

15th IEEE International Conference on
Distributed Computing in Sensor Systems

DCOSS 2019

PROGRAM



May 29-31, 2019
Santorini Island, Greece



Message from the General Chair and Program Chairs

The Fifteenth Annual International Conference on Distributed Computing in Sensor Systems (DCOSS) is held in Santorini, Greece on May 29-31, 2019. In the last few years, we have witnessed significant growth in the use of distributed sensor systems in a number of application areas, ranging from smart cities to manufacturing and remote sensing. In order for smart sensor systems to truly become useful and pervasive, there is a need to address a number of research challenges, including the tight integration of sensing and machine intelligence, reliable and efficient networking, interoperability and scalability, dependable autonomy, interaction with humans, and important aspects of security, privacy and trust. DCOSS focuses on the above information processing issues for distributed sensor systems, covering models, algorithms, architectures, deployment tools, and novel applications.

DCOSS 2019 includes a high-quality technical program consisting of keynotes, research papers, and a poster-demo session. Each submitted paper was reviewed by at least three experts in the field; most papers received four reviews. After in-depth online discussions, 20 papers were finally accepted. Specifically, the program covers important aspects of distributed computing in sensor systems, such as wireless network algorithms, IoT, localisation, security, and novel applications, to name a few. Two keynote talks are delivered by Prof. Magnús M. Halldórsson, Reykjavik University, and Prof. Luca Mottola, Politecnico di Milano. In addition, DCOSS 2019 includes an interesting set of 7 focused Workshops and the Special Session on Smart Transport by the EU Safestrip project. We believe the technical program will provide an exciting forum for researchers and practitioners to exchange cutting-edge ideas in distributed sensor systems.

The conference would not be successful without the hard work of many volunteers. We would like to thank the Publicity Chairs (Theofanis Raptis, Stefano Basagni, Lei Shu, and Aline Carneiro Viana) for their efforts in attracting a good number of submissions around the world. We sincerely thank the Technical Program Committee members for their high-quality reviews. Also, we are grateful to the Chairs of the 7 specialized Workshops, the Poster and Demo Chairs (Panagiota Katsikouli, Paul Patras, Simone Silvestri), Publication Chair (Rafael Falcon), Registration and Finance Chairs (Stephane Kuendig and Jose Rolim), and Web Chair (Pantelis Tzamalís) for their dedication and hard work toward the success of DCOSS 2019. We wish to also thank the various sponsors and supporters of DCOSS 2019. Last, but not the least, our sincere thanks to the Steering Committee Chair, Jose Rolim, for his great guidance and help.

Finally, we are grateful to the authors for submitting their fine work to DCOSS 2019 and all the participants for their attendance.

General Chair

Sotiris Nikolettseas

Program Co-Chairs

Niki Trigoni, Tarek Abdelzaher and Gian Pietro Picco

Program at a glance

	WEDNESDAY MAY.29			THURSDAY MAY.30				FRIDAY MAY.31				
8:15	Registration opens											
9:00	UrbCom 2019	ISIoT 2019	Opening (General Chair, Program Chairs)	IoT14 - first day	SecRIoT 2019	WPSN 2019	SmaCE 2019		IoT14 - second day	Wi-DroIT 2019	Session V: System Services	
9:30												
9:30												
10:00			Keynote Talk Luca Mottola					Keynote Talk Magnús Halldórsson				
10:00												
10:30												
10:30			Coffee Break					Coffee Break				Coffee Break
11:00												
11:00												
11:30												
11:30		Session I: Ranging and Localization		Session III: Internet of Things: Gateways, Policies, and Novel Platforms		Session VI: Communication						
12:00												
12:00												
12:30												
12:30											Posters/Demos	
13:00											Closing Remarks	
13:00	Lunch Break											
13:30	Lunch Break											
13:30	Lunch Break											
14:00	Lunch Break											
14:00	UrbCom 2019	ISIoT 2019	Session II: Best Paper Award Nominees	IoT14 - first day	SecRIoT 2019	WPSN 2019	SmaCE 2019	Session IV: Applications	IoT14 - second day	Wi-DroIT 2019	Special Session on Smart Transport	
14:30												
14:30												
15:00												
15:00												
15:30												
15:30			Invited Poster Papers (I)					Invited Poster Papers (II)				
15:45												
15:45								Coffee Break				
16:00												
17:30												
19:30		Boat Cruise in the Caldera										
19.30												
20:00								Conference Dinner				
20:00												
22:00												

