

Oct 18	
Workshop	
<i>Session 1: 9.00 am (ESST): Chair Professor Sally McClean, Ulster University, UK</i>	
9:00 – 9:20	Lingkai Yang, Sally McClean, Mark Donnelly, Kevin Burke and Kashaf Khan Process Duration Modelling and Concept Drift Detection for Business Process Mining
9:20 – 9:40	Zhi Chen, Shuai Zhang, Sally McClean, Brahim Allan and Ian Kegel Sequence Mining TV Viewing Data Using Embedded Markov Modelling
9:40 - 10:00	Zeeshan Tariq, Darryl Charles, Sally McClean, Ian McChesney and Paul Taylor Proactive business process mining for end-state prediction using trace features
10:00 – 10:20	Cathryn Peoples, Zeeshan Tariq, Adrian Moore, Mohammad Zoualfaghari and Andrew Reeves Using Process Mining to Formalise Service Level Agreement (SLA) Allocation
<i>Session 2: 11.15 am (ESST): Chair Professor Gautam Srivastava, Brandon University, Canada</i>	
11:15 – 11:35	Meadhbh O’Neill, Jeff Morgan and Kevin Burke Process Visualization of Manufacturing Execution System (MES) Data
11:35 – 11:55	Syed Arshad Raza and Atiq W. Siddiqui Discovering COVID-19 Induced Shifts in Refined Petroleum Products Demand: A Sequence-based Time Series Mining Approach
11:55 – 12: 15	Maryam Hina, Mohsan Ali, Abdul Rehman Javed, Gautam Srivastava, Thippa Reddy Gadekallu, and Zunera Jalil Email Classification and Forensics Analysis Using Machine Learning
12:15 – 12:35	Lindsay Sterle and Suman Bhunia On SolarWinds Orion Platform Security Breach
2021 IEEE Smart World Congress	
Oct 19	
8:15-8:30	Opening: Professor Yi Pan
8:30-9:15	Jiannong Cao, Hong Kong Polytechnic University, China Future Edge Computing – Towards Distributed Intelligence for AIoT Applications Chair: Yi Pan
9:15-10:00	S.S. Iyengar, Florida International University, USA Machine learning and AI techniques enabled Digital Forensics. Chair: Xuan Guo
Session 1 (10:15-12:15): IEEE International Conference on Smart City Innovations Chairs: Xuan Guo	
10:15 - 10:30	Zequan Zhou, Yupeng Wang, Xiling Luo, Yi Bai, Xiaochao Wang, Feng Zeng Secure Accountable Dynamic Storage Integrity Verification
10:30 - 10:45	Yifei Gong, Feng Gu, Mengyan Dai Predicting the Risks of Street Violent Crimes Using Agent-Based Modeling
10:45 - 11:00	Yi Bai, Zequan Zhou, Xiling Luo, Xiaochao Wang, Feng Liu, Yifu Xu A Cloud Data Integrity Verification Scheme Based on Blockchain

11:00 - 11:15	Xiaochao Wang, Zequan Zhou, Xiling Luo, Yifu Xu, Yi Bai, Feixiang Luo A Blockchain-Based Fine-Grained Access Data Control Scheme With Attribute Change Function
11:15 - 11:30	Otily Toutsop, Sanchari Das, Kevin Kornegay Exploring the Security Issues in Home-Based IoT Devices Through Denial of Service Attacks
11:30 - 11:45	Jishen Yang, Yan Huang, Madhuri Siddula, Zhipeng Cai Noise Generation GAN Based Identity Privacy Protection for Smart City
11:45 - 12:00	Jian Wang, Neeraj Varshney, Jiayi Zhang, David Griffith, Nada Golmie Deep Learning Based Link-Level Abstraction for mmWave Communications
12:00 - 12:15	Venkata Malladi, Yi Li, Madhuri Siddula, Daehee Seo, Yan Huang Decentralized Aggregation Design and Study of Federated Learning
