IEEE IRI 2018 Agenda

Day 1: Saturday, July 7, 2018

8:45 – 9:00 a.m.   **Welcome, Conference Opening Remarks**
Location: Bryce & Snow Room

9:00 – 10:00 a.m.   **Keynote 1**

Dr. Heiko Ludwig, IBM Almaden Research Center, USA

Title: **Scary New World - Threats to Machine Learning and What We can do about It**

Session Chair: Dr. Stuart Rubin

Location: Bryce & Snow Room

10:00 – 10:30 a.m.   **Break**
Location:

10:30 a.m. – Noon   **Sessions**

Session A11: Security and Privacy
Chair: Latifur Khan
Location: Bryce & Snow Room

10:30 **Adversarial Anomaly Detection Using Centroid-based Clustering**
   Imrul Chowdhury Anindya and Murat Kantarcioglu
11:00 **A Survey of Medicare Data Processing and Integration for Fraud Detection**
   Richard Bauder and Taghi Khoshgoftaar
11:30 **Decentralized IoT Data Management Using BlockChain and Trusted Execution Environment**
   Gbadebo Ayoade, Vishal Karande and Latifur Khan

Session A12: Modeling and Mining

Chair: Vito D'Orazio
Location: Maple Room

10:30 **Large-Scale Realistic Network Data Generation on a Budget**
   Brian Ricks, Patrick Tague and Bhavani Thuraisingham
11:00 **Towards a Robust Architecture Model for Dynamic Software Product Lines Engineering**
   Edilton Santos and Ivan Machado
11:30 **Modeling Normal Behavior of Industrial Control System Protocols**
   Mustafa Faisal and Alvaro Cardenas

Noon – 1:30 p.m.   **Lunch**
Location: Salt Creek Ballroom
 1:30 – 3:00 p.m.   **Sessions & Workshop**

Session A2: Social Media and Users
Chair: Sampath Jayarathna
Location: Bryce & Snow Room

1:30   **Movie Recommendations Using the Deep Learning Approach**
           Jeffrey Lund and Yiu-Kai Ng
2:00   **Recommending Scientific Collaboration based on Topical, Authors and Venues Similarities**
           Abdulrhman M. Alshareef, Mohammed F. Alhamid and Abdulmotaleb El Saddik
2:30   **On the use of URLs and hashtags for age prediction of Twitter users**
           Abhinay Pandya, Mourad Oussalah, Paola Monachesi, Panos Kostakos and Lauri Loven

Invited papers Session I
Chair: Mohd Anwar
Location: Maple Room

1:30   **Extracting Entity-specific Substructures for RDF Graph Embedding**
           Muhammad Rizwan Saeed and Viktor K. Prasanna
2:00   **Deep Spatio-Temporal Representation Learning for Multi-Class Imbalanced Data Classification**
           Samira Pouyanfar, Shu-Ching Chen and Mei-Ling Shyu
2:30   **TwoRavens for Event Data**
           Vito D'Orazio, Marcus Deng and Michael Shoemate

The 6th IEEE International Workshop on Formal Methods Integration (FMi 2018)
Chairs:
Location: Zion Room

3:00 – 3:30 p.m.   **Break**
Location:

3:30 – 5:00 p.m.   **Sessions**

Session A3: Classification and Processing
Chair: Taghi M. Khoshgoftaar
Location: Maple Room

3:30   **The Effects of Random Undersampling with Simulated Class Imbalance for Big Data**
           Tawfiq Hasanin and Taghi Khoshgoftaar
4:00   **Medicare Fraud Detection using Random Forest with Class Imbalanced Big Data**
           Richard Bauder and Taghi Khoshgoftaar
4:30   **Coding 70 million multilingual political event**

Yan Liang, Christan Grant, Andrew Halterman, Jill Irvine and Khaled Jabr

Session APP1: Applications: Detection
Chair: Gbeadero Ayoade
Location: Bryce & Snow Room

3:30   **Topic Diffusion Discovery based on Sparseness-constrained Non-negative Matrix Factorization**
Yihuang Kang, Keng-Pei Lin and I-Ling Cheng
3:50   **The Pakistan Asian Anticipated Seismic commotion Extrapolation and Relaying Prototypical for Realm Inhabits by Expanding Wind Energy**
Shafiq Ur Rehman and Mubeen Balooch
4:10   **Activity Detection and Analysis Using Smartphone Sensors**
Amari Vaughn, Yang Liu, Paul Biocco and Mohd Anwar
4:30   **Utilizing Netflow Data to Detect Slow Read Attacks**
Cliff Kemp, Chad Calvert and Taghi Khoshgoftaar

