IEEE IRI 2020 Program
V20200728
Time Zone: Las Vegas local time (Pacific Time Zone PDT)
IEEE IRI Conference Day 1: Tuesday, August 11, 2020

8-8:30am	Welcome, Conference Opening Remarks (General Chairs, PC Chairs)
8:30-9:45am	**Keynote 1:** ***Elisa Bertino*** ***Samuel D. Conte Professor of Computer Science,*** ***Purdue University, USA*** **Security, Privacy and Safety in the IoT - Research Roadmap** **Session Chair**: Stuart H. Rubin SPAWAR Systems Center Pacific (SSC-Pacific)
9:45 - 10:05 am	Coffee Break
10:05-11:25am	**Session A1**
	Session A11 **AI and Security** Chair: Danda Rawat, Howard University, USA
33 (18 min)	**An Empirical Analysis on the Usability and Security of Passwords** Kanwardeep Walia (California State University, Sacramento); Shweta Shenoy (KLA Corporation); Yuan Cheng (California State University, Sacramento)*
40 (18 min)	**Detection Methods of Slow Read DoS Using Full Packet Capture Data** Clifford Kemp (Florida Atlantic University); Chad Calvert (Florida Atlantic University); Taghi Khoshgoftaar (Florida Atlantic University)*
54 (18 min)	**RNN-VED for Reducing False Positive Alerts in Host-based Anomaly Detection Systems** Lydia Bouzar-Benlabiod (ESI)*; Stuart Rubin (Space and Naval Warfare Systems Center Pacific, San Diego, USA); Kahina Belaidi (ESI); Houda Haddar (ESI)
28 (15 min)	**Addressing Imbalanced Data Problem with Generative Adversarial Network For Intrusion Detection** Ibrahim Yilmaz (Tennessee Tech University)*; Rahat Masum (Tennessee Tech University); Ambareen Siraj (Tennessee Tech University)
	Session A12 **Computer Security and Privacy I** Chair: Yang Cai, Carnegie Mellon University, USA
75 (18 min)	**Combating Hard or Soft Disasters with Privacy-Preserving Federated Mobile Buses-and-Drones based Networks** Bo Ma (AUT); Jinsong Wu (Universidad de Chile)*; William Liu (Auckland University of Technology, New Zealand), Luca Chiaraviglio (Tor Vergata University of Rome, Italy), Xing Ming (Auckland University of Technology, New Zealand)
76 (18 min)	**Relating the Empirical Foundations of Attack Generation and Vulnerability Discovery** Tyler Westland (University of Cincinnati); Nan Niu (University of Cincinnati)*; Rashmi Jha (University of Cincinnati); David Kapp (AFRL/RYWA); Temesguen Kebede (AFRL/RYWA)
77 (18 min)	**Privacy-Preserving and Efficient Sharing of Drone Videos in Public Safety Scenarios using Proxy Re-encryption** Khaled Rabieh (Metropolitan State University); Suat I Mercan (Florida International University)*; Kemal Akkaya (Florida International University); Vashish Baboolal (Florida International

