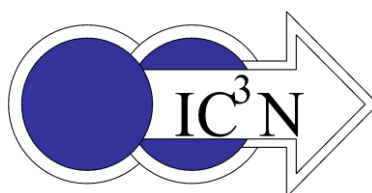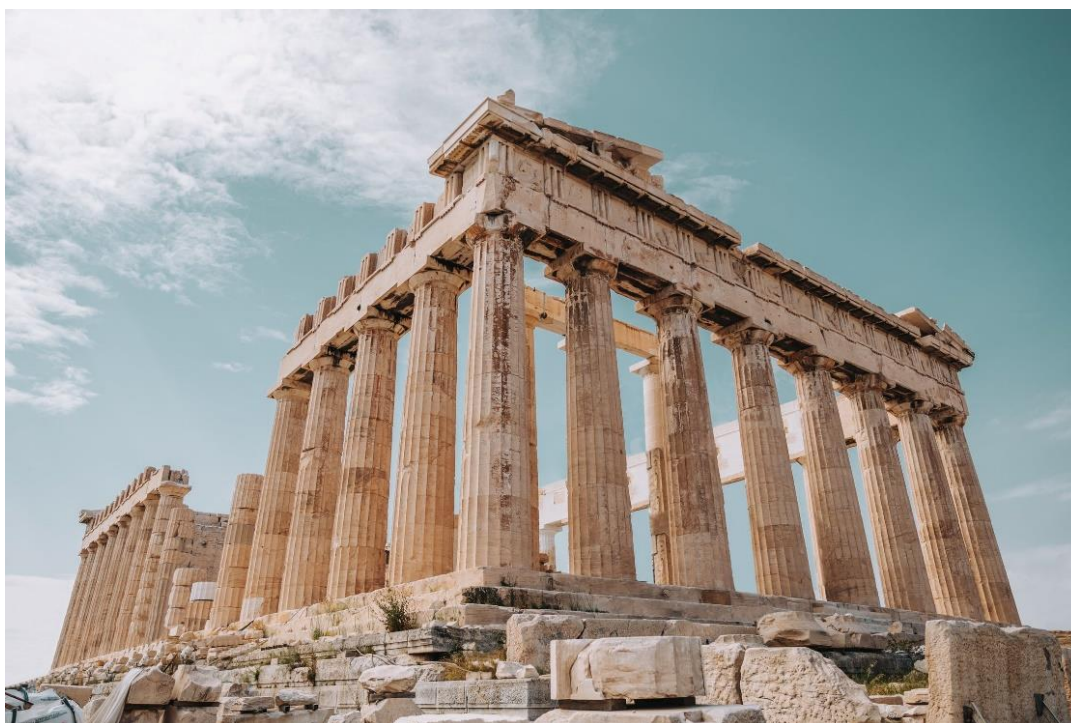# ICCCN 2021

The 30th International Conference on

Computer Communications and Networks

July 19 – July 22, 2021

Final Program

Athens, Greece

ICCCN 2021 Program Overview

12:30	Registration Open		
12:45 - 13:30	**Opening Remarks** (Room 1)		
13:30 - 14:30	**Keynote I** Room 1		
14:30 - 14:45	Coffee break		
14:45 - 16:30	Session 1 CAAME - 1 (Room 1)	Session 2 IoT (Room 2)	Invited 1 Wireless Communications and Networking (Room 3)
16:30 - 16:45	Coffee break		
16:45 - 18:45	**Panel I** Room 1		
18:45 - 19:00	Coffee break		
19:00 - 20:45	Session 3 AMSN - 1 (Room 1)	Session 4 SPTI - 1 (Room 2)	Invited 2 Internet of Things: Design and Services (Room 3)

13:00	Registration Open		
13:30 - 14:30	**Keynote II** Room 1		
14:30 - 14:45	Coffee break		
14:45 - 16:30	Session 5 CAAME - 2 (Room 1)	Session 6 SDN/NFV (Room 2)	Invited 3 Machine Learning and Intelligence (Room 3)

16:30 - 16:45	Coffee break		
16:45 - 18:45	**Panel II** Room 1		
18:45 - 19:00	Coffee break		
19:00 - 20:45	Session 7 OMM (Room 1)	Session 8 SNC (Room 2)	Invited 4 Cloud, Services, and Network Orchestration (Room 3)

July 21 (Wednesday), 2021
All times listed in Athens, Greece time.

13:00	Registration Open		
13:30 - 14:30	**Keynote III** Room 1		
14:30 - 14:45	Coffee break		
14:45 - 16:30	Session 9 HOT (Room 1)	Session 10 CAAME - 3 (Room 2)	Invited 5 Optical Networking (Room 3)
16:30 - 16:45	Coffee break		
16:45 - 18:45	Session 11 AMSN - 2 (Room 1)	Session 12 SPTI – 2 (Room 2)	Invited 6 Measurements and Performance of Networked Systems and Services (Room 3)
18:45 - 19:00	Coffee break		
19:00 - 20:45	Invited 7 Programmability of Networks (Room 1)	Invited 8 Security and Privacy (Room 2)	Invited 9 Networks and Society (Room 3)

ICCCN 2021 Technical Program

13:30-14:30

Keynote I: Human-Centric Networking and why it should be a key focus for the Next Generation Internet and 6G research?

