T1: 5G and Future Networks Technologies + Applications and Services (in-person)

12 October 2022// 16:00 -17:30 // In-Person in Montreal

SESSION CHAIR

TBD

ACCEPTED PAPERS

Performance of a Neural Network Receiver under Mismatch of Channel Training Samples – Pedro Henrique Carneiro Souza and Luciano Leonel Mendes (Inatel, Brazil); Richard Demo Souza (Federal University of Santa Catarina, Brazil)

On the Exact Performance of IRS-Assisted Communications Under Random and Coherent Phase Shifts Over κ-μ Fading Channels – Gustavo Rodrigues de Lima Tejerina and Luciano Leonel Mendes (Inatel, Brazil); Rausley Adriano Amaral de Souza (National Institute of Telecommunications (INATEL), Brazil)

Towards Interaction and Conflict Management in AI-assisted Operational Control Loops in 6G – Saeedeh Parsaeefard, Pooyan Habibi and Alberto Leon-Garcia (University of Toronto, Canada)

A Shapley value-enhanced evaluation technique for effective aggregation in Federated Learning – Mohammadreza Salarbashishahri, Samuel Dayo Okegbile and Jun Cai (Concordia University, Canada)

Performance Analysis of Large Aperture mMIMO UCCA Arrays in a 5G User Dense Network – Md Imrul Hasan (The University of Texas at Dallas, USA); Sk Nayemuzzaman (University of Texas at Dallas Texas, USA); Mohammad Saquib (UniversityTexas Dallas, USA)

A Study on the Use of Runtime Files in Handling Crash Reports in a Large Telecom Company – Panchal Komal, Fatima Ait-Mahammed and Abdelwahab Hamou-Lhadj (Concordia University, Canada); Zhongwen Zhu (Ericsson Canada, Canada); Salman Memon (Ericsson, Canada); Alka Isac (Ericsson AB, Canada); Pragash Krishnamoorthy (Ericsson, Canada)

T2: 5G and Future Networks Application and Services (in-person)

12 October 2022// 16:00 -17:30 // In-Person in Montreal

SESSION CHAIR

TBD

ACCEPTED PAPERS

3D Self-Motion Tracking Services: Coalescence of mmWave Beam Orientations and Phase Information – *Simon Häger, Stefan Böcker and Christian Wietfeld (TU Dortmund University, Germany)*

Community CBRS Networks – What You Need to Know – *Filippo Malandra (University at Buffalo, USA); Mari Silbey (US Ignite, Inc., USA); Rolando Alvarez (DigitalC, USA); Bob Cacace (City of Yonkers, USA); Troy Hege (Purdue Research Foundation, USA)*

No Limits – Smart Cellular Edges for Cross-Border Continuity of Automotive Services – *Girma Mamuye Yilma (NEC Laboratories Europe GmbH, Germany); Nina Slamnik-Krijestorac (University of Antwerp, IDLab-imec, Belgium); Marco Liebsch (NEC Laboratories Europe GmbH, Germany); Antonio Francescon (Fondazione Bruno Kessler, Italy); Johann M. Marquez-Barja (University of Antwerpen & imec, Belgium)*

NextG Managed Access Systems (N-MAS) for Correctional-Facility Markets – *Praveen Gupta (MITRE, USA)*

OSC Community Lab: The Integration Test Bed for O-RAN Software Community – *Fransiscus Asisi Bimo, Ferlinda Feliana, Shu-Hua Liao and Chih-Wei Lin (National Taiwan University of Science and Technology, Taiwan); James Li (China Mobile Technology (USA) Inc., USA); Rittwik Jana (Google, USA); Richard Wright (AT&T, USA); Ray-Guang Cheng (National Taiwan University of Science and Technology, Taiwan)*

Unauthorized Power Usage Detection in Disaggregated Smart Meter Home Network – *Olufemi A Abraham and Kabid Hassan Shibly (Nara Institute of Science and Technology, Japan); Hideya Ochiai (University of Tokyo, Japan); Md Delwar Hossain, Yuzo Taenaka and Youki Kadobayashi (Nara Institute of Science and Technology, Japan)*

Comparison of Traditional ML Algorithms for Energy Consumption Prediction Models– *Rebeca Estrada (Escuela Superior Politécnica del Litoral, Espol, Guayaquil, Ecuador & Facultad de Ingeniería en Electricidad y Computación, Ecuador); Víctor Asanza (Escuela Superior Politécnica del Litoral, Ecuador); Danny Torres (Escuela Superior Politecnica del Litoral, Guayaquil, Ecuador); Irving Valeriano (Escuela Superior Politecnica del Litoral, Ecuador); Daniel Alvarado Pelaez (Escuela Superior Politecnica del Litoral, Espol, Ecuador)*

