38th International Conference on

Computers and Their Applications
(CATA-2023)

PROGRAM

Tuesday, March 21, 2023

Virtual Conference Online

Sponsored by

International Society for Computers and Their Applications

38th International Conference on
Computers and Their Applications
(CATA-2023)

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Dr. Mohammad Hossain, University of Minnesota Crookston, USA

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8:55 a.m. – 9:00 a.m.　　**WELCOME By CATA Organizers**

　　　　　　　　　　　　Ying Jin, Ajay Bandi, Mohammad Hossain CATA Chairs

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9:00 a.m. – 10:00 a.m.　　**KEYNOTE SPEAKER**

Dr. Mohammad Hasan
Professor, School of Science
IUPUI, Indianapolis, IN, USA
Title: Representation Learning on Network Data and its Applications
Session Chair: Dr. Ying Jin, California State University, Sacramento, USA

10:00 a.m. – 10:05 a.m.　　**5 Minute Break**

SESSION 1:

MACHINE LEARNING AND ALGORITHM - I
Tuesday, March 21, 2023, 10:05 a.m. - 11:25 a.m.
Session Chair: Dr. Mohammad Hossain (University of Minnesota Crookston, USA)

1. **Learning Thresholds to Select Cooperative Partners by Applying Deep Reinforcement Learning in Distributed Traffic Signal Control**
   Shinya Matsuta (Tokyo University of Science, Japan), Naoki Kodama (Meiji University, Japan), and Taku Harada (Tokyo University of Science, Japan)

2. **Fake News Detection System: An implementation of BERT and Boosting Algorithm**
   Raquiba Sultana and Tetsuro Nishino (The University of Electro-Communications, Japan)

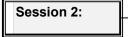3. **Quality assurance in BPMN models in a Biodiesel plant**
   Narayan Debnath (Eastern International University, Vietnam), Carlos Humberto Salgado, Mario Gabriel Peralta, Daniel Riesco, Lorena Baigorria and Germán Montejano (National University of San Luis, Argentina)

4. **Alternative Approach to Achieve a Solution of Derangement Problems by Dynamic Programming**
   Thitivatr Patanasakpinyo (Mahidol University, Thailand)

11:25 a.m. – 11:30 a.m.　　**5 Minute Break**

Session 2:	**NETWORKING, REALTIME CONTROL, AND AI** Tuesday, March 21, 2023, 11:30 a.m. - 1:10 p.m. Session Chair: Dr. Ajay Bandi (Northwest Missouri State University, USA)

1. **AI Enabled SaaS Framework for Fashion Designing**
   Debasis Chanda (MDI Murshidabad, India) and Narayan C Debnath (Eastern International University, Vietnam)

2. **Real-Time Temperature Control of Shell and Tube Heat Exchanger by IMC based PID controller**
   Pallavi Puduru, Ilaiah Sadam and Prabhaker Reddy Ginuga (University College of Technology, Osmania University, Hyderabad, India)

3. **Edge Networks the Future of Cloud Computing**
   Sean McGrath, Liam Quinn, Xiaoxiao Liu, Colin Flanagan (University of Limerick, Ireland), and Liaoyuan Zeng (University of Electronic Science and Technology of China, China)

4. **3D Objects Detection and Recognition from Color and LiDAR Data for Autonomous Driving**
   Lian Kang and Pierre Payeur (University of Ottawa, Canada)

5. **Adaptive Fair and Cost-Effective Load Balancing in Distributed Computing Systems**
   Satish Penmatsa (Framingham State University, USA) and Krishna Kanth Varma P (SRKR Engineering College, India)

1:10 p.m. – 1:25 p.m.   15 Minute Break

SESSION 3:	**NEURAL NETWORK AND DATA MINIG** Tuesday, March 21, 2023, 1:25 p.m. – 2:45 p.m. Session Chair: Dr. Ying Jin, California State University, Sacramento, USA

1. **A Stock Recommendation System**
   John Jenq and Jashanjit Singh (Montclair State University, USA)

2. **Crawling Based Data Collection and Data Pre-processing**
   Alexander Morales and Jiang Guo (California State University, Los Angeles, USA)

3. **Infrastructure Development of Non DHT-Based Pyramid Tree Network Architecture**
   Indranil Roy, Nick Rahimi, Bidyut Gupta (Southeast Missouri State University, USA) and Narayan Debnath (Eastern International University, Vietnam)

4. **Title Overlapping Communities Discovery and Improvement**
   Rong Yang (Western Kentucky University, USA)

2:45 p.m. – 2:50 p.m.   5 Minute Break

SESSION 4:	**MACHINE LEARNING AND ALGORITHM - II** Tuesday, March 21, 2023, 2:50 p.m. - 4:10 p.m. Session Chair: Dr. Ying Jin, California State University, Sacramento, USA

1. **Design of a New Secured Hierarchical Peer-to-Peer Fog Architecture Based on Linear Diophantine Equation**
   Saydul Akbar Murad, Nick Rahimi (Univ. of Southern Mississippi, USA), Indranil Roy (Southeast Missouri State University, USA) ,and Bidyut Gupta (Southern Illinois University, USA)

2. **Viability of Machine Learning in Android Scareware Detection**
   Aayush Gautam and Nick Rahimi (Univ. of Southern Mississippi, USA)

3. **Using Machine Learning to Predict Airport Passenger Throughput**
   Samuel Yi and Jiang Guo (California State University Los Angeles, USA)

4. **Mining for Conserved Constituents and Quantities**
   James Hearne and Yusuke Yokota (Western Washington University, USA)

4:10 p.m. – 4:20 p.m.   Best Paper Award Announcement

ALL times are in USA Central Daylight Saving Time (CDT)