Speaker: Prof. Dimitra Simeonidou, University of Bristol, UK
Chair: Prof. George Rouskas, North Carolina State University, USA
Email: rouskas@ncsu.edu

14:45 - 16:30

Session 1: Communication Networks Architectures, Algorithms, Measurement and Performance Evaluation (CAAME – 1)

Chair: Eleni Stai, ETH Zurich,
Email: stai@eeh.ee.ethz.ch

- **Online Partial Service Hosting at the Edge**
  Lakshmi Narayana, Mohit Agarwala, Nikhil Karamchandani, and Sharayu Moharir

- **DRLS: A Deep Reinforcement Learning Based Scheduler for Time-Triggered Ethernet**
  Chunmeng Zhong, Hongyu Jia, Hai Wa, and Xibin Zhao

- **Budget-Constrained Reinforcement of SCADA for Cascade Mitigation**
  Vajiheh Farhadi, Sai Gopal Vennelaganti, Ting He, Nilanjan Ray Chaudhuri, and Thomas La Porta

- **Context-Aware Online Offloading Strategy with Mobility Prediction for Mobile Edge Computing**
  Chen Shuyu, Chen Haopeng, Ruan Jinteng, and Wang Ziming

- **Breaking One-RTT Barrier: Ultra-Precise and Efficient Congestion Control in Datacenter Networks**

Guoyuan Yuan, Renjie Zhou, Dezun Dong, and Shan Huang

Session 2: Internet of Things (IoT)

Chair: Khaled Harfoush, North Carolina State University
Email: harfoush@cs.ncsu.edu

- **Network Traffic Characteristics of IoT Devices in Smart Homes**
  Md Mainuddin, Zhenhai Duan, and Yingfei Dong

- **Automatic Recognition of Identification Schemes for IoT Identifiers based on A Hybrid DNN Model**
  Xiaotao Li, Shujuan You, and Wai Chen

- **An Analytical Model for Evaluating the Interplay Between Capacity and Energy Efficiency in NB-IoT**
  Romain Barbau, Vincent Deslandes, Gentian Jakllari, and André-Luc Beylot

- **MASS Communication for Constrained Devices**
  Khaled Harfoush, Cheng Huang, and Zeng Huy Tay

- **Semantic Identifiers and DNS Names for IoT**
  Simon Fernandez, Michele Amoretti, Fabrizio Restori, Maciej Korczyński, and Andrzej Duda

- **Message in Message for Improved LoRaWAN Capacity**
  Takwa Attia, Martin Heusse, and Andrzej Duda

Invited Session 1: Wireless Communications and Networking

Chair: Maria Diamanti, National Technical University of Athens, Greece
Email: mdiamanti@netmode.ntua.gr

- **Coverage is Not Binary: Quantifying Mobile Broadband Quality in Urban, Rural and Tribal Contexts**
  Vivek Adarsh, Michael Nekrasov, Udit Paul, Tarun Mangla, Arpit Gupta, Morgan Vigil-

Hayes, Ellen Zegura, and Elizabeth Belding

- **Joint Scheduling of eMBB and URLLC Services in RIS-Aided Downlink Cellular Networks**
Chadi Assi, Mohammed Almekhlafi, Amine Arfaoui, Mohamed Elhattab, and Ali Ghrayeb

- **An Open Real-World Dataset of Cellular UAV Communication Properties**
Gonzalo Martínez, Grigoriy Dubrovskiy, Shangyue Zhu, Alamin Mohammed, Hai Lin, J. Nicholas Laneman, Aaron Striegel, Ravikumar Pragada, and Douglas Castor

- **Multi-Operator Cell Tower Locations Prediction from Crowdsourced Data**
Mostafizur Rahman, Mohammad Arif Hossain, and Murat Yuksel

16:45 - 18:45

Panel I: Cities of the future: what possible evolution towards the creation of smart communities

Moderator: Prof. Antonio Puliafito
Panelists: Dr. Glenn Ricart, Dr. Marco Conti, Prof. Ernesto Damiani, Prof. Serge Fdida

19:00 - 20:45

Session 3: Ad Hoc, Mobile, and Sensor Networking (AMSN – 1)

Chair: Waltenegus Dargie, TU Dresden
Email: waltenegus.dargie@tu-dresden.de

- **False-name-proof mechanism for time window coverage tasks in mobile crowdsensing**
Hao Cheng, Bin Jin, Yu Qiao, Lei Zhang, and Wang Chongjun

- **A Link Quality Estimation Model for a Joint Deployment of Unmanned Aerial Vehicles and Wireless Sensor Networks**
Waltenegus Dargie, and Jianjun Wen

- **Extension Algorithms for Path Exposure in Energy Harvesting Wireless Sensor Networks**
Abdulsalam Basabaa, and Ehab S. Elmallah

- **Energy-Efficient UAV Flight Planning for a General PoI-Visiting Problem with a Practical Energy Model**
Jianping Huang, Feng Shan, Runqun Xiong, Yuchao Shao, and Junzhou Luo