5:00 – 6:00 p.m.   **Poster Session & Reception**
Chair: Latifur Khan
Location: Salt Creek Ballroom

Poster Session: Part - 1

- **On Wordsense Disambiguation Through Morphological Transformation and Semantic Distance and Domain link knowledge**
  Mourad Oussalah and Ekaterina Gilman
- **Solar and Home Battery Based Electricity Spot Market for Saudi Arabia**
  Fathe Jeribi and Sungchul Hong
- **Supervised Machine Learning Algorithms for Credit Card Fraudulent Transaction Detection: A Comparative Study**
  Sahil Dhankhad, Emad Mohammed and Behrouz Far
- **How Perceptions of Web Resource Boundaries Differ for Institutional and Personal Archives**
  Faryaneh Poursardar and Frank Shipman
- **Oculomotor Plant Feature Extraction from Human Saccadic Eye Movements**
  Sobiga Shanmugathasan and Sampath Jayarathna
- **Prioritized Situation Awareness for Soccer Robots Using Timed Transition Petri nets**
  Max Weissman, Daniel Ponsini and Seung-Yun Kim
- **Modeling CDC Data for Real Time Feature Estimation**
  Tannaz Rezaei Damavandi, Sampath Jayarathna and Yu Sun

Day 2: Sunday, July 8, 2018

8:00 – 9:00 a.m.   **Breakfast**
Location: Salt Creek Ballroom

9:00 – 10:00 a.m.   **Keynote 2**
Professor Ellen Riloff, School of Computing, University of Utah, Salt Lake City, UT, USA

Title: **Affective Text Analysis: Detecting Implicit Sentiment**

Session Chair: Professor Latifur Khan

Location: Bryce & Snow Room

10:00 – 10:30 a.m.   **Break**
Location:

10:30 a.m. – Noon   **Sessions & Workshop**

Session B1: Knowledge Representation and Management
Chair: Yan Liang
Location: Bryce & Snow Room

10:30   **Handling Hyperknowledge Representations through an Interactive Visual Approach**
Marcio Moreno, Rodrigo C. M. Santos, Wallas Santos, Rafael Brandão, Patrícia Carrion and Renato Cerqueira

11:00   **Knowledge-Based Randomization for Amplification**
Thouraya Bouabana Tebibel, Stuart Rubin, Lydia Bouzar-Benlabiod, Miled Basma Bentaiba-Lagrid and Maria Hanini

11:30   **Knowledge Amplification Using Randomization in Case-Based Reasoning. Case Study: Severity of Mammography Mass**
Miled Basma Bentaiba-Lagrid, Lydia Bouzar-Benlabiod, Stuart Rubin, Thouraya Bouabana-Tebibel and Maria Romeissa Hanini

Invited papers Session II
Chair: James McGlothlln
Location: Maple Room

10:30   **Ontology-Based Supervised Concept Learning for the Biogeochemical Literature**
Deya Banisakher, Maria E. Presa Reyes, Joshua D. Eisenberg, Josh Allen, Mark A. Finlayson, Rene Price, Shu-Ching Chen

11:00   **Trustworthy Computing in the Dynamic IoT Cloud**
I-Ling Yen

11:30   **A Multi-Model Based Framework for Driver Missense Mutation Identification**
Ahmed Soliman, Mei-Ling Shyu

The 7th IEEE International Workshop on Data Integration and Mining (DIM-2018)

Chairs: Wei-Bang Chen
Location: Zion Room

- **Universal Metadata Repository: Integrating Data Profiles Across an Organization**
  Neda Abolhassani, Lakshmish Ramaswamy, Colin Puri, Teresa Tung, Sonali Parthasarathy, Zhijie Wang, Matthew Kujawinski
- **Identifying Tweets with Fake News**
  Saranya Krishnan, Min Chen
- **Diabetic Retinopathy Stage Classification using Convolutional Neural Networks**
  Xiaoliang Wang, Yongjin Lu, Yujuan Wang, Wei-Bang Chen

Noon – 1:30 p.m.　　　　　　**Lunch**
Location: Salt Creek Ballroom

1:30 – 3:00 p.m.　　　　　　**Sessions & Workshop**

Session B2: Learning

Chair: Brian Ricks
Location: Bryce & Snow Room

1:30　**Classification for Authorship of Tweets by Comparing Logistic Regression and Naive Bayes Classifiers**
　　　Opeyemi Aborisade and Mohd Anwar
2:00　**Deep Transfer Learning for Traffic Sign Recognition**
　　　Grant Rosario, Thomas Sonderman and Xingquan Zhu
2:30　**Partition-Aware Scalable Outlier Detection Using Unsupervised Learning**
　　　Pallabi Parveen, Melissa Lee, Austin Henslee, Matt Dugan and Brad Ford