Keynote Talks

“The What and What Not of Intermittent Computing”

Wednesday, May 29, 2019



Prof. Luca Mottola
Politecnico di Milano, Italy and SICS, Sweden

“How well do we know the physical model?”

Thursday, May 30, 2019



Prof. Magnús M. Halldórsson, Reykjavik
University, Iceland

08.15	Registration opens
09.00-09.30	Opening (General Chair, Program Chairs)
09.30-10.30	Keynote Talk: “The What and What Not of Intermittent Computing” <i>Luca Mottola, Politecnico di Milano, Italy</i>
10.30-11.00	Coffee Break
11.00-13.00	Session I: Ranging and Localization (Chair: Luca Mottola) • R3: Reflection Resilient Concurrent Ranging with Ultra-Wideband Radios <i>Milad Heydariaan, Hessam Mohammadmoradi, Omprakash Gnawali (University of Houston, USA)</i> • SRAC: Simultaneous Ranging and Communication in UWB Networks <i>Hessam Mohammadmoradi, Milad Heydariaan, Omprakash Gnawali (University of Houston, USA)</i> • Thermal Piloting: A Novel Approach for Sensor Localization in Data Center Monitoring <i>Mehdi Jafarizadeh, Peiying Jennifer Tsai, Rong Zheng (McMaster University, Canada)</i> • Map-aided Navigation for Emergency Searches <i>Johan Wahlstrom, Pedro Porto Buarque de Gusmao, Andrew Markham, Niki Trigoni (University of Oxford, UK)</i>
13.00-14.00	Lunch Break
14.00-15.30	Session II: Best Paper Award Nominees (Chair: Omprakash Gnawali) • mID: Tracking and Identifying People with Millimeter Wave Radar <i>Peijun Zhao, Chris Xiaoxuan Lu (University of Oxford); Jianan Wang (DeepMind); Changhao Chen, Wei Wang, Niki Trigoni, Andrew Markham (University of Oxford, UK)</i> • ZenCam: Context-Driven Control of Continuous Vision Body Cameras <i>Shiwei Fang, Ketan Mayer-Patel, Shahriar Nirjon (UNC Chapel Hill, USA)</i> • Energy-Efficient Radio Selection and Data Partitioning for Real-Time Data Transfer <i>Di Mu, Mo Sha, Kyoung-Don Kang, Hyungdae Yi (State University of New York at Binghamton, USA)</i>
15.30-15.45	Invited Poster Papers (I) (Chair: Cristina Pinotti) • Aerial Robotic Team for Complex Monitoring in Precision Agriculture <i>Emilian Vlasceanu, Dan Popescu, Loretta Ichim (University Politecnica of Bucharest, Romania)</i> • An Efficient Trajectory-based Routing using Virtual Coordinates for Low-Power WSNs with Mobile Sinks <i>Xiaofei Cao, Sanjay Madria (Missouri University of Science and Technology, USA)</i> • Expressive Feature-oriented Multicast for the Internet of Things <i>Jonathan Oostvogels, Stefanos Peros, Stephane Delbruel, Danny Hughes (KU Leuven, Belgium)</i>
17.30-20.00	Boat Cruise in the Caldera