Session 4: Security, Privacy, Trust and Incentives (SPTI – 1)

Chair: Jianli Pan, University of Missouri - St. Louis
Email: pan@umsl.edu

- **Checking Network Security Policy Violations via Natural Language Questions**
Pinyi Shi, Yongwook Song, Zongming Fei, and James Griffioen

- **ShadowDGA: Toward Evading DGA Detectors with GANs**
Yu Zheng, Chao Yang, Yanzhou Yang, Qixian Ren, Yue Li, and Jianfeng Ma

- **Assessing the Use of Insecure ICS Protocols via IXP Network Traffic Analysis**
Giovanni Barbieri, Mauro Conti, Nils Ole Tippenhauer, and Federico Turrin

- **Def-IDS: An Ensemble Defense Mechanism Against Adversarial Attacks for Deep Learning-based Network Intrusion Detection**
Jianyu Wang, Jianli Pan, Ismail Alqerm, and Yuanni Liu

- **Anomaly Detection of Network Streams via Dense Subgraph Discovery**
Hao Yan, Qianzhen Zhang, Deming Mao, Ziyue Lu, Deke Guo, and Sheng Chen

Invited Session 2: Internet of Things: Design and Services

Chair: Eirini Eleni Tsiropoulou, University of New Mexico Albuquerque
Email: eirini@unm.edu

- **Engineering an IoT-Edge-Cloud Computing System Architecture: Lessons Learnt from An Undergraduate Lab Course**
Jasenka Dizdarevic and Admela Jukan

- **MulTLoc: RF Hologram Tensor Filtering and Upscaling for Locating Multiple RFID Tags**
Xiangyu Wang, Jian Zhang, Shiwen Mao, Senthilkumar Cg Periaswamy, and Justin Patton

- **Combining Auto-Encoder with LSTM for WiFi-Based Fingerprint Positioning**
Yu-Ting Liu, Jen-Jee Chen, Yu-Chee Tseng, and Frank Y. Li

- **Improvement of Bi-directional Communications using Solar Powered Reconfigurable Intelligent Surfaces**
Abdullah Almasoud, Mohamed Selim, Ahmad Alsharoa, and Ahmed Kamal

13:30 - 14:30

Keynote II: Machine Learning and Security: The Good, The Bad, and The Ugly

Speaker: Wenke Lee
Chair: Prof. Deniz Gurkan, University of Houston, USA
Email: dgurkan@uh.edu

14:45 - 16:30

Session 5: Communication Networks Architectures, Algorithms, Measurement and Performance Evaluation (CAAME – 2)

Chair: Marios Avgeris, National Technical University of Athens, Greece
Email: mavgeris@netmode.ntua.gr

- **Characterizing the Performance of QUIC on Android and Wear OS Devices**
  Anirudh Ganji, and Muhammad Shahzad

- **Accurately Decoding MIMO Streams in VLC**
  Raghav Venkatnarayan, and Muhammad Shahzad

- **SARACA:Demand-Driven Satellite Network Resource Allocation for Civil Aviation**
  Xiang Zhang, Yuan Yang, and Mingwei Xu

- **Interference-Aware Sector Design in IEEE 802.11ad Network**
  Guillaume Gaillard, and Gentian Jakllari

Session 6: Software Defined Networks and Network Virtualization Technologies (SDN/NFV)

Chair: Albert Cabellos, UPC-BarcelonaTech

Email: acabello@ac.upc.edu

- **Parallelism-aware Service Function Chaining and Embedding for 5G Networks**
  Danyang Zheng, Chengzong Peng, Xueting Liao, and Xiaojun Cao

- **A Control Plane for WireGuard**
  Jordi Paillissé Vilanova, Alejandro Barcia, Albert López, Alberto Rodriguez Natal, Fabio Maino, and Albert Cabellos

- **Research on User Access Selection Mechanism Based on Maximum Throughput for 5G Network Slicing**
  Yangguang Lu, Xin Chen, Ranran Xi, and Ying Chen

- **A P4-based packet scheduling approach for clustered deep packet inspection appliances**
  Ping Jiang, Shuo Zhang, Qingyun Liu, and Chao Zheng

- **Validation and Benchmarking of CNFs in OSM for pure Cloud Native applications in 5G and beyond**
  Adrián Pino, Pouria Khodashenas, Xavier Hesselbach, Estefanía Coronado, and Shuaib Siddiqui

- **CAMEL: Centrality-Aware Multitemporal Discovery Protocol for Software-defined Networks**
  Faheed A.F. Alenezi, Sejun Song, and Baek-Young Choi

Invited Session 3: Machine Learning and Intelligence

Chair: Anastasios Zafeiropoulos, National Technical University of Athens, Greece
Email: tzafeir@cn.ntua.gr

- **A Framework for Edge Intelligent Smart Distribution Grids via Federated Learning**
  Nathaniel Hudson, Md Jakir Hossain, Minoo Hosseinzadeh, Hana Khamfroush, Mahshid