T3: 5G and Future Networks Trials, Experimental Results, Deployment Scenarios, Hardware and Test/Measurements (in-person)

14 October 2022// 16:00 -17:30 // In-Person in Montreal

SESSION CHAIR

Jacopo Iannacci, Fondazione Bruno Kessler – FBK, Italy

ACCEPTED PAPERS

5G in the Wild: Performance of C-Band 5G-NR in Rural Low-Power Fixed Wireless Access – *Eleanor Davies (University of Lancaster, United Kingdom (Great Britain)); Antony Chung (Lancaster University, United Kingdom (Great Britain)); Matthew Broadbent (Edinburgh Napier University, United Kingdom (Great Britain)); Alasdair Macleod (Quickline Communications Ltd, United Kingdom (Great Britain)); Nicholas Race (Lancaster University, United Kingdom (Great Britain))*

Simulation of NR-V2X in a 5G Environment using OMNeT++ – Suryanarayanaraju Pusapati (University of Regina, Canada); Bassant Selim (Ericsson AB, Canada); Yimin Nie (Ericsson INC., Canada); Huang Lin and Wei Peng (University of Regina, Canada)

Under Trial: Evolved Service-Based Architecture Platform for Mobile Telecommunication Networks – *Sebastian Robitzsch (InterDigital Europe, United Kingdom (Great Britain)); Josep Ribes (Universitat Politecnica de Valencia, Spain); Andre S. Gomes (OneSource, Portugal); Hergys Rexha (Abo Akademi University, Finland); Luis Cordeiro (OneSource, Portugal); Mohamad Kenan Al-Hares (InterDigital Europe Ltd., United Kingdom (Great Britain)); Marius Corici (Fraunhofer FOKUS, Germany); David Gomez-Barquero (Universitat Politecnica de Valencia, Spain)*

Better Safe Than Sorry: Distributed Testbed for Performance Evaluation of Private Networks – *Christian Arendt, Stefan Böcker, Caner Bektas and Christian Wietfeld (TU Dortmund University, Germany)*

QoE Evaluation of Integrated Satellite-Terrestrial Network on a Real-World Testbed – *Mahshid Noorani (University of Maryland, USA); Asim Zoulkarni (University of Maryland, College Park, USA); John S. Baras (University of Maryland, USA)*

A Supra-Disciplinary Open Framework of Knowledge to Address the Future Challenges of a Network of Feelings – *Jacopo Iannacci (Fondazione Bruno Kessler – FBK, Italy); Francesca Cavallo (Centro Di Terapia Metacognitiva Interpersonale, Italy); Carlo Fischione (KTH, Sweden)*

T4: 5G and Future Networks Technologies (virtual)

12 October 2022// 11:00 -12:30 // Virtual

SESSION CHAIR

Sumit Kumar, SnT, University of Luxembourg, Luxembourg

ACCEPTED PAPERS

Automated Data Analytics and Resource Arbitration Scheduling for Containerized Network Functions – *Takaya Miyazawa (National Institute of Information and Communications Technology (NICT), Japan); Masahiro Jibiki and Ved P. Kafle (National Institute of Information and Communications Technology, Japan)*

Autonomous Navigation and Configuration of Integrated Access Backhauling for UAV Base Station Using Reinforcement Learning – *Hongyi Zhang (Chalmers University of Technology, Sweden); Jingya Li (Ericsson, Sweden); Zhiqiang Qi (Ericsson, China); Xingqin Lin (NVIDIA, USA); Anders Aronsson (Ericsson, Sweden); Jan Bosch (Chalmers University of Technology, Sweden); Helena Holmström Olsson (Malmö University, Sweden)*

Towards 3D Flexible 6G Networks: Status, Challenges and Technical Enablers – *Sokratis Barmpounakis and Andreas Georgakopoulos (WINGS ICT Solutions, Greece); Panagiotis Vlacheas (WINGS ICT SOLUTIONS, Greece); Panagiotis Demestichas (University of Piraeus, Greece)*

Drivers for Organic 6G Networking – *Marius Corici, Fabian Eichhorn and Varun Gowtham (Fraunhofer FOKUS, Germany); Thomas Magedanz (Fraunhofer Institute FOKUS / TU Berlin, Germany)*