	University); Ramazan Aygun (Kennesaw State University)
34 (15 min)	**Relevance of Grapheme's Shape Complexity in Writer Verification Task** Ameur Bensefia (Higher Colleges of Technology)*; Chawki Djeddi (Larbi Tebessi University)
11:25am-1:30pm	**Lunch break**
1:30 -2:50 pm	**Session A2**
	Session A21 **Computer Vision** Chair: Florian Alber, Carnegie Mellon University, USA
8 (18 min)	**Multimodal Information Integration for Indoor Navigation Using a Smartphone** Yaohua Chang (The City College of New York); Jin Chen (City College of New York); Tyler Franklin (The City College of New York); Lei Zhang (Borough of Manhattan Community College – CUNY); Arber Ruci (New York City Regional Innovation Node – CUNY); Hao Tang (CUNY); Zhigang Zhu (The City College of New York)*
17 (18 min)	**Automated Filtering of Advanced Eye Gaze Metrics from Dynamic Areas of Interest** Gavindya Jayawardena (Old Dominion University)*; Sampath Jayarathna (Old Dominion University)
41 (18 min)	**Dynamic image for micro-expression recognition on region-based framework** Trang Thanh Quynh Le (University of St. Thomas); Thuong Khanh Tran (University of Oulu); Manjeet Rege (University of St. Thomas, USA)*
82 (18 min)	**Building Damage Evaluation from Satellite Imagery using Deep Learning** Fei Zhao and Chengcui Zhang* (The University of Alabama at Birmingham, USA)
	Session A22 **Computer Security and Privacy II** Chair: Tanmay Bhowmik, Mississippi State University, USA
6 (18 min)	**Distributed Differentially Private Mutual Information Ranking and Its Applications** Ankit Srivastava, Samira Pouyanfar, Joshua Allen, Ken Johnston, Qida Ma Microsoft
47 (18 min)	**Medicare Fraud Detection using CatBoost** John Hancock (Florida Atlantic University); Taghi Khoshgoftaar (Florida Atlantic University)*
48 (18 min)	**A Distribution-based Regression for Real-time COVID-19 Cases Detection from Chest X-ray and CT Image** Nuha Zamzami (University of Jeddah)*; Pantea Koochemeshkian (Concordia University); Nizar Bouguila (Concordia University)
62 (15 min)	**Blockchain-Oriented Requirements Engineering: New Directions** Sandeep Reddivari (University of North Florida)*
2:50 – 3:10pm	Coffee Break
3:10-4:50pm	**Session A3**
	Session A31 **Machine Learning and Data Mining I** Chair: Ming Dong, Wayne State University, USA
45 (18 min)	**Background Subtraction with a Hierarchical Pitman-Yor Process Mixture Model of Generalized Gaussian Distributions** Srikanth Amudala (Concordia University); Samr Ali (Concordia University)*; Nizar Bouguila (Concordia University)
50 (18 min)	**Fully Bayesian Learning of Multivariate Beta Mixture Models** Mahsa Amirkhani (Concordia University)*; Narges Manouchehri (Concordia University); Nizar Bouguila (Concordia University)

DAUB2 (18 min)	**Post-Click Behaviors Enhanced Recommendation System** Zhenhua Liang, Siqi Huang, Xueqing Huang, Rui Cao and Weize Yu
21 (15 min)	**The Democratization of Machine Learning Features** Jayesh Patel (Rockstar Games)*
25 (15 min)	**Identifying Feature Pattern for Weighted Imbalance Data: A Feature Selection Study for Thoracolumbar Spine Fractures in Crash Injury Research** Paromita S Nitu (Marquette University)*; Praveen Madiraju (Marquette University); Frank Pintar (Medical College of Wisconsin)
	Session A32 **Data & Knowledge Representation and Management** Chair: Ronaldo S. Mello, Federal University of Santa Catarina, Brazil
58 (18 min)	**AD4ML: Axiomatic Design to Specify Machine Learning Solutions for Manufacturing** Alejandro Gabriel Villanueva Zacarias (University of Stuttgart)*; Rachaa Ghabri (University of Stuttgart); Peter Reimann (University of Stuttgart)
60 (18 min)	**Data Driven Relational Constraint Programming** Michael Valdron (Ontario Tech University); Ken Q Pu (University of Ontario Inst. of Technology)*
49 (18 min)	**Quality not Quantity! A Qualitative Evaluation and Proposal for Understanding the Depth of Audience "Knowledge" Post Data Extraction** Julian J Jarrett (Lutron Electronics)*; Kimberley Hemmings-Jarrett (Drexel University); Denise Agosto (); M Brian Blake (George Washington University); Terryann Barnett (NYC Department of Education)
51 (18 min)	**Approximate Matching of Spatiotemporal RDF Data by Path** Jiajia Lu (Northeastern University); Xiaofeng Di (Northeastern University); Luyi Bai (Northeastern University)*