Rahnamay-Naeini, and Nasir Ghani

- **RCP: A Reinforcement Learning-Based Retransmission Control Protocol for Delivery and Latency Sensitive Applications**
Yu Wang and Alhussein Abouzeid

- **Accelerate Cooperative Deep Inference via Layer-wise Processing Schedule Optimization**
Ning Wang, Yubin Duan, and Jie Wu

- **A Reward-Based Fair Resource Allocation in EONs Considering Traffic Demand Behavior**
Tania Panayiotou

- **Sense-Bandits: AI-based Adaptation of Sensing Thresholds for Heterogeneous-technology Coexistence Over Unlicensed Bands**
Mohammad Hirzallah and Marwan Krunz

16:45 - 18:45

Panel II: Privacy vs. Utility: Can this Conflict over Personal Data Have Two Winners

Moderator: Prof. Yannis Ioannidis
Panelists: Prof. Elisa Bertino, Prof. Minos Garofalakis, Dr. Lucian Itu, Dr. Peter Kairouz

19:00 - 20:45

Session 7: Orchestration Methods and Middleware in support of Big Data, and the Cloud (OMM)

Chair: Dimitris Dechouniotis, National Technical University of Athens, Greece
Email: ddechou@netmode.ntua.gr

- **Cooperative Multi-Agent Deep Reinforcement Learning for Dynamic Virtual Network Allocation**

Akito Suzuki, Ryoichi Kawahara, and Shigeaki Harada

- **Model-based Stream Processing Auto-scaling in Geo-Distributed Environments**
Hamidreza Arkian, Guillaume Pierre, Johan Tordsson, and Erik Elmroth

- **mck8s: An orchestration platform for geo-distributed multi-cluster environments**
Mulugeta Ayalew Tamiru, Guillaume Pierre, Johan Tordsson, and Erik Elmroth

- **A Deep Reinforcement Learning-based Task Scheduling Algorithm for Energy Efficiency in Data Centers**
Penglei Song, Ce Chi, Kaixuan Ji, Zhiyong Liu, Fa Zhang, Shikui Zhang, Dehui Qiu, and Xiaohua Wan

Session 8: Social Networks and Computing (SNC)

Chair: Eleni Fotopoulou, National Technical University of Athens, Greece
Email: efotopoulou@netmode.ntua.gr

- **Efficient Communication Topology via Partially Differential Privacy for Decentralized Learning**
Cheng-Wei Ching, Hung-Sheng Huang, Chun-An Yang, Yu-Chun Liu, and Jian-Jhih Kuo Kuo

- **Should We Trust Influencers on Social Networks? On Instagram Sponsored Post Analysis**
Xueting Liao, Danyang Zheng, Yubao Wu, and Xiaojun Cao

- **It's a Matter of Style: Detecting Social Bots through Writing Style Consistency**
Matteo Cardaioli, Mauro Conti, Andrea Di Sorbo, Enrico Fabrizio, Sonia Laudanna, and Corrado Aaron Visaggio

- **Trust- and Rating- based Recommendations for On-line Social Networks**
  Anna Kobusinska, Dionisis Margaris, and Jakub Peikert

Invited Session 4: Cloud, Services, and Network Orchestration

Chair: Reza Nejabati, University of Bristol
Email: reza.nejabati@bristol.ac.uk

- **FedCo: A Federated Learning Controller for Content Management in Multi-party Edge Systems**
  Venkatraman Balasubramanian, Moayad Aloqaily, and Martin Reisslein

- **Storage Protection with Connectivity and Processing Restoration for Survivable Cloud Services**
  Carlos Natalino, Ahmad Rostami, and Paolo Monti

- **Protection Strategies for Dynamic VNF Placement and Service Chaining**
  Leila Askari, Mohammadhassan Tamizi, Omran Ayoub, and Massimo Tornatore

- **Zero-Touch Network Orchestration At The Edge**
  Reza Nejabati, Shadi Moazzeni, Pratchaya Jaisudthi, and Dimitra Simeonidou

- **Epinoia: Intent Checker for Stateful Networks**
  Huazhe Wang, Puneet Sharma, Faraz Ahmed, Joon-Myung Kang, Chen Qian, and Mihalis Yannakakis

13:30 - 14:30

Keynote III: Decision-Making for Uncoordinated User Access to Limited Distributed Resources

Speaker: Prof. Ioannis Stavrakakis
Chair: Prof. Symeon Papavassiliou, National Technical University of Athens, Greece
Email: papavass@mail.ntua.gr

14:45 - 16:30

Session 9: Hot Topics in Networking (HOT)

Chair: Ning Wang, Rowan University
Email: wangn@rowan.edu

- **VTL: A Virtual Transport Layer for Deployable and Configurable Transport Protocols**
  El-Fadel Bonfoh, Christophe Chassot, and Samir Medjiah

- **Contrastive Self-Supervised Representation Learning for Sensing Signals from the Time-Frequency Perspective**
  Dongxin Liu, Tianshi Wang, Shengzhong Liu, Ruijie Wang, Shuochao Yao, and Tarek Abdelzaher

- **iGate: NDN Gateway for Tunneling over IP World**
  Ran Zhu, Tianlong Li, and Tian Song