Session 2 (13:00-15:30): IEEE International Conference on Smart City Innovations Chairs: Xuan Guo	
13:00 - 13:15	Yitong Yang, Qixiao Lin, Jian Mao, Lipei Liu An Improved Social Attribute Inference Scheme Based on Multi-Attribute Correlation
13:15 - 13:30	Weiying Li, Hongyu Chen, Ruifeng Zhao, Chunqiang Hu A Federated Recommendation System Based on Local Differential Privacy Clustering
13:30 - 13:45	Yanfei Lu, Zhiyuan Zhao, Qinghe Gao A Distributed Offloading Scheme With Flexible MEC Resource Scheduling
13:45 - 14:00	Yang Chen, Mohammed M. Olama Collaborative Decision Approach for Electricity Pricing-Demand Response Stackelberg Game
14:00 - 14:15	Silvia Carla Strada, Davide Penati, Sergio Savaresi Concept and Sizing of an e-Bike Sharing Service for Commuters to a Major Metropolitan Area
14:15 - 14:30	Carson K. Leung Smart City Transportation Data Analytics
14:30 - 14:45	Zhengze Zhu, Lounis Adouane, Alain Quilliot Intelligent Traffic Based on Hybrid Control Policy of Connected Autonomous Vehicles in Multiple Unsignalized Intersections
14:45 - 15:00	Elham Okhovat, Michael A. Bauer Monitoring the Smart City Sensor Data Using Thingsboard and Node-Red
15:00 - 15:15	Akshita Maradapu Vera Venkata Sai, Yingshu Li, Kainan Zhang User Motivation Based Privacy Preservation in Location Based Social Networks
15:15 - 15:30	Pierfrancesco Bellini, Daniele Cenni, Nicola Mitolo, Paolo Nesi, Gianni Pantaleo Exploiting Satellite Data in the Context of Smart City Applications
Session 3 (15:45-18:15): IEEE International Conference on Smart City Innovations Chairs: Xuan Guo	
15:45 - 16:00	Nasibeh Zohrabi, Lauren Linkous, Roja Eini, Sarin Adhikari, Brittany Keegan, John C Jones, Basil I. Gooden, Brian C Verrelli, Sherif Abdelwahed Towards Sustainable Food Security: An Interdisciplinary Approach
16:00 - 16:15	Xudong Zhang, Liang Zhao, Feng Gu Boosting the Speed of Real-Time Multi-Object Trackers
16:15 - 16:30	Shaoqi Hou, Chao Li, Xueting Liu, Yuhao Zeng, Wenyi Du, Guangqiang Yin LORFD: Fully Convolutional Network for Real-Time Multi-Scale Face Detection Algorithm

16:30 - 16:45	Kangning Yin, Jie Liang, Xu Yang, Shaoqi Hou, Chunyu Wang, Guangqiang Yin Multi-Scale Object Detection Algorithm in Smart City Based on Mixed Dilated Convolution Pyramid
16:45 - 17:00	Jingrou Xu, Zhaoqian Jia, Wenchao Wang, Chunyu Wang, Guangqiang Yin A Novel Neural Network for P300 Brain-Computer Interface Signal Recognition
17:00 - 17:15	Ye Li, Zhaoqian Jia, Yiyin Ding, Fangyan Shi, Guangqiang Yin Joint Pedestrian Detection and Attribute Recognition Feature Learning
17:15 - 17:30	Wen Tian, Gaofei Sun, Yuan Chen Machine Learning Based Floor-Level Sensor Positioning in Smart Buildings
17:30 - 17:45	Ashima Malik, Jerry Gao, Nasrajan Jalin Wildfire Risk Prediction and Detection Using Machine Learning in San Diego, California
17:45 - 18:00	Nicolai Sison, Lin Li, Meng Han Survey of Machine Learning and Deep Learning Techniques for Travel Demand Forecast
18:00 - 18:15	Yingchang Xiang, Jia Xiang, Ruinian Li Smart City Power Allocation Based on Linear Feasibility Problem
Oct 20	