IEEE IRI Conference Day 2: Wednesday, August 12, 2020

8:30-9:45am	**Keynote 2:** **Bhavani Thuraisingham** ***Founders Chair Professor of Computer Science,*** ***University of Texas at Dallas, USA*** **SecAI: Integrating Cyber Security and Artificial Intelligence with Applications in Internet of Transportation and Infrastructures** **Session Chair**: Stuart H. Rubin SPAWAR Systems Center Pacific (SSC-Pacific)
9:45-10:05am	Coffee Break
10:05-11:25am	Session B1
	Session B11 **AI and Medical Informatics** Chair: Mounifah Alenazi, University of Cincinnati, USA
44 (18 min)	**A Novel AI-enabled Framework to Diagnose Coronavirus COVID-19 using Smartphone Embedded Sensors: Design Study** Halgurd S. Maghdid (Koya University); Kayhan Ghafoor (Salahaddin University-Erbil)*; Danda Rawat (Howard University, USA)
43 (18 min)	**Attention-Guided Generative Adversarial Network to Address Atypical Anatomy in Synthetic CT Generation** Hajar Emami (Wayne State University)*; Ming Dong (Wayne State University); Carri Glide-Hurst (Henry Ford Health System)
71 (18 min)	**Empowering Team Science Across the Translational Spectrum with the UAB Biomedical Research Infrastructure Technology Enhancement (U-BRITE)** Jake Chen (UAB)*
24 (18 min)	**Predicting PTSD Severity in Veterans from Self-reports for Early Intervention: A Machine Learning Approach** Priyanka Annapureddy (Marquette University)*; Md Fitrat Hossain (Marquette University); Thomas Kissane (Marquette University); Wylie Frydrychowicz (Marquette University); Paromita S Nitu (Marquette University); Joseph B Coelho (Marquette University); Nadiyah Johnson (Marquette University); Praveen Madiraju (Marquette University); Zeno Franco (Medical College of Wisconsin); Katinka Hooyer (Medical College of Wisconsin); Niharika Jain (Marquette University); Mark Flower (Mental Health America); Sheikh Ahamed (Marquette University)
	Session B12 **Predictive Modeling and Data Analysis** Chair: Xin Chen, Governors State University, USA
37 (18 min)	**Forecasting Atmospheric Visibility using Auto Regressive Recurrent Neural Network** Jahnavi Jonnalagadda (George Mason University)*; Mahdi Hashemi (George Mason University)
70 (18 min)	**Global Land Temperature Forecasting using Long Short-Term Memory Network** Prashanti Maktala (George Mason University)*; Mahdi Hashemi (George Mason University)
52 (18 min)	**Semantic Embeddings for Medical Providers and Fraud Detection** Justin Johnson (Florida Atlantic University); Taghi Khoshgoftaar (Florida Atlantic University)*
36 (15 min)	**Studying the impact of streetlights on street crime rate using geo-statistics** Srikanth Vadlamani (George Mason University)*; Mahdi Hashemi (George Mason University)
11:25am-1:30pm	**Lunch break**
1:30 –	**Session B2**

2:30pm	**IEEE Technical Committee on Multimedia Computing (TCMC)** ***Annual Report and General Information Session*** **Chengcui Zhang (TCMC Chair)**
2:30-2:50pm	Coffee Break
2:50-4:30 pm	**Session B3**
	Session B31 **Machine Learning and Data Mining II** Chair: Vidhyashree Nagaraju, The University of Tulsa, USA
56 (18 min)	**Development of Sentiment Lexicon in Bengali utilizing Corpus and Cross-lingual Resources** Salim Sazzed (Old Dominion University)*
81 (18 min)	**Multi-Label Multi-Task Learning with Dynamic Task Weight Balancing** Tianyi Wang (Florida International University)*; Shu-Ching Chen (Florida International University)
59 (15 min)	**Semantic Data Understanding With Character Level Learning** Michael J Mior (Rochester Institute of Technology); Ken Q Pu (University of Ontario Inst. of Technology)*
67 (15 min)	**Natural Language-based Integration of Online Review Datasets for Identification of Sex Trafficking Businesses** Maria Diaz (California State University, Fullerton); Anand Panangadan (California State University, Fullerton, USA)*
53 (15 min)	**Using a Deep Learning Model, Content Features, and Author Metadata to Recommend Research Papers** Si-Hong Lam (Brigham Young University); Eric Brewer (Brigham Young University); Yiu-Kai Ng (Brigham Young University)*
	Session B32 **Database and Graph Models** Chair: Nan Niu, University of Cincinnati, USA
46 (18 min)	**An Approach for Schema Extraction of NoSQL Graph Databases** Ronaldo S. Mello (Federal University of Santa Catarina)*; Salomão Jacinto (UFSC); Angelo Frozza (UFSC)
68 (18 min)	**KGdiff: Tracking the Evolution of Knowledge Graphs** Abbas Keshavarzi (University of Georgia)*; Krzysztof J. Kochut (University of Georgia)
64 (18 min)	**A Water Quality Research Platform for the Near-real-time Buoy Sensor Data** Maria Presa-Reyes (Florida International University)*; Biayna Bogosian (Florida International University); Bradley Schonhoff (Florida International University); Christopher Jerauld (Florida International University); Christian Moreyra (Florida International University); Piero Gardinali (Florida International University); Shu-Ching Chen (Florida International University)
18 (15 min)	**Towards an Accountability Suggestion Map for Supporting Information Systems Management Based on Systems Thinking** Felipe Cordeiro (ISERJ)*; Rodrigo Pereira dos Santos (UNIRIO); Aline Vasconcelos (IFF); Patricia Lago (Vrije Universiteit Amsterdam)
66 (15 min)	**Wrapping a NoSQL Datastore for Stream Analytics** Kjell Orsborn (Uppsala University)*; Khalid Mahmood (Uppsala University)
4:30 – 6pm	Break
6-7:15pm	**Virtual Banquet & Awards Ceremony**