- **Localization of Tagged Objects on Shelf via a Portable Camera-augmented RFID Reader**
  Yazhe Tian, Sheng Chen, Jiuwu Zhang, Zijuan Liu, Xiulong Liu, and Keqiu Li

- **A Lightweight Heatmap-based Eye Tracking System**
  Xiaoxiao Luan, Bojun Zhang, Dongdong Liu, Xiulong Liu, Xinyu Tong, and Keqiu Li

- **Energy-Efficient Device Selection in Federated Edge Learning**
  Cheng Peng, Qin Hu, Jianan Chen, Kyubyung Kang, Feng Li, and Xukai Zou

Session 10: Communication Networks Architectures, Algorithms, Measurement and Performance Evaluation (CAAME – 3)

Chair: Vasileios Karyotis, Ionian University
Email: karyotis@ionio.gr

- **fybrrStream: A WebRTC based Efficient and Scalable P2P Live Streaming Platform**
  Debajyoti Halder, Prashant Kumar, Saksham Bhushan, and Anand Baswade

- **Future Network Traffic Matrix Synthesis and Estimation Based on Deep Generative Models**
  Grigorios Kakkavas, Michail Kalntis, Vasileios Karyotis, and Symeon Papavassiliou

- **Beartooth Relay Protocol: Supporting Real-Time Application Streams with Dynamically Allocated Data Reservations over LoRa**
  Batuhan Mekiker, Mike P. Wittie, Jefferson Jones, and Michael Monaghan

- **Tagged Cuckoo Filters**
  Kun Huang and Tong Yang

Invited Session 5: Optical Networking

Chair: Krzysztof Walkowiak, Wroclaw University of Science and Technology
Email: Krzysztof.Walkowiak@pwr.edu.pl

- **Protection Techniques For Wavelength Division Multiplexing Networks using Resource Delayed Release Strategy**

Shideh Yavary Mehr and Byrav
Ramamurthy

- **Comparison of Various Sharing
  Approaches in Survivable Translucent
  Optical Networks**
  Krzysztof Walkowiak, Roza Goscien, Piotr
  Lechowicz, and Adam Wlodarczyk

- **How Optical Technologies Can Innovate
  Intra Data Center Networks**
  Ken-Ichi Sato

- **Super-Cloudlet: Rethinking Edge
  Computing in the Era of Open Optical
  Networks**
  Behzad Mirkhanzadeh, Tinaliang Zhang,
  Miguel Razo-Razo, Marco Tacca, and Andrea
  Fumagalli

- **Machine Learning-Aided Resource
  Assignment in Space Division
  Multiplexed Elastic Optical Networks**
  Shrinivas Petale and Suresh Subramaniam

16:45 - 18:45

Session 11: Ad Hoc, Mobile, and
Sensor Networking (AMSN – 2)

Chair: Reinhard Gotzhein, University of
Kaiserslautern
Email: gotzhein@cs.uni-kl.de

- **A Physarum-based Boost Algorithm for
  Network Optimization in Dense Wireless
  Sensor Networks**
  Haiyang Zhang, Fang Qi, and Xiaomeng Liu

- **Breathing Sound-based Exercise
  Intensity Monitoring via Smartphones**
  Yanzhi Ren, Zhourong Zheng, Hongbo Liu,
  Yingying Chen, Hongwei Li, and Chen Wang

- **On Data-centric Forwarding in Mobile
  Ad-hoc Networks: Baseline Design and
  Simulation Analysis   AMSN**
  Md Ashiqur Rahman and Beichuan Zhang

- **cTEx- A Configurable Topology Explorer
  for Wireless Ad-hoc Networks**
  Christopher Kohlstruck and Reinhard
  Gotzhein

Session 12: Security, Privacy, Trust
and Incentives (SPTI – 2)

Chair: Fan Zhang, IBM Massachusetts Lab
Email: fzhang@us.ibm.com

- **A Few-Shot Class-Incremental Learning
  Approach for Intrusion Detection**
  Tingting Wang, Bo Hu, Qiujian Lv, and
  Degang Sun

- **Open-Pub: A Transparent yet Privacy-
  Preserving Academic Publication System
  based on Blockchain**
  Yan Zhou, Zhiguo Wan, and Zhangshuang
  Guan

- **An Encryption-as-a-service Architecture
  on Cloud Native Platform**
  Bo Yang, Fan Zhang, and Samee U Khan

- **A Novel Framework of Identifying
  Chinese Jargons for Telegram
  Underground Markets**
  Hailin Wang, Yiwei Hou, and Haizhou Wang

- **Network-based Active Defense for
  Securing Cloud-based Healthcare Data
  Processing Pipelines**
  Vaibhav Akashe, Roshan Lal Neupane,
  Mauro Lemus Alarcon, Songjie Wang, and
  Prasad Calyam

Invited Session 6: Measurements and
Performance of Networked Systems
and Services

Chair: Sergey Gorinsky, IMDEA Networks
Institute
Email: sergey.gorinsky@imdea.org

