

Advance Program 2024

The 11th International Conference on Future Internet of Things and Cloud (FiCloud 2024)

The 20th International Conference on Mobile Web and Intelligent Information Systems (Mobiwis 2024)

The 5th International Conference on AI, Big Data and Blockchain (ABB 2024)

19-21 August 2024 [Hybrid]

Vienna, Austria

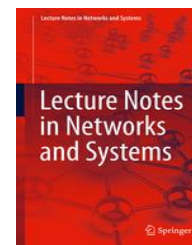
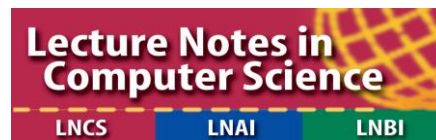
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Advance Program 2024

General Information

- The conferences will be held onsite in Vienna as well as online via the videoconferences service, **Zoom**.
- The onsite sessions will be held at the conference venue:



- The online sessions will be held via Zoom. The following information is applicable to presentation via Zoom.
 - Authenticated access will be given to participants who registered for the conferences. Participants are requested to get familiarize themselves with the Zoom.
 - Paper presentations will be given in a live online format at the scheduled times, via Zoom. Check the conference program for date/time of paper presentation.
 - Each paper will have around 15-20 minutes for presentation, followed by Q/A.
 - The online delivery mode of presentations will be in a live format via Zoom
- Link to [Vienna Time Zone](#)

KEYNOTE I

Explainable AI for Building Trust and Transparency in Autonomous IoT Systems

Dr. Jules Ferdinand P. Disso

BNP Paribas, UK

Abstract:

The integration of Artificial Intelligence (AI) with the Internet of Things (IoT) has given rise to autonomous systems that are increasingly prevalent in various sectors, including, healthcare, smart cities, and industrial automation. However, the opaque nature of many AI models, often referred to as "black boxes," poses significant challenges in understanding and trusting the decision-making processes of these systems. This talk will explore the imperative need for Explainable AI (XAI) in order to build trust and transparency in IoT systems. It will look into current advancements in AI, highlighting the evolution of machine learning models and their applications in IoT systems. It also sets the stage for a deep dive into Explainable AI techniques such as LIME (Local Interpretable Model-agnostic Explanations), SHAP (SHapley Additive exPlanations), and attention mechanisms and examine their suitability and effectiveness in elucidating AI-driven decisions within IoT systems. Key discussion points will include maintaining balance between model explainability and performance as well as addressing the trade-offs and strategies for optimizing both. The ethical implications of deploying XAI in scenarios where user trust is paramount will also be scrutinized, considering the potential consequences of opaque decision-making in critical applications. Real-world case studies will illustrate successful implementations of XAI in IoT systems, showcasing how transparency can enhance reliability and user trust. Furthermore, the talk will explore the challenges faced and lessons learned from these implementations. Finally, it will highlight emerging trends and open research questions in XAI, which aim to encourage academic and industrial community to further investigate this crucial research area.

Biography:

Dr. Jules Ferdinand Pagna Disso is the Director and Group Head of Cyber Risk Intelligence & Insider Technology Risk at BNP Paribas and Head of Digital Asset Risk. He has obtained PhD in Intrusion Detection Systems from the University of Bradford. He possesses extensive experience in cyber threat intelligence, IT risk management, vulnerability management, IT governance and Artificial Intelligence. He oversees the external surface attack management for a large number of websites across nearly 50 business units, ensuring the identification and resolution of cyber threats. He has developed innovative techniques for integrating AI into cybersecurity processes, enhancing the field's capabilities to mitigate risks effectively. At the Paris HUB AI, Dr. Disso collaborates with legal experts in order to navigate and influence AI regulations. He has also delivered numerous talks at international conferences on AI and its implications on cybersecurity. He has significant expertise in developing world-class offensive tools, managing complex deception networks, and conducting high-profile incident responses.

KEYNOTE II

A Service-based Approach to Drone Service Delivery in Skyway Networks

Prof. Athman Bouguettaya

The University of Sydney, Australia

Abstract:

We propose a novel service framework to effectively provision drone-based delivery services in a skyway network. This service framework provides a high-level service-oriented architecture and an abstraction to model the drone service from both functional and non-functional perspectives. We focus on spatio-temporal aspects as key parameters to query the drone services under a range of requirements, including drone capabilities, flight duration, and payloads. We propose to reformulate the problem of drone package delivery as finding an optimal composition of drone delivery services from a designated take-off station (e.g., a warehouse rooftop) to a landing station (e.g., a recipient's landing pad). We select and compose those drone services that provide the best quality of delivery service in terms of payload, time, and cost under a range of intrinsic and extrinsic environmental (i.e., context-aware) factors, such as battery life, range, wind conditions, drone formation, etc. This talk will overview the key challenges and propose solutions in the context of single drones and swarms of drones for service delivery.