Cooperative Spectrum Sensing based on Anomaly Detection and K Nearest Neighbors– *Lizeth Lopez-Lopez (Universidad Autonoma de Baja California, Mexico); Ángel G. Andrade (Universidad Autónoma de Baja California & Facultad de Ingeniería, Mexico); Guillermo Galaviz (Universidad Autonoma de Baja California, Mexico)*

OpenAirInterface as a platform for 5G-NTN Research and Experimentation– *Sumit Kumar (SnT, University of Luxembourg, Luxembourg); Ashish Kumar Meshram (Ph.D., Luxembourg); Abdelrahman Astro and Jorge Querol (University of Luxembourg, Luxembourg); Thomas Schlichter (Fraunhofer IIS, Germany); Symeon Chatzinotas (University of Luxembourg, Luxembourg); Florian Kaltenberger (Eurecom, France); Adam Kapovits (Eurescom GmbH, Germany); Roberto Magueta (Instituto de Telecomunicações (IT)/University of Aveiro, Portugal); Thomas Heyn (Fraunhofer IIS, Germany); Florian Völk, Sertac Kaya, Robert T. Schwarz and Andreas Knopp (Bundeswehr University Munich, Germany); Luis Pereira (Allbesmart Lda, Portugal)*

T5: 5G and Future Networks Technologies (virtual)

13 October 2022 // 11:00 -12:30 // Virtual

SESSION CHAIR

ACCEPTED PAPERS

A Novel RACH Scheme for Efficient Access in 5G and Beyond Networks using Hash Function – *Siba Narayan Swain and Ashit Subudhi (Indian Institute of Technology Dharwad, India)*

The Cost of Uncertainty: Impact of Overprovisioning on the Dimensioning of Machine Learning-based Network Slicing – *Caner Bektas, Stefan Böcker and Christian Wietfeld (TU Dortmund University, Germany)*

Resource Allocation with Vickrey-Dutch Auctioning Game for C-RAN Fronthaul – *Doruk Sahinel (Eindhoven University of Technology, The Netherlands & Technische Universität Berlin, Germany); Simon Rommel and Idelfonso Tafur Monroy (Eindhoven University of Technology, The Netherlands)*

Security and 5G: Attack mitigation using Reinforcement Learning in SDN networks– *Jose Alvaro Fernandez Carrasco, Lander Segurola Gil, Francesco Zola and Raul Orduna Urrutia (Vicomtech, Spain)*

Achieving Linear Scaling in Provisioning End-to-End Network Slicing – *Omar Abdul Latif (Rochester Institute of Technology, USA); Muhieddin Amer (Rochester Institute of Technology, United Arab Emirates); Andres Kwasinski (Rochester Institute of Technology, USA)*

Angle of Arrival Estimation for Terahertz-enabled Space Information Networks – *Hasan Nayir (Istanbul Technical University, Turkey); Gunes Karabulut Kurt (Ecole Polytechnique de Montreal, Canada); Ali Gorcin (Yildiz Technical University, Turkey)*

T6: 5G and Future Networks Technologies (virtual)

12 October 2022// 16:00 -17:30 // Virtual

SESSION CHAIR

TBD

ACCEPTED PAPERS

Resource Allocation Using Filtennas in the Presence of Leakage – *Ishani Majumdar (Rutgers University, USA); Narayan Mandayam (WINLAB, Rutgers University, USA); Behzad Golparvar and Chung-Tse Michael Wu (Rutgers University, USA); Joseph F Brodie (Rutgers, The State University of New Jersey, USA); Ruo-Qian Wang and Shaghayegh Vosoughitabar (Rutgers University, USA)*

Energy-Efficient Massive MIMO Design: Optimal Number of Antennas Ensuring Guaranteed Bit Rate – *Mohammed Abuibaid and Marc St-Hilaire (Carleton University, Canada); Sultan Aldırmaz Çolak (Kocaeli University, Turkey); Imad Eid (Ooredoo Palestine, Palestine)*

Extending the Network Service Descriptor to Capture User Isolation Intents for Network Slices – *Nour Gritli (Ericsson, Canada); Ferhat Khendek (Concordia University, Canada); Maria Toeroe (Ericsson, Canada)*

Vision-Assisted User Clustering for Robust mmWave-NOMA Systems – *Aditya Rajasekaran (Carleton University & Ericsson, Canada); Hamza Sokun (Ericsson, Canada); Omar Maraqa (King Fahd University of Petroleum and Minerals, Saudi Arabia); Halim Yanikomeroglu (Carleton University, Canada); Saad Al-Ahmadi (King Fahd University of Petroleum and Minerals, Saudi Arabia)*