- **WiFresh: Age-of-Information from
  Theory to Implementation**

Igor Kadota, Muhammad Rahman, and Eytan Modiano

- **Developing Models from Measurements in a Noisy Environment: Lessons from an Indoor Wi-Fi Measurement Study on Application Performance**
  Caylin Hartshorn, Waleed Al-Shaikhli, Sheyda Kiani Mehr, Daniel Cummins, Venkatesh Tamarapalli, and Deep Medhi

- **PREDICAT: Efficient Packet Classification via Prefix Disjointness**
  Pavel Chuprikov, Vitalii Demianiuk, and Sergey Gorinsky

- **SATSS: A Self-Adaptive Task Scheduling Scheme for Mobile Edge Computing**
  Jian Yang and Christian Poellabauer

- **Performance Characterization of Post-Quantum Digital Certificates**
  Manohar Raavi, Pranav Chandramouli, Simeon Wuthier, Xiaobo Zhou, and Sang-Yoon Chang

19:00 - 20:45

Invited Session 7: Programmability of Networks

Chair: Krishna Sivalingam, Indian Institute of Technology Madras
Email: krishna.sivalingam@gmail.com

- **Using Deep Reinforcement Learning for Routing in IP Networks**
  Abhiram Singh, Sidharth Sharma, and Ashwin Gumaste

- **Machine Learning based Flow Classification in DCNs using P4 Switches**
  Radhakrishna Kamath and Krishna Sivalingam

- **Closed-loop Network Automation with Generic Programmable Data Plane (G-PDP)**

Shaofei Tang, Hui Liang, Min Wang, Tingyu Li, and Zuqing Zhu

- **P4 Programmability at the Network Edge: the BRAINE Approach**
  Filippo Cugini, Davide Scano, Alessio Giorgetti, Andrea Sgambelluri, Piero Castoldi, and Francesco Paolucci

- **An SDN Emulation Platform for Converged Fiber-Wireless 5G Networks**
  Manos Varvarigos, Aristotelis Kretsis, Polyzois Soumplis, and Panagiotis Kokkinos

Invited Session 8: Security and Privacy

Chair: Vasilios Siris, Athens University of Economics and Business
Email: vsiris@aueb.gr

- **A novel Two-Factor HoneyToken Authentication Mechanism**
  Vassilis Papaspyrou, Leandros Maglaras, Mohamed Amine Ferrag, Ioanna Kantzavelou, Helge Janicke, and Christos Douligeris

- **Pervasive Internet-Wide Low-Latency Authentication**
  Cyrill Krähenbühl, Markus Legner, Silvan Bitterli, and Adrian Perrig

- **Capability-based access control for multi-tenant systems using OAuth 2.0 and Verifiable Credentials**
  Nikos Fotiou, Vasilios Siris, and George Polyzos

- **Massive MIMO-NOMA Systems Secrecy in the Presence of Active Eavesdroppers**
  Marziyeh Soltani, Mahtab Mirmohseni, and Panos Papadimitratos

- **Federated Authorization for Managed Data Sharing: Experiences from the ImPACT Project**
  Ilya Baldin and Jeffrey Chase

Invited Session 9: Networks and Society

Chair: Martin Maier, Institut National de la Recherche Scientifique (INRS)
Email: maier@emt.inrs.ca

- **A Data-Driven Analysis of K-12 Students' Participation and Learning Performance in an Online Supplementary Learning Platform**
Jiaquan Zhang, Xin Gao, Hui Chen, Lei Chen, Liang Wang, Jar-Der Luo, and Xiaoming Fu

- **6G as if People Mattered: From Industry 4.0 toward Society 5.0**
Martin Maier

- **An Edge-based Strategy for Smart Advertising**
Rasool Seyghaly, Jordi Garcia, and Xavi Masip-Bruin

- **Influence Spread Control in Complex Networks via Removal of Feed Forward Loops**
Satyaki Roy, Prithwiraj Roy, Venkata Sriram Siddhardh Nadendla, and Sajal Das

ICCCN 2021 Workshop Program Overview

13:30 - 14:45	Keynote I (Room 1)	Keynote II (Room 2)	BDMLN (Room 3)
14:45 - 15:00	Virtual Coffee break 1		
15:00 - 17:00	BLESS (Room 1)	IoTSPT-ML (Room 2)	SmartCityCom 1 (Room 3)
17:00 - 17:15	Virtual Coffee break 2		
17:15 - 19:15	AFEC (Room 1)	SMS (Room 2)	SmartCityCom 2 (Room 3)
Closing			

Integrated Workshop ProgramSchedule

July 22 (Thursday)
All times listed in Athens, Greece time.