Biography:

Athman Bouguettaya is Professor and previous Head of School of Computer Science, at the University of Sydney, Australia. He was also previously Professor and Head of School of Computer Science and IT at RMIT University, Melbourne, Australia. He received his PhD in Computer Science from the University of Colorado at Boulder (USA) in 1992. He was previously Science Leader in Service Computing at the CSIRO ICT Centre (now DATA61), Canberra, Australia. Before that, he was a tenured faculty member and Program Director in the Computer Science department at Virginia Polytechnic Institute and State University (commonly known as Virginia Tech) (USA). He is a founding member and past President of the Service Science Society, a non-profit organization that aims at forming a community of service scientists for the advancement of service science. He is or has been on the editorial boards of several journals including, the IEEE Transactions on Services Computing, IEEE Transactions on Knowledge and Data Engineering, ACM Transactions on Internet Technology, The ACM Computing Surveys, the International Journal on Next Generation Computing, VLDB Journal, Distributed and Parallel Databases Journal, and the International Journal of Cooperative Information Systems. He is also the Editor-in-Chief of the Springer-Verlag book series on Services Science. He served as a guest editor of a number of special issues including the special issue of the ACM Transactions on Internet Technology on Semantic Web services, a special issue of the IEEE Transactions on Services Computing on Service Query Models, and a special issue of IEEE Internet Computing on Database Technology on the Web. He was the General Chair of the WISE International Conference for 2023. He was the General Chair of the IEEE ICWS for 2021 and 2022. He was also General Chair of ICSOC for 2020. He served as a Program Chair of the 2012 and 2017 International Conference on Web and Information System Engineering, the 2009 and 2010 Australasian Database Conference, 2008 International Conference on Service Oriented Computing (ICSOC) and the IEEE RIDE Workshop on Web Services for E-Commerce and E-Government (RIDE-WS-ECEG'04). He also served on the

IEEE Fellow Selection Committee as a Vice-Chair for 2022 and 2023. He has published more than 300 books, book chapters, and articles in journals and conferences in the area of databases and service computing (e.g., the IEEE Transactions on Knowledge and Data Engineering, the ACM Transactions on the Web, WWW Journal, VLDB Journal, SIGMOD, ICDE, VLDB, and EDBT). Bouguettaya's work in Web services and more generally in service computing, greatly contributed to the formation of a whole community around the idea of service computing. The impact of his foundational work in Web services has led to numerous highly cited papers. The total Google Scholar citation is more than 10,350. He is also listed by Google Scholar as one of the top 10 cited researchers in the world using the keyword "Service Computing" or "Service-Oriented Computing" or "Web Services". He was the recipient of several federally competitive grants in Australia (e.g., ARC), the US (e.g., NSF, NIH), Qatar (NPRP), EU (FP7), and China (NSFC). He also won major industry grants from companies like HP and Sun Microsystems (now Oracle). He has been an invited speaker at many international conferences and universities around the world. Because of his pioneering work, he was invited to a keynote and speaker at a number of conferences and universities in Australia, UK, France, Morocco, Malaysia, Netherlands, Tunisia, New Zealand, Algeria, China, Qatar, the UAE, etc. Bouguettaya has trained many PhD students who went on to be professors at Purdue University (USA), University of Michigan, Rochester Institute of Technology, Deakin University, Sajib Mistry, and Texas A&M. He also trained a number of postdocs who are now researchers at Alibaba, Sun Yat-Sen University (China), University of Adelaide, Data61, and UNSW. Bouguettaya is a Fellow of the IEEE, Member of the Academia Europaea (Honoris Causa) (MAE) (HON), WISE Fellow, AAIA Fellow, and Distinguished Scientist of the ACM. He is also a Distinguished Speaker of the ACM and IEEE.

KEYNOTE III

Neuromorphic Computing at the Edge

DI Dr. techn. Mugdim Bublin

The University of Applied Sciences, FH Campus Wien

Abstract:

Despite the significant successes of AI, particularly deep learning, in areas such as image recognition, natural language processing, and autonomous vehicles, substantial challenges remain open to investigate. One of the most pressing issues is the high energy consumption of AI applications, especially on embedded devices and within the Internet of Things (IoT). Neuromorphic computing, inspired by biological brains, offers a potential solution by achieving high performance with significantly lower energy consumption than modern deep neural networks. This talk will present key concepts of neuromorphic computing and explore its application at the edge in IoT. Finally, it will discuss open problems and provide an outlook for the future.