8:30-9:15	Weijia Jia, Beijing Normal University, United International College, and Shanghai Jiaotong University, China Smart City meets AI Chair: Yanqing Zhang
9:15-10:00	May Wang, Georgia Institute of Technology, USA Why Many AI Tools Do Not Show Impact in Combating COVID-19?! Challenges and Opportunities in Translating AI for Healthcare Chair: Yubao Wu
Session 4 (10:15-12:15): IEEE International Conference on Smart City Innovations Chairs: Xuan Guo	
10:15 - 10:30	Ke Su, Shanhong Zheng, Gang Liu Credit Risk Prediction Based on DenseNet-BC of Fusion Focal Loss and Static Restart SGD
10:30 - 10:45	Xuyang Teng, Yiming Pan, Meilin He, Meihua Bi, Zhaoyang Qiu, Huina Song An Improved Multi-Scale Probabilistic Edge Detection for Urban Remote Sensing Images
10:45 - 11:00	Zhenjie Shi, Shuai Yin, Hailiang Zhang, Xiaofan Zhao, Wenming Ma Interactive Reinforcement Learning Strategy
11:00 - 11:15	Hailiang Zhang, Wenming Ma, Zhenjie Shi, Shuai Yin, Xiaofan Zhao Indicator Diagram for Power Prediction of Pumping Unit Based on Machine Learning
11:15 - 11:30	Curby Alexander, Liran Ma, Zhipeng Cai, Wei Cheng Eureka Labs: Enhancing Cybersecurity Education Through Inquiry-Based Hands-On Activities
11:30 - 11:45	Wenbing Zhao, Xiongyi Liu, Shruti Shah, Isaac Baah, Abhi Patel, Nicholas Wise Peer Support in Smart Learning and Education
11:45 - 12:00	Nazmus Saquib, Fatih Bakir, Chandra Krintz, Rich Wolski A Resource-Efficient Smart Contract for Privacy Preserving Smart Home Systems
12:00 - 12:15	Chao Li, Shaoqi Hou, Xiaoyu Yang, Guangqiang Yin Discussion of Airport Security Check Process Based on Circuit
Session 5 (13:00-14:30): IEEE International Conference on Smart City Innovations Chairs: Xuan Guo	
13:00 - 13:15	Feng Zeng Secure ADS-B Protection Scheme Supporting Query
13:15 - 13:30	Mohsen Bezenjani A Novel Internet of Things Architecture for Improving Fire Safety in High-Rise Buildings

13:30 - 13:45	Yiyin Ding, Shaoqi Hou, Yuhao Zeng, Wenyi Du, Chunyu Wang Key Frame Extraction Based on Frame Difference and Cluster for Person Re-Identification
13:45 - 14:00	Nantaporn Ratisoontorn, Nida Chatwattanasiri Integrated Image Processing Framework to Determine Nutrient Quantities From Guideline Daily Amount (GDA) Label
14:00 - 14:15	Zhen Han, Ye Li, Lei Wu, Li Zhan, Guangqiang Yin A Fast Head Reconstruction Algorithm Based on Single Photo
14:15 - 14:30	Jin Zhang, Fan Liang, Wei Yu, David Griffith, Wenqi Guo, Avi Gopstein Towards an Adaptive Time-Triggered Protocol in Wireless Networks
Session 6 (15:15 – 17:45) : IEEE International Conference on Ubiquitous Intelligence and Computing Chair: Jonathan Shihao Ji	
15:15 – 15:30	MOOP4PD: A Multi-Objective Optimization Approach for Package Delivery by the Crowd of Occupied Taxis Zhifeng Zhou, Rong Chen, Jian Gao
15:30 – 15:45	iScreen: A Pure Software-Based Screen Privacy Protection System for Mobile Devices Dan Wang, Haibo Lei, Zijian Pan, Yongpan Zou, Kaishun Wu
15:45 – 16:00	A Toolled Method for Developing Knowledge-Based Activity Recognizers Rafik Belloum, Antoine Riche, Nic Volanschi, Charles Consel