13:30 - 14:45

Keynote 1: Smart Cities: The Promise and Perils of Technology
Speaker: Dr. Bhaskar Krishnamachari, USC
Session Chair: Yu Chen (Binghamton University, USA)
Email: ychen@binghamton.edu

Keynote 2: Security and Privacy for the Internet of Things
Speaker: Dr. Biplab Sikdar, National University of Singapore
Session Chair: Abhishek Parakh (University of Nebraska at Omaha, USA)
Email: aparakh@unomaha.edu

BDMLN Workshop
Welcome by workshop Chairs: Yalong Wu (North Central College, USA) and Jie Lian (Shanghai Normal University, China)
Session Chair: Yalong Wu (North Central College, USA) Email: ywu1601@noctrl.edu
Jie Lian (Shanghai Normal University, China) Email: lianjie@shnu.edu.cn

- **Community Detection and Analysis in Air Pollution Complex Network Based on LPA**
Jie Lian, Xin Ding and Jianguo Pan (Shanghai Normal University)

- **QoS-Aware Placement of Deep Learning Services on the Edge with Multiple Service Implementations**
Nathaniel Hudson, Hana Khamfroush and Daniel E. Lucani (Northern Kentucky University, University of Kentucky and Aarhus University)

- **Bayesian Adaptive Path Allocation Techniques for Intra-Datacenter Workloads**
Ali Malik, Ruairí de Fréin, Chih-Heng Ke, Hasanen Alyasiri and Obinna Izima (Tchnological University Dublin, National Quemoy University and University of Kufa)

15:00 - 17:00

BLESS Workshop

Welcome by workshop Chairs: Yu Chen (Binghamton University, USA) and Sachin Shetty (Old Dominion University, USA)
Session Chairs: Xueping Liang (University of North Carolina at Greensboro, USA) Email: x_liang@uncg.edu
Chin-Tser Huang (University of South Carolina, USA) Email: huangct@cse.sc.edu

- **Blockchain-enabled Personalized Incentives for Sustainable Behaviors in Smart Cities**
Ayten Kahya (University of Southern California, USA), Anusha Avyukt (University of Southern California, USA), Gowri S. Ramachandran (Queensland University of Technology, Australia), Bhaskar Krishnamachari (University of Southern California, USA)

- **Casper - A Blockchain and Self-Sovereign Identity Empowered Digital Identity Platform**
Eranga Bandara (Old Dominion University, USA), Xueping Liang (University of North Carolina at Greensboro, USA), Peter Foytik (Old Dominion University, USA), Sachin Shetty(Old Dominion University, USA) , Kasun De Zoysa (University of Colombo, Sri Lanka), Nalin Ranasinghe (University of Colombo, Sri Lanka)

- **Efficient and Trustworthy Authentication in 5G Networks Based on Blockchain**
Jian Liu (University of South Carolina, USA), Chin-Tser Huang (University of South Carolina, USA)

- **Fed-DDM: A Federated Ledgers based Framework for Hierarchical Decentralized Data Marketplaces**
Ronghua Xu (Binghamton University, USA), Yu Chen (Binghamton University, USA)

- **Secure and Privacy-Preserving Stored Surveillance Video Sharing atop Permissioned Blockchain**
Alem Fitwi (Binghamton University, USA), Yu Chen (Binghamton University, USA)

IoTSPT-ML Workshop

Welcome by workshop Chairs: Geetha Thamilarasu (University of Washington Bothell, USA) and Abhishek Parakh (University of Nebraska at Omaha, USA)
Session Chairs: Geetha Thamilarasu (University of Washington Bothell, USA) Email: geetha@uw.edu
Abhishek Parakh (University of Nebraska at Omaha, USA) Email: aparakh@unomaha.edu

- **Synthetic and private smart health care data generation using GANs**
Sana Imtiaz, Muhammad Arsalan, Vladimir Vlassov and Ramin Sadre (KTH Royal Institute of Technology, Otto-von-Guericke Universität Magdeburg and Université catholique de Louvain, Belgium)

- **PDTM: Phase-based dynamic trust management for Internet of things**
Runbo Su, Arbia Riahi Sfar, Enrico Natalizio, Pascal Moyal and Ye-Qiong Song (LORIA, CNRS, Université de Lorraine, Military Academy of Tunisia / STD Lab and IECL, INRIA, Université de Lorraine)

- **Intrusion Detection System For IoT Networks Using Neural Networks With Extended Kalman Filter**

Divya Kulkarni, Shruti Rathore and Raj Jaiswal (BITS Pilani Goa Campus)

- **Grammatical Evolution for Detecting Cyberattacks in Internet of things Environments**
Hasanen Alyasiri, John Clark, Ali Malik and Ruairí de Fréin (University of Kufa, The University of Sheffield and Technological University Dublin)

- **Security of continuous-variable quantum key distribution against canonical attacks**
Panagiotis Papanastasiou, Carlo Ottaviani and Stefano Pirandola (Univ of York)

SmartCityCom 1 Workshop

Welcome by workshop Chairs: Shuhuiu Yang (Purdue University Northwest, USA) and Besma Smida (University of Illinois at Chicago, USA)
Session Chair: Shuhuiu Yang (Purdue University Northwest, USA)
Email: yangshuhui@gmail.com

- **Applying Harary Graph Structures to the Overlay Network Kademlia**
Henner Heck and Arno Wacker (Universität der Bundeswehr München)

- **Timetable-based Routing in Fixed Schedule Dynamic Networks**
Lata Narayanan and Cristian Oswaldo Rodriguez Santiago (Concordia University)

- **Co-governed Space-Terrestrial Integrated Network Architecture and Prototype Based on MIN**
Guohua Wei, Hui Li, Yongjie Bai, Xin Yang, Huayu Zhang and Wenjun Li (Peking University Shenzhen Graduate School, Purple Mountain Laboratories Future Network Center,Peng Cheng Laboratory Network Communication Center)