08.15	Registration opens
09.00-10.30	Keynote Talk: “How well do we know the physical model?” <i>Magnús Halldórsson, Reykjavik University, Iceland</i>
10.30-11.00	Coffee Break
11.00-13.00	Session III: Internet of Things: Gateways, Policies, and Novel Platforms (<i>Chair: Magnús Halldórsson</i>) Handling inherent delays in Virtual IoT Gateway <i>Saptarshi Hazra, Simon Duquennoy (RISE SICS, Sweden); Peng Wang (KTH Royal Institute of Technology, Sweden); Thiemo Voigt (RISE SICS, Sweden); Chenguang Lu, Daniel Cederholm (Ericsson Research, Sweden)</i> Securing the Insecure Link of Internet-of-Things Using Next-Generation Smart Gateways <i>Syed Rafiul Hussain, Elisa Bertino (Purdue University); Shahriar Nirjon (University of North Carolina Chapel Hill, USA)</i> CLAP: Compact Labeling scheme for Attribute-based IoT Policy Control <i>Mostafa Uddin, Murali Kodialam, Fang Hao, Sarit Mukherjee (Nokia Bell Labs, USA)</i> Designing a Low-Cost IoT Sensing Platform for VOC Material Classification <i>Jungmo Ahn, Hyungi Kim, Eunha Kim, JeongGil Ko (Ajou University, Korea)</i>
13.00-14.00	Lunch Break
14.00-15.30	Session IV: Applications (<i>Chair: Theofanis Raptis</i>) Shape Estimation Using Location-Unknown Distance Sensors: A Curvature Based Approach <i>Hiroki Ikeuchi (NTT Corporation, Japan); Hiroshi Saito (The University of Tokyo, Japan)</i> A Real-Time Audio Monitoring Framework with Limited Data for Constrained Devices <i>Asif Salekin (University of Virginia, USA); Shabnam Ghaffarzadegan, Zhe Feng (Bosch Research and Technology Center, USA); John A. Stankovic (University of Virginia, USA)</i> PotatoScanner – A Mobile Delay Tolerant Wireless Sensor Node for Smart Farming Applications <i>Björn Gernert, Jan Schlichter, Lars Wolf (TU Braunschweig, Germany)</i>
15.30-15.45	Invited Poster Papers (II) (<i>Chair: Thomas Lagkas</i>) Utilizing Mobile Nodes for Congestion Control in Wireless Sensor Networks <i>Antonia Nicolaou, Natalie Temene, Charalampos Sergiou, Chryssis Georgiou, Vasos Vassiliou (University of Cyprus, Cyprus)</i> A Configurable Distributed Data Analytics Infrastructure for the Industrial Internet of Things <i>Nikos Kefalakis, Aikaterini Roukounaki, John Soldatos (Athens Information Technology, Greece)</i> Cognitive Game for OCD Effects Minimization using IoT <i>Evangelos D. Spyrou, Dimitris Mitrakos (Aristotle University of Thessaloniki, Greece)</i>
15.45-16.00	Coffee Break
19.30-22.00	Conference Dinner

