pavicevic, Dejana Tomasevic, **Alessio Bucaioni** and Federico Ciccozzi*
- 13:10-13:30 Making Sense of Failure Logs in an Industrial DevOps Environment  
***Muhammad Abbas**, Ali Hamayouni, Mahshid Helali Moghadam, Mehrdad Saadatmand and Per Erik Strandberg*
- 13:30-13:50 Simulation and comparison of different scenarios of a Workflow net using Process Mining

**Felipe Nedopetalski**, Franciny Barreto, Joslaine Cristina Jeske de Freitas and Stéphane Julia

- 13:50–14:10 Towards Specifying and Evaluating the Trustworthiness of an AI-enabled System  
**Mark Arinaitwe** and Hassan Reza
- 14:10-14:30 Description and Consistency Checking of Distributed Algorithms in UML Models using Composite Structure and State Machine Diagrams  
**Yu Manta** and Katsumi Wasaki
- 14:30-15:00 **Break**

### **SESSION T3: E-Learning**

CHAIR: **Dr. Noha Hazzazi, Howard University, USA**  
Co-CHAIR:

- 15:00 - 17:00 (1186,6662,8129,5357,8462+1SE: 1775)
- 15:00-15:20 ICT: Attendance & Contact Tracing During a Pandemic  
**Shawn Zwach** and Michael Ham
- 15:20-15:40 Towards Cloud Teaching and Learning: A COVID 19 era in South Africa  
**Dina Moloja**
- 15:40-16:00 Learning Object as a Mediator in the User/Learner's Zone of Proximal Development  
**Parcilene Fernandes de Brito**, José Henrique Brandão, Douglas Aquino Moreno and Giovanna Biagi Filipakis Souza
- 16:00-16:20 Quality Assessment of Open Educational Resources based on Data Provenance  
**Renata Ribeiro dos Santos**, Marilde Terezinha Prado Santos and Ricardo Rodrigues Ciferri
- 16:20-16:40 Quality Assessment of Open Educational Resources: a systematic review  
**Renata Ribeiro dos Santos**, Marilde Terezinha Prado Santos and Ricardo Rodrigues Ciferri
- 16:40-17:00 Generalized EEG Data Acquisition and Processing System  
**Vinh Le**, Chase Carthen, Norhaslinda Kamaruddin, Alireza Tavakkoli, Sergiu Dascalu and Frederick Harris

**SESSION T4: Potpourri II**

CHAIR: **Dr. Mohammed Waleed Ashour, Majan University College, Oman**

Co-CHAIR:

17:00- 18:20 (8402, , 8583, 8524 ,521,7249)

17:00 - 17:20 Description and Verification of Systolic Array Parallel Computation Model in Synchronous Circuit using LOTOS  
***Yuya Chiba** and **Katsumi Wasaki***

17:20 - 17:40 A Virtual Reality Mining Training Simulator for Proximity Detection  
***Erik Marsh**, **Joshua Dahl**, **Alireza Kamran Pishhesari**, **Javad Sattarvand** and **Frederick C. Harris** 7249*

17:40-18:00 Improved Significant Wave Height Prediction by an LSTM and EEMD Method  
***Ashkan Reisi Dehkordi**, **Alireza Tavakkoli** and **Frederick Harris** 521*

18:00-18:20 Machine Vision Inspection of Steel Surface Using Combined Global and Local Features  
***Mohammed Waleed Ashour**, **Mm Abdulrazzaq** and **Mohammed Siddique***

**Session T5: Conference Concluding Remarks (**Dr. Shahram Latifi**)**

18:20-19:00 (2022 Awardees and Recognitions, ITNG 2024 Planning)

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