16:00 – 16:15	NEAT Activity Detection Using Smartwatch at Low Sampling Frequency Ankita Dewan, Venkata M. V. Gunturi, Vinayak Naik, Kousik Dutta
16:15 – 16:30	MCCR: Learning Multi-Order Convolutional Correlations for Recommendation Yingshuai Kou, Neng Gao, Jia Peng, Jiong Wang, Min Li, Yiwei Shan
16:30 – 16:45	Finding the Global Optimal Solution in Dynamic Multiple TSPTW With Data-Driven ACO Zimu Xu, Jiahui Yu, Weifeng Su
16:45 – 17:00	Lightweight Grouping-Proof for Post-Quantum RFID Security Lu Shouqin, Xiangxue Li
17:00 – 17:15	WiARGAN: A WiFi-Based Action Recognition Method With GANs Shaoying Wang, Tingpei Huang
17:15 – 17:30	A Dense Margin Network for Human Activity Recognition Based on Augmented Channel State Information Lijian Wei, Jun Feng, Yufei Liu, Tuo Zhang, Qirong Bu, Baoying Liu
17:30 – 17:45	Chinese Remainder Theorem-Based Essential Secret Image Sharing Zuquan Liu, Jianquan Yang, Guopu Zhu
Session 7: (18:00-19:15) : IEEE International Conference on Scalable Computing and Communications Chair: Wei Zhong	
18:00-18:15	Shobhit Kumar, Jaspinder Kaur, Manaal Jamadar and Shirshendu Das Efficient On-Chip Communication for Neuromorphic Systems
18:15-18:30	Carson K. Leung, University of Manitoba, Canada Scalable Mining of Big Data
18:30-18:45	Chenkai Sun and Dr. Junxiu An Research on the Evaluation System of Recommender System
18:45-19:00	Brendan Black, Joseph Rafferty, Jose A. Santos and Andrew Ennis Bluetooth RSSI Signal Chaining for Mesh Network Analysis
19:00-19:15	Shaimaa Bajoudah and Paolo Missier Latency of Trading Transactions in Brokered IoT Data Marketplace in Ethereum
Oct 21	
8:30-9:15	Bhavani Thuraisingham, The University of Texas at Dallas, USA

	Integrating Cyber Security and Artificial Intelligence with Applications in the Internet of Transportation and Smart World Chair: Xuan Guo
9:15-10:00	Yingshu Li, Georgia State University, USA Deep Learning Based Inference of Private Information Using Embedded Sensors in Smart Devices. Chair: Wei Li
Session 8 (10:15 – 12:15) : IEEE International Conference on Ubiquitous Intelligence and Computing Chair: Jonathan Shihao Ji	
10:15 – 10:30	CovidPass: A Contactless Check-In System for Keeping Social Distance in Public Health Crisis Xin He, Hong Hong, Yanwen Liu, Yongchuan Li, Zhihan Jiang, Xiaojuan Ma, Longbiao Chen, Cheng Wang
10:30 – 10:45	Feasibility Analysis of Machine Learning Optimization on GPU-Based Low-Cost Edges Jiashun Suo, Xingzhou Zhang, Shilei Zhang, Wei Zhou, Weisong Shi
10:45 – 11:00	Train++: An Incremental ML Model Training Algorithm to Create Self-Learning IoT Devices Bharath Sudharsan, Piyush Yadav, John G. Breslin, Muhammad Intizar Ali
11:00 – 11:15	Globe2Train (G2T): A Framework for Distributed Machine Learning Model Training Using IoT Devices Across the Globe Bharath Sudharsan, John G. Breslin, Muhammad Intizar Ali
11:15 – 11:30	Implanting Domain Knowledge Into Feature Selection for Effective Outlier Detection in Network Traffic Data Zhongyang Wang, Yijie Wang, Yongjun Wang
11:30 – 11:45	Average AoI Minimization in UAV-Assisted IoT Backscatter Communication Systems With Updated Information Xuhui Zhang, Weiran Luo, Yanyan Shen, Shuqiang Wang