Biography:

DI Dr. techn. Mugdim Bublin studied Electrical Engineering at the Technical University of Vienna, earning his DI in 1997 and PhD in 2004. He spent almost 20 years at Siemens, focusing on Radio Resource Management Algorithms for 3G and 4G mobile networks, patent management, and machine learning. He also contributed to automotive software safety at Bosch. Since 2019, he has been affiliated with the University of Applied Sciences, FH Campus Wien. In 2021, he was appointed the City of Vienna Endowed Professor of Artificial Intelligence. His extensive research has resulted in numerous publications and patents, particularly in the application of AI in mobile networks, IoT, sensor technology and industry.

MONDAY, 19 AUGUST 2024

09:00-09:30	Opening Session
Conference Opening and Welcome from Local Hosts	
Onsite Room	Room 1
Online Zoom	Room1-Link

09:30-10:30	Plenary Session: Keynote 1
Explainable AI for Building Trust and Transparency in Autonomous IoT Systems <i>Jules Ferdinand P. Disso, BNP Paribas, UK</i>	
Session Chair	Helen Karatza, Aristotle University of Thessaloniki, Greece
Onsite Room	Room 1
Online Zoom	Room1-Link

10:30-11:00	Tea/Coffee Break
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11:00-12:30	FiCloud Session 1: Security and Privacy
Session Chair	Qublai Ali Mirza, University of Gloucestershire, UK
Onsite Room	Room 1
Online Zoom	Room1-Link
Scheduling Bag-of-Task Jobs with Security Requirements and Partial Computations in a Fog – Cloud System <i>Helen Karatza</i>	
Measuring Security with a Score System <i>Dalton C´ezane Gomes Valadares, Angelo Perkusich and Danilo Freire de Souza Santos</i>	
A Grid-Matrix Based on Industry Needs to Evaluate Automation in Security Operations Centre (SOC) <i>Kamal Zidan, Abu Alam and Qublai Ali Mirza</i>	
ASAP: A Dynamic & Proactive Approach for Android Security Analysis and Privacy <i>Catarina Silva, João Felisberto, Joao Paulo Barraca and Paulo Salvador</i>	

MONDAY, 19 AUGUST 2024

11:00-12:30	MobiWis Session 1: IoT, Networks and Cloud Services
Session Chair	Perin Unal, TEKNOPAR, Turkey
Onsite Room	Room2
Online Zoom	Room2-Link
<p>Challenges and Solutions of Developing and Implementing a Novel Desktop-as-a-Service <i>Christian Baun and Johannes Bouché</i></p> <p>Federated Learning Enabled Green Edge Computing System for IIoT Applications <i>Tor Morten Grønli, Abdullah Lakhan and Muhammad Younas</i></p> <p>Simulation of SARSA-Based Reinforcement- Learning Dynamic SDN Migration Process <i>Jenniffer Teh Sue Ling, Saw Chin Tan, Siew Hong Wei, Muhammad Faiz M. Zaki and Nazaruddin Omar</i></p> <p>Dynamic SDN Multiple Nodes Migration using SARSA Reinforcement Learning <i>Jenniffer Teh Sue Ling, Saw Chin Tan, Siew Hong Wei, Muhammad Faiz M. Zaki and Nazaruddin Omar</i></p> <p>Exploring Worst Arc Flow Minimization: A Comparative Study of a Provided Wireless Network and its Derivation via Spanning Tree Topology <i>Pablo Adasme, Andres Viveros, Ismael Soto, Ali Dehghan Firoozabadi and Demóstenes Zegarra Rodríguez</i></p>	

MONDAY, 19 AUGUST 2024

11:00-12:30	FiCloud Session 2: Security in IoT Systems
Session Chair	Thomas Lee, University of Illinois Chicago, USA
Onsite Room	Room 3
Online Zoom	Room3-Link
<p>The Practical Requirements of a Malware Training Platform Tailored to Industry and Education <i>Alexander Cameron, Abu Alam and Qublai Ali Mirza</i></p> <p>Three Layer IoT Architecture: Attacks and Security Mechanisms <i>Mohamed El Hanine, Ahmed El-Yahyaoui and Redouane Es-Sadaoui</i></p> <p>Security Analysis of IoT-based Remote Labs <i>Nagesh Walchatwar, Akshit Gureja, Vigneswara Ihita Gangavarapu, Adhishree Ojha and Sachin Chaudhari</i></p> <p>Integrated Cyber Security Risk Management-Insurance and Investment Cost Analysis <i>Thomas Lee</i></p>	

12:30-13:30	Lunch Break
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MONDAY, 19 AUGUST 2024