IEEE IRI Conference Day 3: Thursday, Aug 13, 2020

8:45-9:45am	**Panel: IRI for Data Science** **Ubiquitous AI and Reuse** Chair: Stuart H. Rubin SPAWAR Systems Center Pacific (SSC-Pacific)
9:45 – 10:05am	Break
10:05-11:25am	**Session C1**
	Session C11 **Heuristic Acquisition and Reasoning** Chair: Chengcui Zhang, The University of Alabama at Birmingham, USA
55 (18 min)	**An Adaptive and Dynamic Biosensor Epidemic Model for COVID-19** Salvador V Balkus (Univ of Massachusetts Dartmouth); Joshua Rumbut (University of Massachusetts Dartmouth & Medical School); Honggang Wang (Univ of Massachusetts Dartmouth); Hua Fang (University of Massachusetts Dartmouth & Medical School)*
80 (18 min)	**Artificial Intelligence and Data Science Governance: Roles and Responsibilities at the C-Level and the Board** Bhavani Thuraisingham (University of Texas at Dallas, USA)*
61 (15 min)	**An I/O Request Packet (IRP) Driven Effective Ransomware Detection Scheme using Artificial Neural Network** Md. Ahsan Ayub (Tennessee Technological University)*; Andrea Continella (University of Twente); Ambareen Siraj (Tennessee Tech University)
78 (18 min)	**A New Emulation Platform for Real-time Machine Learning in Substance Use Data Streams** Stefan A Bruendl (University of Massachusetts Dartmouth); Hua Fang (University of Massachusetts Dartmouth & Medical School); Hieu X Ngo (University of Massachusetts Dartmouth); Edward Boyer (Harvard Medical School); Honggang Wang (Univ of Massachusetts Dartmouth)*
	Session C12 Data Integration and Mining (DIM) Workshop Chair: Saad Sadiq, University of Miami, USA
DIM12	**Towards Agile Integration: Specification-based Data Alignment** Christopher Giossi, David Maier
DIM13	**Fairness in Data Wrangling** Lacramioara Mazilu, Norman W. Paton, Nikolaos Konstantinou, Alvaro A.A. Fernandes
DIM15	**Latent Features Modelling for Recommender Systems** Abdullah Alhejaili and Shaheen Fatima
DIM16	**Mining Frequent Differences in File Collections** Sudarshan S. Chawathe
11:25am-1:30pm	**Lunch break**
1:30 – 2:50pm	**Session C2**
	Session C21 **Artificial Intelligence for HealthCare (AIHC) Workshop**