08.15	Registration opens
09.00-10.30	Session V: System Services (Chair: Constantinos Marios Angelopoulos) • Active Replication for Centrally Coordinated Teams of Autonomous Vehicles Nasos Grigoropoulos, Manos Koutsoubelias, Spyros Lalis (University of Thessaly, Greece) • DeepRisk: A Deep Transfer Learning Approach to Migratable Traffic Risk Estimation in Intelligent Transportation using Social Sensing Yang Zhang, Hongxiao Wang, Daniel Zhang, Dong Wang (University of Notre Dame, USA) • Power efficient algorithms for wireless charging under phase shift in the vector model Ioannis Katsidimas, Sotiris Nikolettseas, Christoforos Raptopoulos (University of Patras, Greece)
10.30-11.00	Coffee Break
11.00-12.30	Session VI: Communication (Chair: Dong Wang) • Random Gossip Processes in Smartphone Peer-to-Peer Networks Calvin Newport, Alex Weaver (Georgetown University, USA) • A Model for Reliable Uplink Transmissions in LoRaWAN Furqan Khan (The University of Queensland, Australia); Raja Jurdak (CSIRO ICT Centre, Australia); Marius Portmann (The University of Queensland, Australia) • Continuous Monitoring meets Synchronous Transmissions and In-Network Aggregation Charalampos Stylianopoulos, Magnus Almgren, Olaf Landsiedel, Marina Papatriantafilou (Chalmers University of Technology, Sweden)
12.30-12.50	Posters/Demos (Chair: Zinon Zinonos) • Enhancing Distributed Sensor Networks for Air-Quality Monitoring: A Social Informatics Approach L. G. Pee (Nanyang Technological University, Singapore) • A hybridization of Mobile Crowdsensing, Twitter Analytics, and Sensor Data for the holistic approach of pollen onsets detection Pantelis Tzamalīs (University of Patras & CTI, Greece), Pantelis Vikatos (University of Patras, Greece), Sotiris Nikolettseas (University of Patras & CTI, Greece) • Security on the Farm: Safely Communicating with Legacy Agricultural Instrumentation Tim Bell (BECS Technology, Inc., USA), Roger Chamberlain (Washington University in St. Louis, USA), Mike Chambers (BECS Technology, Inc., USA), Brian Riek (AGCO Corporation, USA), Todd Steinbrueck (BECS Technology, Inc., USA) • Traffic Density Based Distributed Congestion Control Strategy for Vehicular Communication Oluwaseyi Akinlade, Ikjot Saini, Xiaofeng Liu, Arunita Jaekel (University of Windsor, Canada)
12.50-13.00	Closing Remarks
13.00-14.00	Lunch Break
14.00-15.45	Special Session on Smart Transport (Chair: Evangelos Bekiaris, CERTH/HIT, Co-chair: Erwin Vermassen, ERTICO) • Implementation and validation approach of the C-ITS novel solution proposed by SAFE STRIP for self-explanatory and forgiving infrastructures

Maria Gkemou, Andrea Steccanella, Ioannis Gkragkopoulos, Dionysios Kehagias, Evangelos Bekiaris

- **An encapsulated energy harvesting platform for on-road low power sensing systems**
Gavrilis Filios, Ioannis Katsidimas, Vassilis Kostopoulos, Thanasis Kotzakolios, Sotiris Nikolettseas, George Sotiriadis, Ioannis Tsenempis
- **Cooperative Safety Applications for C-ITS equipped and non-equipped vehicles supported by an extended Local Dynamic Map built on SAFE STRIP Technology**
Francesco Biral, Giammarco Valenti, Enrico Bertolazzi, Andrea Steccanella
- **HMI to exploit the potential of Distributed Computing in Sensor Systems.**
Roberto Montanari, Andrea Castellano, Elisa Landini
- **Intelligent roads as part of the C-ITS reference architecture**
Erwin Vermassen

Workshops/Special Session Schedule

Wednesday 29, 2019

- **UrbCom 2019 (1st International Workshop on Urban Computing)**
Chairs: Leandro A. Villas, Marilia Curado
- **ISIoT 2019 (1st International Workshop on Intelligent Systems for IoT)**
Chairs: Vasos Vassiliou, Zinon Zinonos, Stelios Timotheou, Loizos Michael

Thursday, May 30, 2019

- **IoT4 (International Workshop on IoT Applications and Industry 4.0) - first day**
Chairs: Thomas Lagkas, Panagiotis Sarigiannidis, John Soldatos
- **SecRIoT 2019 (1st International Workshop on Security and Reliability of IoT Systems)**
Chairs: Vasileios Vlachos, Athanasios Kakarountas, Periklis Chatzimisios, Ioannis Chochliouros
- **WPSN 2019 (1st International Workshop on Wirelessly Powered Systems and Networks)**
Chairs: Theofanis Raptis, Nalin Jayakody, Diego Masotti
- **SmaCE 2019 (1st International Workshop on Smart Circular Economy)**
Chairs: Marios Angelopoulos, Giorgos Demetriou, Sotiris Ioannidis, Vasilis Katos, Sotiris Nikolettseas

Friday, May 31, 2019

- **IoT4 (International Workshop on IoT Applications and Industry 4.0) - second day**
Chairs: Thomas Lagkas, Panagiotis Sarigiannidis, John Soldatos
- **Wi-DroIT 2019 (Wireless Drones over Internet of Things)**
Chairs: Cristina M. Pinotti, Enrico Natalizio
- **Special Session on Smart Transport**
Chairs: Evangelos Bekiaris, CERTH/HIT, Co-chair: Erwin Vermassen, ERTICO