13:30-15:00	FiCloud Session 3: Smart Environment
Session Chair	Perin Unal, TEKNOPAR, Turkey
Onsite Room	Room 1
Online Zoom	Room1-Link
<p>ARAM: Assets-based Risk Assessment Model for Connected Smart Homes <i>Kayode Adewole, Andreas Jacobsson and Paul Davidsson</i></p> <p>A Novel Data Aggregation Point Placement Method for Smart Metering Service using LoRaWAN Technology <i>Thiago Allisson Ribeiro da Silva, Geraldo Abrantes Sarmiento Neto, Pedro Abreu, Artur Felipe da Silva Veloso, Luis Henrique de Oliveira Mendes and José Valdemir Dos Reis Junior</i></p> <p>Structuring and Integrating Smart Building Planning Rules With BIM-based Planning Tools <i>Markus Aleksy and Philipp Bauer</i></p>	

13:30-15:00	MobiWis Session 2: AI, Blockchain and Security
Session Chair	Christian Baun, Frankfurt University of Applied Sciences, Germany
Onsite Room	Room2
Online Zoom	Room2-Link
<p>Decentralized Renewable Energy Trading: A Cross-chain, NFT, and IPFS Framework <i>Trung P. H. T., Khoa T. D., Kha H. N., Bao Q. T., Trong N. D. P., Loc V. C. P., Hieu D. M., and Bang L. K</i></p> <p>Advancing IAM in the Finance Sector by Integrating Zero Trust and Blockchain Technology <i>Clement Daah, Amna Qureshi, Irfan Awan, Omar Adalat and Savas Konur</i></p> <p>Enhanced Security for Animal Health Records Using RSA-Encrypted NFTs on the Blockchain <i>Triet M. N., Khanh H. V., Bang L. K., Khoa T. D., Bao Q. T., Trong N. D. P., Loc V. C. P., and Hieu D. M.</i></p> <p>Evaluating Third-Party Involvement in Android Apps: Norms and Anomalies in Usage Patterns <i>Trung H. T. Phan, Nghiem T. Pham, Hieu D. M., Khoa D. Tran, Bao Q. Tran, Bang K. Le, Ngan N. T. K., and Trong N. D. Phu</i></p>	

MONDAY, 19 AUGUST 2024

13:30-15:00	FiCloud Session 4: Performance Analysis and Opimisation
Session Chair	Samia Bouzefrane, CNAM, Paris, France
Onsite Room	Room 3
Online Zoom	Room3-Link
<p>Centralized vs Decentralized Federated Learning: A trade-off performance analysis <i>Chaimaa Medjadji, Guilain Leduc, Sylvain Kubler and Yves Le Taon</i></p> <p>Adaptive Fit Fraction Based on Model Performance Evolution in Federated Learning <i>Filipe Maciel, Joahannes B D. da Costa, Luis F. G. Gonzalez, Allan M. de Souza, Leandro A. Villas and Luiz F. Bittencourt</i></p> <p>A Reinforcement Learning Approach for Business Processes Tasks Allocation in the Cloud <i>Amina Ahmed Nacer and Mohammed Riyadh Abdmeziem</i></p> <p>LoRaWISEP: A Simulation and Optimization Tool for LoRaWAN IoT Networks <i>Pedro F. F. Abreu, Luis H. de O. Mendes, Geraldo A. Sarmiento Neto, Thiago A. R. da Silva, Artur F. da S. Veloso, Fillipe M. de Vasconcelos, Erico M. Leao and Jos ´ e V. dos Reis Junio</i></p>	

15:00-15:30	Tea/Coffee Break
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MONDAY, 19 AUGUST 2024

15:30-17:00	FiCloud Session 5: IoT-enabled Applications
Session Chair	Dalton Cézane, Federal University of Campina Grande, Brazil
Onsite Room	Room 1
Online Zoom	Room1-Link
<p>IoT Based Wastewater Dissolved Oxygen and Total Dissolved Solids Monitoring with Data Analytics <i>Lillian Yee Kiaw Wang, Jun Wei Bong, Yee Xuan Eng and Wei Sheng Wong</i></p> <p>Hybrid Platforms for IoT in the Classroom – A Competency Analysis and Performance Evaluation <i>Gabriel Astudillo and Victor Ponce</i></p> <p>Low-Cost Retrofitted IoT Based Titration Setup for Remote Labs <i>Abhinav Marri, Vedant Nipane, Rishabh Agrawal, Sachin Chaudhari and Prabhakar Bhimalapuram</i></p> <p>A Study on Home IoT Vulnerabilities <i>Amin Sedighfar</i></p>	