	Chair: Lydia Bouzar-Benlabiod, Ecole Nationale Supérieure d'Informatique, Algeria
AIHC1	**An intelligent baby monitoring system based on Raspberry PI, IoT sensors and convolutional neural network** Rabéa Cheggou, Siham Si Hadj Mohand, Oussama Annad and El-Hadi Khoumeri
AIHC2	**Multi-Class Cardiovascular Diseases Diagnosis from Electrocardiogram Signals using 1-D Convolution Neural Network** Mehdi Fasihi and Ali Jannesari
AIHC3	**Toward Data-Driven Assessment of Caregiver's Burden for Persons with Dementia using Machine Learning Models** Hilda Goins, Seyyedpooya Hekmatiathar, Grace Byfield, Raymond Samuel and Mohd Anwar
AIHC4	**Discovering Drug-Drug and Drug-Disease Interactions Inducing Acute Kidney Injury Using Deep Rule Forests** Bowen Kuo, Yihuang Kang, Pinghsung Wu, Shengtai Huang and Yajie Huang
(~11 minutes/each presentation, followed by Q&A)	Session C22 **Poster and Demo Session** Chair: Nuray Baltaci Akhuseyinoglu, University of Pittsburgh, USA
14	**DataOps for Societal Intelligence: a Data Pipeline for Labor Market Skills Extraction and Matching** Martin Garriga (Faculty of Informatics, National University of Comahue)*; Damian Tamburri (Jheronimus Academy of Data Science); Willem-Jan Van Den Heuvel (Jheronimus Academy of Data Science)
72	**NLP Relational Queries: Design and Applications** Andrei Stoica (University of Ontario Inst. of Technology); Ken Q Pu (University of Ontario Inst. of Technology)*; Heidar Davoudi (Ontario Tech University)
73	**Using Deep Learning To Assign Rheumatoid Arthritis Scores** Do Hai Son Dang (University of Alabama at Birmingham)*; Leigh Allision (University of Alabama at Birmingham)
74	**Development of Natural Language Processing Algorithm for Dental Charting** Yifan Zhang (University of Alabama at Birmingham)*; Chengcui Zhang (The University of Alabama at Birmingham); Brandon Bogard (Berry College)
11	**Topic Diffusion Discovery based on Deep Non-negative Autoencoder** Sheng-Tai Huang, Yihuang Kang, Bowen Kuo, Shao-Min Hung, I-Ling Cheng
2:50-3:10pm	Break
3:10 – 4:50pm	**Session C3**
	Session C31 **Empirical Methods for Recognizing Inference in TExt (EM-RITE) Workshop** Chair: Min-Yuh Day
EMRITE1	**Modeling of Clinical Mammography Recognition** Po-Yao Tsai, Kuo-Chung Chu, Tien-Yu Chang and Yu-Shu Wu
EMRITE2	**Cross-Domain Helpfulness Prediction of Online Consumer Reviews by Deep Learning Model** Shih-Hung Wu and Yi-Kun Chen
EMRITE3	**A Study of Deep Learning for Factoid Question Answering System** Min-Yuh Day and Yu-Ling Kuo
EMRITE5	**Research on Online Impulsive Buying and Post-Purchase Dissonance** Wen-Kuo Chen, Yen-Ling Lin, Hua-Sheng Pan and Cheng-Kun Chen
EMRITE6	**Building the Body Image Conceptual Framework Based on the Theory of Planned**

	Behavior (TPB) Wen-Kuo Chen, Ying-Hsun Hung and Jun-Yu Zhong
	Session C32 **Novel Applications** Chair: Yuan Cheng, California State University, Sacramento, USA
42 (18 min)	**Ultra Wideband Indoor Positioning System based on Artificial Intelligence Techniques** Long Cheng (ABB Inc)*; Zhaoqi Wu (University of Illinois at Urbana-Champaign); Bo Lai (University of California, Irvine); Qiang Yang (North Carolina State University); Anguo Zhao (University of California Irvine); Yuanting Wang (Rensselaer Polytechnic Institute)
9 (18 min)	**BusinessDetect: An Advanced Business Information Mining Application for Intelligent Marketing** Ye Qiu (Peking University)*; Xiaolong Gong (Shanghai Jiao Tong University); Zhiyi Ma (Peking University)
4 (15 min)	**A Comparison of Machine Learning Algorithms Applied to American Legislature Polarization** Gabriel A Mersy (University of Minnesota)*; Vincent M Santore (The Burr Project); Isaac Rand (University of Chicago); Corinne Kleinman (Georgetown University); Grant Wilson (Tulane University); Jason Bonsall (The University of Nevada, Reno); Tyler Edwards (Temple University)
20 (15 min)	**The EGRBAC Model for Smart Home IoT Access Control** Safwa Ameer (The university of Texas at San Antonio)*; Ravi Sandhu (University of Texas at San Antonio:); James Benson (The university of Texas at San Antonio)
	End