UrbCom 2019 (1st International Workshop on Urban Computing)

Wednesday, 29 May

11:00-13:00	Session I: Human Mobility • Mining Human Mobility from Social Media to support Urban Computing Applications <i>Carmela Comito (Institute for High Performance Computing and Networking)</i> • Profiling the Mobility of Tourists Exploring Social Sensing <i>Ana Paula G. Ferreira (Federal University of Minas Gerais), Thiago H. Silva (Federal University of Technology - Paraná), Antonio A. F. Loureiro (Federal University of Minas Gerais)</i> • A Case for Machine Learning in Edge-Oriented Computing to Enhance Mobility as a Service <i>Gonçalo Carvalho (University of Coimbra), Bruno Cabral (University of Coimbra), Vasco Pereira (University of Coimbra), Jorge Bernardino (Polytechnic of Coimbra)</i> • Classifying Venue Categories of Unlabeled Check-ins using Mobility Patterns <i>Helen C. M. Senefonte (Federal University of Technology - Paraná), Thiago H. Silva (Federal University of Technology - Paraná), Ricardo Lüders (Federal University of Technology - Paraná), Myriam R. B. S. Delgado (Federal University of Technology - Paraná)</i>
13:00-14:00	Lunch Break
14:00-15:30	Session II: Smart Cities and Intelligent Transportation System • SEnTINEL - INtelligent Transport SystEm for Urban Mobility Management in Smart Cities <i>Matheus Sanches Quessada (Federal Institute of São Paulo), Andre Luis Cristiani (Federal Institute of São Paulo), Pedro Luis Ranzani Junior (Federal Institute of São Paulo), Matheus Pereira Leal (Federal Institute of São Paulo), Rodolfo I. Meneguette (Federal Institute of São Paulo)</i> • Emerging Urban Challenge: RPAS/UAVs in Cities <i>Luke Russell (Carleton University), Rafik Goubran (Carleton University), Felix Kwamena (Carleton University)</i> • Towards a Traffic Data Enrichment Sensor based on Heterogeneous Data Fusion for ITS <i>Paulo H. Rettore (Federal University of Minas Gerais), Roberto Rigolin F. Lopes (Fraunhofer FKIE), Guilherme Maia (Federal University of Minas Gerais), Leandro A. Villas (University of Campinas), Antonio A. F. Loureiro (Federal University of Minas Gerais)</i> • FIRE-NRD: A fully-distributed and Vanets-based Traffic Management System for Next Road Decision <i>Thiago S. Gomides (Federal University of São João del Rei), Massilon L. Lourenço (Federal University of São João del Rei), Fernanda S.H. Souza (Federal University of São João del Rei), Leandro A. Villas (University of Campinas), Daniel L. Guidoni (Federal University of São João del Rei)</i>

ISloT 2019 (1st International Workshop on Intelligent Systems for IoT)

Wednesday, 29 May

09.00-09.30	Opening (General Chair, Program Chairs)
09.30-10.30	DCOSS Keynote Talk
10.30-11.00	Coffee Break
11.00-13.00	Session I: Protocols • Decentralized Spectrum Learning for IoT Networks Wireless Collision Mitigation <i>Christophe Moy and Lilian Besson</i> • Delay-Bounded Scheduling in IEEE 802.15.4e DSME using Linear Programming <i>Florian Meyer and Volker Turau</i> • Classifying Security Attacks in IoT Networks Using Supervised Learning <i>Christiana Ioannou and Vasos Vassiliou</i> • Improving the Network Lifetime and Performance of Wireless Sensor Networks for IoT Applications based on Fuzzy Logic <i>Payam Rahimi and Chrysostomos Chrysostomou</i> • Mobility Management Solutions in Industrial Wireless Sensor Networks <i>Zinon Zinonos and Vasos Vasilliou</i>
13.00-14.00	Lunch Break
14.00-16.00	Session II: Applications • Virtual Light Sensors in Industrial Environment Based on Machine Learning Algorithms <i>Michalis Drakoulelis, Gabriel Filios, Vasilis Georgopoulos Ninos, Ioannis Katsidimas and Sotiris Nikolettseas</i> • The quest for sense: Physical Phenomena Classification in the Internet of Things <i>Joao B. Borges, Heitor S. Ramos, Raquel A. F. Mini, Aline C. Viana, Antonio A. F. Loureiro</i> • Target Tracking using Cognitive Radar and Foveal Nodes <i>Ioannis Kyriakides</i> • Model-adaptive Event-triggering for Efficient Public Transportation Tracking <i>Panayiotis Kolios and Georgios Ellinas</i> • ParkChain: An IoT Parking Service Based on Blockchain <i>Zinon Zinonos, Panayiotis Christodoulou, Andreas Andreou and Savvas Chatzichristofis</i>