5GLoR: 5G LAN Orchestration for enterprise IoT applications – *Sandesh Dhawaskar Sathyanarayana (University of Colorado Boulder, USA); Murugan Sankaradas (NEC Laboratories America Inc., USA); Srimat Chakradhar (NEC Research Labs, USA)*

Autoencoder Communications with Optimized Interference Suppression for NextG RAN – *Kemal Davaslioglu (University Technical Services & Maryland Advanced Development Laboratories, University Research Foundation, USA); Tugba Erpek and Yalin E Sagduyu (Virginia Tech, USA)*

T7: Mixed Tracks (virtual)

13 October 2022// 14:00 -15:30 // Virtual

SESSION CHAIR

TBD

ACCEPTED PAPERS

5G Festival – Re-inventing live collaborative performances – *Konstantinos Katsaros and Dritan Kaleshi (Digital Catapult, United Kingdom (Great Britain)); Anthony Karydis and Luke Kazanis (Mativision, United Kingdom (Great Britain)); Kane Rawnsley-Odd and Neil Hooper (Audiotonix, United Kingdom (Great Britain)); Pete Fletcher (Sonosphere, United Kingdom (Great Britain))*

Multiobjective optimal sizing and energy planning in green cellular base stations – *Zineb Garroussi (Polytechnique Montréal, Canada); Brunilde Sansò (Ecole Polytechnique de Montreal, Canada); Andre Girard (INRS-EMT and GERAD, Canada); Mathieu Damours and Abdoul Wassi Badirou (Polytechnique Montréal, Canada)*

Personalized Federated Learning for Automotive Intrusion Detection Systems – *Kabid Hassan Shibly and Md Delwar Hossain (Nara Institute of Science and Technology, Japan); Hiroyuki Inoue (Kyoto Sangyo University, Japan); Yuzo Taenaka and Youki Kadobayashi (Nara Institute of Science and Technology, Japan)*

Vertical-oriented 5G platform-as-a-service: user-generated content case study – *Sarang Kahvazadeh (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain); Hamzeh Khalili (Centre Tecnol`ogic de Telecomunicacions de Catalunya, Spain); Rasoul Nikbakht (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain); Bahador Bakhshi (Centre Tecnològic Telecomunicacions Catalunya (CTTC) & Amirkabir University of Technology, Spain); Josep Mangues-Bafalluy (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain)*

Trust-enhanced blockchain-enabled framework for secure and privacy-preserving data sharing systems – *Arian Fotouhi (Concordia University, Canada); Samuel Dayo Okegbile (University of Pretoria, South Africa); Jun Cai (Concordia University, Canada)*

Deep Reinforcement Learning for Task Offloading in UAV-Aided Smart Farm Networks – *Anne Catherine Nguyen and Turgay Pamuklu (University of Ottawa, Canada); Aisha Syed (Nokia Bell Labs, Canada); Sean Kennedy (Nokia Bell Labs, USA); Melike Erol-Kantarci (University of Ottawa & Ericsson, Canada) //* **(Note: This paper has been accepted in S9: Symposium on AI/ML-Driven Communications click here)**

T8: Mixed Tracks (virtual)

14 October 2022// 11:00 -12:30 // Virtual

SESSION CHAIR

TBD

ACCEPTED PAPERS

Building 5G Fingerprint Datasets for Accurate Indoor Positioning – *Huang Lin (University of Regina, Canada); Hakimeh Purmehdi (Ericsson, Canada); Yuxin Zhao (Ericsson AB, Sweden); Wei Peng (University of Regina, Canada)*

Millimeter-Wave Radio Link Analysis for 5G FWA by Combining Measurements and Geospatial Data – *Norshahida Saba (Aalto University, Finland)*

Influences of logical link design in 5G campus systems– *Gustavo Cainelli (Institut Fur Automation Und Kommunikation, Germany); Lisa Underberg (Ifak, Germany); Lutz Rauchhaupt (Institut für Automation und Kommunikation e. V., Germany)*

An Experimental 5G Testbed for Secure Network Slicing Evaluation – *Hisham A. Kholidy (State University of New York (SUNY) Polytechnic Institute, USA); Andrew Karam (Air Force Research Lab(AFRL) & RIGB, USA); Jeffrey Reed (Virginia Tech, USA); Yusuf Elazzazi (Advanced Cybersecurity Research Lab- ACRL & SUNY POLY, USA)*