11:45 – 12:00	Visual Navigation via Reinforcement Learning and Relational Reasoning Kang Zhou, Chi Guo, Huyin Zhang
12:00 – 12:15	Efficient Algorithms for Caregiver Routing and Scheduling in Home Health Care Services Jinyao Huang, Yalan Wu, Jigang Wu, Long Chen
Session 9 (13:00 – 15:00) : IEEE International Conference on Ubiquitous Intelligence and Computing Chair: Jonathan Shihao Ji	
13:00 – 13:15	A Lane Changing Model Based on Imitation Learning and Gaussian Velocity Fields Ming Wei, Wei Ren, Tianqing Zhu
13:15 – 13:30	Speech Emotion Recognition Using XGBoost and CNN BLSTM With Attention Jingru He, Liyong Ren
13:30 – 13:45	That Phone Charging Hub Knows Your Video Playlist! Sraddhanjali Acharya, Abdul Serwadda, Argenis Bilbao
13:45 – 14:00	Can Learning-Based DVFS Technique Adapt to Different Linux Embedded Platforms? Deepak Ramegowda, Man Lin
14:00 – 14:15	PALM: Platoons Based Adaptive Traffic Light Control System for Mixed Vehicular Traffic Dayuan Tan, Mohamed Younis, Wassila Lalouani, Sookyoung Lee

14:15 – 14:30	A Route Optimization Scheme Based on Improved Simulated Annealing Algorithm Chenyan Sun, Wei Ren
14:30 – 14:45	Deep Personalized Prediction of MPA-AUC With Attentive Interactions in Kidney Transplantation Liping Zhang, Dehua Chen, Wei Zhang, Weiliang Zhao, Xiaokang Zhou, Kun Shao
14:45 – 15:00	DALU: Adaptive Learning Rate Update in Distributed Deep Learning Weiping Zhu, Yijie Tang
Session 10 (15:15 – 17:30): IEEE International Conference on Internet of People & IEEE International Conference on Advanced and Trusted Computing Chair: Yubao Wu	
15:15 - 15:30	Pushpinder Kaur Chouhan; Liming Luke Chen; Tazar Hussain; Alfie Beard A Situation Calculus Based Approach to Cognitive Modelling for Responding to IoT Cyberattacks
15:30-15:45	Jie Dai; Yuan Li; Xiaolin Fan; Jing Sun; Yuhai Zhao Finding Early Bursting Cohesive Subgraphs in Large Temporal Networks
15:45-16:00	Chaya Liebeskind; Shmuel Liebeskind; Shoam Yechezkely An Analysis of Interaction and Engagement in YouTube Live Streaming Chat
16:00-16:15	Cheng Qian; Wei Yu; Xing Liu; David Griffith; Nada Golmie Towards Online Continuous Reinforcement Learning on Industrial Internet of Things
16:15-16:30	Estephanos Mekbib; Yan Huang; Chao Mei; Yi Li Designing a Smart Virtual Environment for Autism Spectrum Disorder Detection
16:30-16:45	Sivanvita Srimath; Yang Ye; Krishanu Sarker; Raj Sunderraman; Jonathan Shihao Ji Human Activity Recognition From RGB Video Streams Using 1D-CNNs
16:45-17:00	Dongliang Chen; Hongyong Huang; Yuchao Zheng; Piotr Gawkowski; Zhihan Lv; Haibin Lv Traffic Flow of Connected and Automated Vehicles in Smart Cities: Human-Centric
17:00-17:15	Kate Turley; Joseph Rafferty; Raymond Bond; Maurice David Mulvenna; Assumpta Ryan; Pamela Topping; Lloyd Crawford Biodynamic Lighting to Support the Wellbeing of People Living With Dementia in Care Facilities
17:15 - 17:30	Alexia Dini Kounoudes; Georgia Kapitsaki; Ioannis Katakis; Marios Milis User-Centred Privacy Inference Detection for Smart Home Devices.

2021 IEEE Smart World Congress