Invited papers Session III

Chair: I-Ling Yen
Location: Maple Room

1:30　**Accelerating Analytics for Clinical Pathways to Drive Cost Reduction and Quality Improvement**
　　　James McGlothlin
2:00　**Reduced Residual Nets (Red-Nets): Real-time Low Powered Adversarial Face Recognition**
　　　Saad Sadiq, Marina Zmieva, Mei-Ling Shyu, Shu-Ching Chen
2:30　**Automatic Convolutional Neural Network Selection for Image Classification using Genetic Algorithm**
　　　Haiman Tian, Samira Pouyanfar, Jonathan Chen, Shu-Ching Chen and Sitharama S. Iyengar

The 2nd International Workshop on Social Media Networks Analytics and Applications (IEEE - SMA2)
Chairs:
Location: Zion Room

3:00 – 3:30 p.m.   Break
Location:

3:30 – 4:30 p.m.   Application Sessions

Session APP2: Applications: Social Media and Users
Chair: Pallabi Parveen
Location: Bryce & Snow Room

3:30   Web-Based Recommendation System Architecture for Knowledge Reuse in MOOCs Ecosystems
Rodrigo Campos, Rodrigo Pereira Dos Santos and Jonice Oliveira

3:50   Forecasting Weekly Crude Oil Using Twitter Sentiment of US Foreign Policy and Oil Companies Data
Mourad Oussalah and Ahmed Zaidi

4:10   The Impact of Live Tweeting on Social Movements
Brandeis Marshall, Takeria Blunt and Tayloir Thompson

Session APP3: Applications: Information Reuse
Chair: Shu-Ching Chen
Location: Maple Room

3:30   Improving Efficiency of Bridge Structural Condition Evaluation Based on Symbolized Data Compression
Xiaojie Ma, Jingpei Dan, Ling Liu and Jianxi Yang

3:50   Context-Sensitive Neural Sentiment Classification
Shekoofeh Mokhtari, Tao Li and Ning Xie

4:10   Automated Playlist Generation from Personal Music Libraries
Diana Lin and Sampath Jayarathna

4:30 – 5:30 p.m.   Poster Session
Chair: Latifur Khan
Location: Salt Creek Ballroom

Poster Session: Part - 2
- **Design - computational thinking, transfer and flavors of reuse: Scaffolds to Information and Data Science for sustainable systems in Smart Cities**
  Chien-Sing Lee and K. Daniel Wong

- **Tackling Class Imbalance in Cyber Security Datasets**
  Charles Wheelus, Elias Bou-Harb and Xingquan Zhu
- **Efficient All-And-One Support Vector Machines Based on One-Versus-All Data Inseparability**
  Patoomsiri Songsiri and Boonserm Kijsirikul
- **RevMap: A Visualized Framework For Holistic View of Reviews**
  Shekoofeh Mokhtari, Ning Xie and Tao Li
- **Visualization of Server Log Data for Detecting Abnormal Behavior**
  Reeta Suman, Emad A. Mohammed, Behrouz Far, Ashok Nair and Sanaz Janbakhsh
- **A New RESTful Web Service to Explore Data Mining in the Web**
  Rodrigo Moura Juvenil Ayres, Lucas Angeli Gimenes, Bruno Luiz Michelotti, Haroldo Amaral, Danilo Gastaldello and André Nunes de Souza
- **Deep Learning based vs Markov Chain Based Text Generation For Cross Domain Adaptation For Sentiment Classification**
  Omar Abdelwahab and Adel Elmaghraby
- **Multidimentional Data Mining Based on Tensor Model**
  Ryohei Yokobayashi and Takao Miura
- **Developing Application Based Upon An Ontology-Based Modelling of Vietnamese Traditional Dances**
  Truong-Thanh Ma, Salem Benferhat, Zied Bouraoui, Thanh-Nghi Do and Huu-Hoa Nguyen