Machine Learning Aided Design of Sub-Array MIMO Antenna for CubeSat Based on 3D Printed Metallic Ridge Gap Waveguide – *Mohammed Farouk Nakmouche (Ecole de Technologie Supérieure, Canada); Dominic Deslandes (École de technologie supérieure, Canada); Ghyslain Gagnon (ETS, Canada)//* **(Note: This paper has been accepted in S5: Symposium on Satellite & Space Communications click here)**

On Crossover Distance for Optical Wireless Satellite Networks and Optical Fiber Terrestrial Networks– *Aizaz U Chaudhry and Halim Yanikomeroglu (Carleton University, Canada) //* **(Note: This paper has been accepted in S5: Symposium on Satellite & Space Communications click here)**

T9: Mixed Tracks (virtual)

13 October 2022// 14:00 -15:30 // Virtual

SESSION CHAIR

TBD

ACCEPTED PAPERS

Jamming Attacks on NextG Radio Access Network Slicing with Reinforcement Learning – *Yi Shi, Yalin E Sagduyu and Tugba Erpek (Virginia Tech, USA); M. Cenk Gursoy (Syracuse University, USA)*

Reviewing the role of machine learning and artificial intelligence for remote attestation in 5G+ networks – *Shannon K Gallagher and Anton Hristozov (Software Engineering Institute, USA); Amit Vasudevan (CMU, USA); Austin Whisnant (Software Engineering Institute, USA)*

Multi-Stage, Dynamic Optimization of Wireless Network Slices with Polymorphic Algorithms – *Kristen Young and Ravi Potluri (Verizon, USA); Jin Yang (Verizon Wireless, USA)*

SDAC: An Architectural Enhancement to enable Artificial Intelligence in 5G Systems – *Morteza Kheirkhah (Interdigital, United Kingdom (Great Britain) & University College London, United Kingdom (Great Britain)); Ulises Olvera-Hernandez (InterDigital Communications, United Kingdom (Great Britain)); Tezcan Cogalan and Alain Abdel-Majid Mourad (InterDigital, United Kingdom (Great Britain))*

Pre-connect Handover Management for 5G Networks – *Yao Wei (Carleton University, Canada); Ricardo Paredes Cabrera (Ericsson, Canada); Chung-Horng Lung and Samuel Ajila (Carleton University, Canada)*

Hybrid Deep Learning for Channel Estimation and Power Allocation for MISO-NOMA System – *Mohammad Gaballa (Brunel University London, United Kingdom (Great Britain)) //* **(Note: This paper has been accepted in Symposium S9: Symposium on AI/ML-Driven Communications click here)**

WS2: Workshop on Artificial Intelligence (AI)-Enabled Future Networks: A Cross-layer Perspective

14 October 2022 // 14:00 – 15:30 // Virtual

ACCEPTED PAPERS

A Streamlit-based Artificial Intelligence Trust Platform for Next-Generation Wireless Networks – *Murat Kuzlu (Old Dominion University, USA); Ferhat Ozgur Catak (University of Stavanger, Norway); Salih Sarp (Virginia Commonwealth University & Old Dominion University, USA); Umit Cali (NTNU, USA); Oezguer Gueler (Old Dominion University, USA)*

Cloud Native Applications Profiling using a Graph Neural Networks Approach – *Amine Boukhtouta (Ericsson Research, Canada); Taous Madi (King Abdullah University of Science and Technology, Saudi Arabia); Makan Pourzandi (Ericsson, Canada); Hyame Alameddine (Ericsson Research, Canada) //* **(Note: This paper has been scheduled in workshop WS5, on-site presentation click here)**

Business Models for 5G and Future Mobile Network Operators – *Laurence Banda and Mjumo Mzyece (University of the Witwatersrand, South Africa); Fisseha Mekuria (Malmo University, Sweden & Technology & Society, Sweden)*

Attack Graphs for Standalone Non-Public 5G Networks – *Arpit Tripathi (Indian Institute of Technology Hyderabad & Institute for Development and Research in Banking Technology, India); Abhishek Thakur (IDRBT, India); Bheemarjuna Reddy Tamma (IIT Hyderabad, India)*

On Securing MAC Layer Broadcast Signals Against Covert Channel Exploitation in 5G, 6G & Beyond –*Reza S Soosahabi (University of Louisiana Lafayette & Keysight Technologies, USA); Magdy A Bayoumi (University of Louisiana Lafayette, USA)*

An Innovative Hashgraph-based Federated Learning Approach for 5G Network Protection – *Hisham A. Kholidy (State University of New York (SUNY) Polytechnic Institute, USA); Riaad Kamaludeen (SUNY Polytechnic Institute, USA)*