IoT4 (International Workshop on IoT Applications and Industry 4.0) – 1st day

Thursday, 30 May

11.00-13.00	• Forecasting bath and metal height features in electrolysis process <i>Achilleas Pasias, Thanasis Vafeiadis, Dimosthenis Ioannidis and Dimitrios Tzovaras</i> • Middleware for Real-time Event Detection and Predictive Analytics for Smart Manufacturing <i>Muhammad Intizar Ali and Pankesh Patel</i> • Data Analytics Platform for the Optimization of Waste Management Procedures <i>Thanasis Vafeiadis, Alexandros Nizamis, Vissarion Pavlopoulos, Luigi Giugliano, Vaia Rousopoulou, Dimosthenis Ioannidis and Dimitrios Tzovaras</i> • A semantic-driven approach for Industry 4.0 <i>Sangje Cho, Gökan May and Dimitris Kiritsis</i> • Knowledge Management for Manufacturing SMEs using Industrial IoT <i>Driate, Minoufekr and Plapper</i>
13:00-14:00	Lunch Break
14.00-15.45	• Smart Interconnected Infrastructure for Security and Safety in Public Places <i>Angelos Chatzimichail, Christos Chatzigeorgiou, Fotis Andritsopoulos, Christina Karaberi, Georgios Meditskos, Panagiotis Kasnesis, Dimitrios Kogias, Georgios Gorgogetas, Athina Tsanousa, Stefanos Vrochidis, Charalampos Patrikakis and Ioannis Kompatsiaris</i> • Water in the Cloud: Understanding Water Chemistry via the Internet of Things <i>Roger Chamberlain, Mike Chambers, Darren Greenwalt, Maria Scharth, Brett Steinbrueck, Todd Steinbrueck and David Thomas</i> • An IoT-based prototype of a driverless bulldozer <i>Nelson H. Carreras Guzman, Adam Gergo Mezovari, Ying Yan and Martin Nordal Petersen</i> • Unveiling Trends and Predictions in Digital Factories <i>Sophia Karagiorgou, Georgios Vafeiadis, Dimitrios Ntalaperas, Nikolaos Lykousas, Danae Vergeti and Dimitrios Alexandrou</i>

SecIoT 2019 (1st International Workshop on Security and Reliability of IoT Systems)