15:30-17:00	MobiWis Session 3: Blockchain Techniques and Technologies
Session Chair	Tor-Morten Gronli, Kristiania University College, Norway
Onsite Room	Room 2
Online Zoom	Room2-Link
<p>Applying the Knowledge Behavior Gap Model to Study the Acceptance of Blockchain-Based Solutions <i>Thong H. N. Dinh and Agnis Stibe</i></p> <p>Transparent Threads: Enhancing Handicraft Supply Chain Ethics and Transparency with Blockchain, Smart Contracts and Encrypted-RSA NFTs <i>Trung P. H. T., Bang L. K., Kha H. N., Bao Q. T., Trong N. D. P., Loc V. C. P., Hieu D. M., and Nghiem P. T.</i></p> <p>Enhancing User Control and Transparency in Personal Data Trading: A Blockchain-Enabled Platform Approach <i>Triet M. N., Bang L. K., Khanh H. V., Anh T. N., Nhi T. L., Nghiem P. T., Khiem H. G., and Nam T. B.</i></p> <p>Quantum-Blockchain Healthcare System for Invasive and No-Invasive-IoMT Data <i>Tor Morten Grønli, Abdullah Lakhan and Muhammad Younas</i></p>	

MONDAY, 19 AUGUST 2024

15:30-17:00	FiCloud Session 6: Cloud, Edge and IoT
Session Chair	Amin Sedighfar, Humber College, Canada
Onsite Room	Room 3
Online Zoom	Room3-Link
Data Sovereignty and Compliance in the Computing Continuum <i>Vasileios Karagiannis</i>	
Using Multicast Network Slices in Edge Environments <i>Jose A. Carrilho and Edmundo R. M. Madeira</i>	
IoT Based Automated Medication Dispensing with Data Analytics and Visualisation <i>Seth Ameer Lee, William Swee Chiong Ho, Yong Hong Yap, Lillian Yee Kiaw Wang, Dinesh Sangarran Ramachandram and Pui San Saw</i>	
A Tool Condition Monitoring Study to Support Circular Economy <i>Inci Sila Kaleli, Perin Unal, Bilgin Umut Deveci and Ozlem Albayrak</i>	

19:00-21:00	Welcome Reception
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Tuesday, 20 AUGUST 2024

09:30-10:30	Plenary Session: Keynote 2
A Service-based Approach to Drone Service Delivery in Skyway Networks <i>Athman Bouguettaya, The University of Sydney, Australia</i>	
Session Chair	Dana Petcu, West University of Timisoara, Romania
Onsite Room	Room 1
Online Zoom	Room1-Link

10:30-11:00	Tea/Coffee Break
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11:00-12:30	FiCloud Session 7: AI and Blockchain for Cyber Security
Session Chair	Eslam AbdAllah, Concordia University of Edmonton, Canada
Onsite Room	Room 1
Online Zoom	Room1-Link
Feature selection in ML-based SDN intrusion detection system <i>Francesco Di Gennaro, Alessandro Cucchiarelli, Christian Morbidoni, Luca Spalazzi</i>	
Blockchain Technology and Vulnerability Exploits on Smart Contracts <i>Iman Darvishi, Bismark Tei Asare, Ahmad Musa, Abel Yeboah-Ofori, Waheed Oseni and Aishat Ganiyu</i>	
Performance Evaluations on AI Regression and Classification Algorithms using Ensemble Methods <i>Aishat Ganiyu, Iman Darvishi, Ronald Addo-Quaye, Abel Yeboah-Ofori, Bismark Tei Asare and Oluwole Oguntoyinbo</i>	
Towards Very-High Interaction Honeypots for ICS: a Proof of Concept <i>Francesco Blefari, Carmelo Felicetti, Francesco Aurelio Pironti, Angelo Furfaro</i>	

Tuesday, 20 AUGUST 2024

11:00-12:30	MobiWis Session 4: AI-based Applications
Session Chair	Monique Pretorius, Atomli Consulting , South Africa
Onsite Room	Room 2
Online Zoom	Room2-Link
<p>Exploring Human Artificial Intelligence Using the Knowledge Behavior Gap Model <i>Agnis Stibe and Thong H. N. Dinh</i></p> <p>Review of Deep Learning Models for Remote Healthcare <i>Avnish Singh Jat, Tor-Morten Grønli and George Ghinea</i></p> <p>Transformation Design Framework for AI-Driven Hyper-Performance <i>Agnis Stibe</i></p> <p>A Statistical Approach for Modeling the Expressiveness of Symbolic Musical Text <i>Michele Della Ventura</i></p> <p>A Domain-Aware Federated Learning Study for CNC Tool Wear Estimation <i>Inci Sila Kaleli, Perin Unal, Bilgin Umut Deveci, Ozlem Albayrak and Ahmet Murat Ozbayoglu</i></p>	