- **Machine Learning Approach for Detecting Location Spoofing in VANET**
Aekta Sharma and Arunita Jaekel (University of Windsor)

17:15 - 19:15

AFEC Workshop

Welcome by workshop Chairs: Wei Chang (Saint Joseph's University and Ning Wang (Rowan University)
Session Chairs: Wei Chang (Saint Joseph's University, USA) Email: wchang@sju.edu
Ning Wang (Rowan University, USA) Email: wangn@rowan.edu

- **Collaborative Optimization of Edge-Cloud Computation Offloading in Internet of Vehicles**
Yureng Li, and Shouzhi Xu (China Three Gorges University)

- **MACE: A Mobile Ad-hoc Computing Emulation Framework**
Bruno Chianca Ferreira, Guillaume Dufour, and Guthemberg Silvestre (Ecole Nationale de l'Aviation Civile, ONERA, and ENAC, Université de Toulouse, France)

- **A Game theory-based Computation Offloading Method in Cloud-Edge Computing Networks**
Zhenning Wang, Tong Wu, Zhenyu Zhang, and Huan Zhou (China Three Gorges University)

- **Latency-aware Radio Resource Allocation over Cloud RAN for Industry 4.0**
Haorui Peng, William Tärneberg, and Maria Kihl (Lund University)

- **Towards Testbed as-a-Service: design and implementation of an unattended SoC cluster**
Gabriele Proietti Mattia, and Roberto Beraldi (Sapienza University of Rome)

- **Service Deployment and Service Request Optimization Scheduling in MEC enabled LEO Networks**
  Ye Zhang, Yong Tang, and Wenyong Wang (University of Electronic Science and Technology of China)

SMS Workshop

Welcome by workshop Chairs: Silvia Mirri (University of Bologna, Italy), Marco Furini (University of Modena and Reggio Emilia, Italy)
Session Chair: Silvia Mirri (University of Bologna, Italy) Email: silvia.mirri@unibo.it
Marco Furini (University of Modena and Reggio Emilia, Italy)
Email: marco.furini@unimore.it

- **SenseGraph: Affect Self-monitoring and Tagging Tool with Wearable Devices**
  Sebastian Alpers and Kuderna-Iulian Benta (University of Mannheim Mannheim, Germany; Babes-Bolyai University Cluj-Napoca, Romania)

- **RMOVO: a dApp for DLT-based Smart Mobility**
  Mirko Zichichi, Stefano Ferretti and Gabriele D'Angel (Universidad Politécnica de Madrid, Spain; University of Bologna, Italy; University of Urbino "Carlo Bo", Italy)

- **Designing an Affective States Input Tool for Biking**
  Octavian Cuibus, Kuderna-Iulian Benta and Sebastian Alpers (Technical University of Cluj-Napoca Cluj-Napoca, Romania; Babeș-Bolyai University Cluj-Napoca, Romania; University of Mannheim Mannheim, Germany)

- **Fostering user's awareness about indoor air quality through an IoT-enabled home garden system**
  Chiara Ceccarini, Ka Kei Chan, Lei Lok I, Rita Tse, Su-Kit Tang and Catia Prandi (University of Bologna Bologna, Italy; Macao Polytechnic Institute Macao SAR, China; Macao SAR, China; Macao Polytechnic Institute Macao SAR, China; Macao Polytechnic Institute Macao SAR, China; University of Bologna Bologna, Italy)

- **CDetector: Extracting Textual Features of Financial Social Media to Detect Cyber Attacks**
  Jinwei Liu, Long Cheng, Hongmei Chi and Cong Liu (Florida A&M University; North China Electric Power University, China; Shandong University of Technology, China)

- **Towards Decentralized Complex Queries over Distributed Ledgers: a Data Marketplace Use-case**
  Mirko Zichichi, Luca Serena, Stefano Ferretti and Gabriele D'Angelo (Universidad Politecnica de Madrid, Spain; University of Bologna, Italy; University of Urbino, Italy; University of Bologna, Italy)

SmartCityCom 2 Workshop

Session Chair: Besma Smida (University of Illinois at Chicago, USA)
Email: smida@uic.edu

- **Smart Replication for Seamless and Efficient Real Time Communication in Underground Railway Train**
  Kariem Fahmi and Douglas Leith (Trinity College Dublin)

- **SCoIoT: Swarm-Computations for the Internet of Things**
  Christopher Scherb, Pascal Bürklin and Christian Tschudin (University of Basel)

- **TREMA: A traffic-aware energy efficient MAC protocol to adapt the LoRaWAN capacity**
  Laurent Chasserat, Nicola Accettura, Balakrishna Prabhu and Pascal Berthou (LAAS-CNRS)

- **Realization of an Intrusion Detection use-case in ONAP with Acumos**
  Shabnam Sultana, Philippe Dooze and Vijay Kumar (highstreet Technologies GmbH, Berlin, Orange Labs, Lannion, AT&T Services, Inc., New Jersey)

Closing

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