5:30 – 8:30 p.m.   **Banquet & Awards Ceremony**
Location: Salt Creek Ballroom

8:00 – 9:00 a.m.   **Breakfast**
Location: Salt Creek Ballroom

9:00 – 10:00 a.m.   **Sessions**

Session C1: Decision Support
Chair: *Panos Kostakos*
Location: Bryce & Snow Room

9:00   **Is Gene Selection Enough for Imbalanced Bioinformatics Data?**
          Ahmad Abu Shanab and Taghi Khoshgoftaar
9:30   **An Approach for Schema Extraction of JSON and Extended JSON Document Collections**
          Angelo Frozza, Ronaldo Mello and Felipe Costa

Session APP4 (Part-1): Applications: Data Analytics
Chair: Latifur Khan
Location: Maple Room

9:00   **Semantic Data Querying Over NoSQL Databases with Apache Spark**
          Mahmudul Hassan and Srividya Bansal
9:20   **Filter-Based Subset Selection for Easy, Moderate, and Hard Bioinformatics Data**
          Ahmad Abu Shanab and Taghi Khoshgoftaar

10:00 – 10:30 a.m.   **Break**
Location:

10:30 a.m. – Noon   **Sessions & Workshop**

Session C2: Diagnosis and Prediction
Chair: Mahmudul Hassan
Location: Maple Room

10:30   **Misclassification Cost-Sensitive Software Defect Prediction**
          Ling Xu, Bei Wang, Ling Liu, Mo Zhou, Shenping Liao and Meng Yan
11:00   **Correlating refugee border crossings with Internet search data**
          Panos Kostakos, Abhinay Pandya, Mourad Oussalah, Simo Hosio, Christoph Breidbach, Vassilis Kostakos and Niels van Berkel

Session APP5 (Part-1): Applications: AI and Machine Learning
Chair: Gbeadero Ayoade
Location: Bryce & Snow Room

10:30   **A complex task scheduling scheme for big data platforms based on SAT**
          Hong Huang and Latifur Khan

10:50 **A Graduate School Recommendation System Using the Multi-Class Support Vector Machine and KNN Approaches**
Alisha Banskota and Yiu-Kai Ng

11:10 **Generating Trust Based Cross Domain Recommendations using Ant Colony Optimization**
Adeel Ahmed and Khalid Saleem

11:30 **Identifying Medicare Provider Fraud with Unsupervised Machine Learning**
Richard Bauder, Raquel Rosa and Taghi Khoshgoftaar

The 7th IEEE International Workshop on Empirical Methods for Recognizing Inference in TExt (IEEE EM-RITE 2018)

Chairs: Min-Yuh Day, Yoshinobu Kano and Chuan-Jie Lin
Location: Zion Room

- **Preliminary Modeling of Gender Identification in the Social Community**
  Kuo-Chung Chu, Peng-Hua Jiang, Huan-Yu Syu, and Yan-Ling Chen
- **Artificial Intelligence for Automatic Text Summarization**
  Min-Yuh Day and Chao-Yu Chen
- **Automatic Dialogue Template Synthesis for Chatbot by Story Information Extraction**
  Shih-Hung Wu, Liang-Pu Chen, Ping-Che Yang, and Tsun Ku
- **Automatic Question Generation from Children's Stories for Companion Chatbots**
  Zhe-Hao Lee, Elisa Chen, Liang-Pu Chen, Ping-Che Yang, and Richard Tzong-Han Tsai

Noon – 1:00 p.m. Lunch
Location: Salt Creek Ballroom

1:00 – 2:00 p.m. Application Sessions

Session APP4 (Part-2): Applications: Data Analytics
Chair: Min-Yuh Day
Location: Maple Room

1:00 **RDF Data Storage Techniques for Efficient SPARQL Query Processing using Distributed Computation Engines**
Mahmudul Hassan and Srividya Bansal

1:20 **Efficient Processing of Range Queries over Distributed Relational Databases**
Richard Price, Lakshmish Ramaswamy and Seyedamin Pouriyeh

1:40 **Compositional Data Analysis with PLS-DA and Security Applications**
Divya Ankam and Nizar Bouguila

Session APP5 (Part-2): Applications: AI and Machine Learning
Chair: Wei-Bang Chen
Location: Bryce & Snow Room

1:00 **Speaker Verification Using Adapted Bounded Gaussian Mixture Model**
Muhammad Azam and Nizar Bouguila

1:20 **Toward A Dynamic K in K-Nearest Neighbor Fingerprint Indoor Positioning**

Dawei Liu, Jiusong Hu and Hongli Liu

1:40   Soccer Ball Recognition and Distance Prediction using Fuzzy Petri nets
Patrick Hansen, Philip Franco and Seung-Yun Kim