Tuesday, 20 AUGUST 2024

11:00-12:30	FiCloud Session 8: AI in IoT and Mobile Systems
Session Chair	Saeed Sharif, University of East London, UK
Onsite Room	Room 3
Online Zoom	Room3-Link
<p>A Mobile Feature-Based Cascaded Deep Learning Approach for Diabetic Retinopathy Classification <i>Marah Alhalabi, Nermin Eissa, Hadeel Salman, Arwa Sheibani, Ayesha Amin and Mohammed A. Ghazal</i></p> <p>Developing a User-Friendly Flutter-Based Mobile App for Integrating NDN with IoT Systems <i>Mohamed Ahmed M. Hail and Arne Matthes</i></p> <p>Advancements in Sentiment Analysis: Insights, Innovations and Future Directions <i>Saeed Sharif, Madhav Raj Theeng Tamang, Mohammed Swalih Koya and Wael Elmedany</i></p>	

12:30-13:30	Lunch Break
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Tuesday, 20 AUGUST 2024

13:30-15:00	FiCloud Session 9: Social Engineering and Security Risks
Session Chair	Lillian Wang, Monash University Malaysia, Malaysia
Onsite Room	Room 1
Online Zoom	Room1-Link
<p>The Impact of Social Engineering Attacks on the Metaverse Platform <i>Alameen Jafar, Abel Yeboah-Ofori , Toluwalaju Abisogun, Ian Hilton, Oluwole Oguntoyinbo and Oyelakin Oyetunji</i></p> <p>Managing Third Party Risk for Small and Medium Enterprises <i>Siddharth Dua, Pooja Shah, Eslam G. Abdallah</i></p> <p>Data Security and Governance in Multi-Cloud Computing Environment <i>Abel Yeboah-Ofori, Alameen Jafar, Toluwalogu Abisogun, Ian Hilton, Waheed Oseni, Ahmad Musa</i></p>	

13:30-15:00	MobiWis Session 5: Smart Cities and Knowledge Management
Session Chair	Ludger Martin, Hochschule RheinMain, Germany
Onsite Room	Room 2
Online Zoom	Room2-Link
<p>Information and Knowledge Management Methods for the Preparation of New Security Standards and New Legislation for Use in Smart Cities <i>Hana Dubravova and Vladimir Bures</i></p> <p>Lessons Learned: A Usability Study of an Urban Data Platform for Citizens <i>Yasmina Tajja and Ludger Martin</i></p> <p>The Impact of Modern Information Technology on the Resistance to Disinformation in the Police <i>Lenka Jakubcova, Kristyna Holubova and Hana Dubravova</i></p> <p>Exploring Cognitive Enhancement Technologies in the Workplace: A Systematic Literature Review <i>Monique Pretorius, Agnis Stibe, Karel Stanz and Arien Strasheim</i></p>	

Tuesday, 20 AUGUST 2024

13:30-15:00	FiCloud Session 10: Big Data and Advanced Networks in Healthcare
Session Chair	Mohamed Ahmed M. Hail, Institute of Telematics, University of Lübeck, Germany
Onsite Room	Room 3
Online Zoom	Room3-Link
<p>Through-the-wall Human Activity Recognition using Ultra-Wideband Radar and Deep Learning <i>Satanai Yakoub, Sara Karkanawi, Gasm Elbary Elhassan, Taimur Hassan, Mohammed A. Ghazal and Jawad Yousaf</i></p> <p>Advancing Patient Care: A WBAN-Based Sustainable Health Monitoring System for Stress Assessment <i>Ghada Said Rezk, Maria Al Bacha, Deema Saber Al Madhoun, Shaima Saeed Saleh, Abdalla Said Gad, Maha Yaghi, Taimur Hassan, Jawad Yousaf and Mohammed A. Ghazal</i></p> <p>InstaCare: Rapid Access to non-Urgent Medical Care using a Hybrid Heatmap of Doctor Availability and Crowd-Sourced Quality Assessment <i>Mohammed A. Ghazal, Reham Kotb, Maha Yaghi, Hager Khalil, Shamma Alyafei, Haneen Hasan and Marah Alhalabi</i></p> <p>Diabetic Retinopathy Detection and Grading AI for Mobile and Hand-held Devices: A Readiness Survey <i>Mohammed A. Ghazal, Taimur Hassan, Jawad Yousaf, Marah Alhalabi, Hadeel Salman, Arwa Sheibani, Ayesha Amin and Abdalla Said Gad</i></p>	

15:00-15:30	Tea/Coffee Break
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Tuesday, 20 AUGUST 2024

15:30-17:00	FiCloud Session 11: IoT and Cloud Continuum
Session Chair	Angelo Furfaro, University of Calabria, Italy
Onsite Room	Room 1
Zoom Link	Room1-Link
<p>Transitioning IIoT Data Processing: An Experience with InfluxDB on Kubernetes <i>Ünal Kayaduman, Turgay Kale and Nezihe Sözen</i></p> <p>Towards business continuity with Edge-Cloud continuum <i>Carmine Colarusso, Ida Falco and Eugenio Zimeo</i></p> <p>RoadProbe: A Machine Learning-based System for Predictive Road Maintenance <i>Abdelmounaam Rezgui, Yashwanth Sai Rachala and Moussa Ayyash</i></p>	

15:30-17:00	FiCloud Session 12: Security Risks and Control
Session Chair	Rafael Teixeira, Instituto de Telecomunicações, Portugal
Onsite Room	Room 2
Zoom Link	Room2-Link
<p>Hybrid Access Control Model for an IoT Environment <i>Mohammed Walid Krakallah, Safia Nait-Bahloul and Samia Bouzefrane</i></p> <p>Step-by-Step Simulation and Statistical Analysis of C and Assembly Programs for MSP430 <i>Christian Franck and Johann Großschädl</i></p> <p>ApiPot: A Novelty API Honey-pot for Exhaustive Attack Feature Detection in HTTP Protocol <i>Kalpin Erlangga Silaen, Benfano Soewito, Maria Anggreainy and Aditya Kurniawan</i></p> <p>Leveraging Digital Identity and Open Banking Data for Fraud Prevention in the Financial Industry <i>Nada Khalifa, Wael Elmedany and Saeed Sharif</i></p>	

Tuesday, 20 AUGUST 2024

15:30-17:00	FiCloud Session 13: Machine Learning Approaches
Session Chair	Irfan Awan, University of Bradford, UK
Onsite Room	Room 3
Zoom Link	Room3-Link
<p>Synergy of Machine Learning and Blockchain Strategies for Transactional Fraud Detection in FinTech Systems <i>Hanae Abbassi, Saida El Mendili and Youssef Gahi</i></p> <p>A Deep Graph Neural Networks Approach for Service Failure Analytics <i>Ba-Hung Nguyen, Hitoshi Yabusaki and Takahiro Sagara</i></p> <p>Exploring Machine Learning Approaches for QoS Prediction on SMT Processors <i>Sercan Sari, Onur Demir and Gurhan Kucuk</i></p> <p>Shallow vs. Deep Learning: Prioritizing Efficiency in Next Generation Networks <i>Rafael Teixeira, Leonardo Almeida, Pedro Rodrigues, Mário Antunes, Diogo Gomes and Rui Aguiar</i></p>	

17:00-18:30	FiCloud Session 14: IoT and Sensor Networks
Session Chair	Rafael Teixeira, Instituto de Telecomunicações, Portugal
Onsite Room	Room 1
Zoom Link	Room1-Link
<p>MQTT-Chain: An MQTT approach using blockchain and smart contracts to achieve a new Quality of Service level <i>Bruno Machado Agostinho, Stefano Chessa, Raffaele Perego, Mario Antônio Ribeiro Dantas and Alex Sandro Roschildt Pinto</i></p> <p>Spatio-Temporal PM Analysis for Event Detection using Low-Cost IoT Sensors <i>Shreyash Gujar, Spanddhana Sara, Ayu Parmar, Sachin Chaudhari and K.S Rajan</i></p> <p>Addressing Mobility Challenges in LoRaWAN through Adaptive Data Rate: A Statistical Median-Based Approach <i>Geraldo Abrantes Sarmiento Neto, Thiago Allisson Ribeiro da Silva, Pedro Felipe Ferreira de Abreu, Artur Felipe da Silva Veloso, Luis Henrique de Oliveira Mendes and José Valdemir Dos Reis Junior</i></p> <p>Planning Hybrid Networks for Multi-Microgrids with LoRaWAN <i>Artur Felipe da Silva Veloso, Pedro Abreu, Thiago Allisson Ribeiro da Silva, Geraldo Abrantes Sarmiento Neto, Luis Mendes and José Valdemir Dos Reis Junior</i></p>	

Tuesday, 20 AUGUST 2024

17:00-18:30	FiCloud Session 15: Cloud Services and Applications
Session Chair	Helen Karatza, Aristotle University of Thessaloniki, Greece
Onsite Room	Room 2
Zoom Link	Room2-Link
<p>Time Dynamic "Allow Listing" For Dropbox <i>Ayesha Khan, Selena Lovelace, Mohamad El-Hajj and Stephane Lemieux</i></p> <p>Optimizing Warehouse Operations in Bangladesh: Leveraging IoT and Cloud Migration for Enhanced Security and Efficiency <i>Toushif Hossain, Riyad Hossain, Rubaiyat Islam and Saadia Binte Alam</i></p> <p>Integration of Self-sovereign Identity in Centralized Identity Management: SSI-based Authentications, Attribute-based Authorization <i>Aytaj Badirova, Faraz Fatemi Moghaddam and Ramin Yahyapour</i></p> <p>Secured Maintaining System-Pattern Based Healthcare Verification using Cloud <i>Abdullah Alotaibi</i></p>	

17:00-18:30	FiCloud Session 16: Intelligent Systems and Applications
Session Chair	Jose A. Carrilho, University of Campinas, Brazil
Onsite Room	Room 3
Zoom Link	Room3-Link
<p>Supporting C2C Communications in a Smart Shire Environment Using DLT-based Data Mules <i>Francesco Aurelio Pironti, Francesco Blefari and Angelo Furfaro</i></p> <p>Improving Automotive Aftermarket Forecasting with MLOps <i>Pedro Sobral, Rafael Teixeira, Ricardo Marques, Nuno Figueiredo, Mário Antunes and Diogo Gomes</i></p> <p>The Analysis of Apple Orchard from Three-dimensional Point Cloud Data for Precision Agriculture <i>Nasreddine Haqiq, Mounia Zaim, Abdelhay Haqiq, Mohamed Sbihi, Mustapha El Alaoui and Lhoussaine Masmoudi</i></p>	
19:30-21:30	Conference Dinner

Wednesday, 21 AUGUST 2024

09:30-10:30	ABB Session 1: Keynote 3
Neuromorphic Computing at the Edge <i>DI Dr. techn. Mugdim Bublin, The University of Applied Sciences, FH Campus Wien</i>	
Session Chair	Irfan Awan, University of Bradford, UK
Onsite Room	Room 2
Online Zoom	Room2-Link

10:30-11:00	Tea/Coffee Break
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11:00-12:30	ABB Session 2: Security and Privacy
Session Chair	Muhammad Younas, Oxford Brookes University, UK
Onsite Room	Room 2
Online Zoom	Room2-Link
Privacy-Preserving Energy Optimisation in Home Automation Systems <i>Henrique Sousa, Rafael Gonçalves, Mário Antunes and Diogo Gomes</i>	
Self-Sovereign Identity Management System Using Verifiable Credentials to Enhance Privacy and Security Through Zero Knowledge Proofs <i>Daniel Shadung, Sthembile Mthethwa, Sthembile Ntshangase, Tanita Singano and Nthabiseng Mokoena</i>	
Investigation into Data Protection Strategies in Complex Digital Health <i>Davies C Ogbodo, Irfan Ullah-Awan Andrea Cullen and Fatima Zahrah</i>	
Interpretable SHAP-Driven Machine Learning for Accurate Fault Detection in Software Engineering <i>Sofian Kassaymeh, Gaith Rjoub, Rachida Dssouli, Jamal Bentahar, and Shahed Bassam Almobydeen</i>	

12:30-13:30	Lunch Break
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Wednesday, 21 AUGUST 2024

13:30-15:00	ABB Session 3: AI-based Applications
Session Chair	Lillian Wang, Monash University Malaysia, Malaysia
Onsite Room	Room 2
Online Zoom	Room2-Link
<p>Audio Driven Video Filtering Using Machine Learning <i>Arshdeep Kaur and Shikharesh Majumdar</i></p> <p>A Decentralized Cyber Threat Information (CTI) Sharing Platform <i>Tanita Singano, Sthembile Mthethwa and Sthembile Ntshangase</i></p> <p>Analyzing Bitcoin Price Trends: News Sentiment and Financial Metrics <i>Burcu Selcuk and Tacha Serif</i></p> <p>Beyond Traditional Motion Planning: A Proximal Policy Optimization Reinforcement Learning Approach for Robotics <i>Gaith Rjoub, Nagat Drawel, Rachida Dssouli, Jamal Bentahar, Sofian kassaymeh, and Mohammed Alweshah</i></p> <p>Data Analytics and Visualisation of Wastewater Monitoring via IoT Based Water Moving Vehicle <i>Amirul Mohd Zahari, Shawn Shao En Wang, Jia Sheng Tang, Wai Liang Yeoh and Lillian Yee Kiaw Wang</i></p>	

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