Thursday, 30 May

09.30-10.30	DCOSS Keynote Talk
10.30-11.00	Coffee Break
11.00-13.00	Session I: • A Novel Hierarchical Intrusion Detection System based on Decision Tree and Rules-based Models <i>Ahmed Ahmim, Makhlof Derdour (University of Larbi Tebessi, Algeria); Leandros Maglaras, Helge Janicke (De Montfort University, United Kingdom); Mohamed Amine Ferrag (Guelma University, Algeria)</i> • Threat analysis in dynamic environments: The case of the smart home <i>Georgios Kavallieratos, Vasileios Gkioulos (NTNU Norwegian University of Science and Technology, Norway); Sokratis K. Katsikas (Open University of Cyprus, Cyprus)</i> • Resilient Self-Calibration in Distributed Visual Sensor Networks <i>Jennifer Simonjan, Bernhard Rinner (Alpen-Adria-Universität Klagenfurt, Austria); Bernhard Dieber (JOANNEUM RESEARCH, Austria)</i> • Performance of Secure Boot in Embedded Systems <i>Christos Profentzas, Mirac Günes, Yiannis Nikolakopoulos, Magnus Almgren (Chalmers University of Technology, Sweden); Olaf Landsiedel (Kiel University, Germany)</i> • Collaborative agent-based detection of DDoS IoT botnets <i>Georgios Spathoulas, Nikolaos Giachoudis, Georgios Theodoridis and Georgios Damiris (University of Thessaly, Greece)</i> • Spyduino: Arduino as a HID exploiting BadUSB vulnerability <i>Evangelos Karystinos, Christos Douligeris (University of Pireaus, Greece); Antonios Andreatos (Hellenic Air Force Academy, Greece)</i>
13.00-14.00	Lunch Break
14.00-15.45	Session II: • Monitoring Supply Current Thresholds for Smart Device's Security Enhancement <i>Dimitrios Myridakis, Georgios Spathoulas, Athanasios Kakarountas (University of Thessaly, Greece); Dimitrios Schinianakis, Joachim Lueken (Nokia Bell Labs, Germany)</i> • Security and privacy in the Internet of Things using blockchain technology <i>Georgios Spathoulas, Angeliki Karageorgopoulou (University of Thessaly, Greece)</i> • Security Challenges in the eHealth Domain: The VICINITY Approach <i>Maria Belesioti, Evangelos Sfakianakis, Ioannis Chochliouros (OTE, Greece); Viktor Oravec (bAvenir, s.r.o., Slovakia); Athanasios Tryferidis, Dimitrios Tzovaras, Maria Koutli (CERTH/ITI, Greece); Kostis Kaggelides (Gnomon Informatics S.A., Greece)</i> • VICINITY: IoT Semantic Interoperability based on the Web of Things <i>Andrea Cimmino Arriaga, Fernando Serena, María Poveda-Villalón, Raúl García-Castro (Universidad Politécnica de Madrid, Spain); Peter Kostelnik (InterSoft A.S., Slovakia); Athanasios Tryferidis, Dimitrios Tzovaras (CERTH/ITI, Greece); Viktor Oravec, Stefan Vanya (bAvenir, s.r.o., Slovakia); Christoph Grimm (Kaiserslautern University of Technology, Germany)</i> • VICINITY Platform-based Load Scheduling Method by Considering Smart Parking and Smart Appliance

	<i>Yajuan Guan, Wei Feng, Emilio J. Palacios-Garcia, Juan C. Vásquez and Josep M. Guerrero (Aalborg University, Denmark)</i>
15.45-16.00	Coffee Break
16.00-17.00	Session III: • Simulation based validation of a Smart Energy Use-Case with Homomorphic Encryption <i>Johannes Kölsch, Axel Ratzke, Christopher Heinz, Christoph Grimm (TU Kaiserslautern, Germany); Gomathi Nandagopal (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India)</i> • Secure IoT e-Health Applications using VICINITY Framework and GDPR guidelines <i>Maria Koutli, Natalia Theologou, Athanasios Tryferidis, Dimitrios Tzovaras (CERTH/ITI, Greece); Aimilia Kagkini, Dimitrios Zandes, Konstantinos Karkaletsis, Konstantinos Kaggelides (Gnomon Informatics S.A., Greece); Jorge Almela Miralles, Viktor Oravec, Stefan Vanya (bAvenir, s.r.o., Slovakia)</i> • A new security approach in telecom infrastructures: The RESISTO concept <i>Maria Belesioti Alexandros Kostopoulos, Ioannis Chochliouros (OTE, Greece); Rodoula Makri (National Technical University of Athens, Greece); Mirjam Fehling-Kaschek (Fraunhofer Institute for High-Speed Dynamics, Germany); Marco Carli (Università degli Studi Roma TRE, Italy); Alberto Neri, Federico Frosali (Homeland Security & Critical Infrastructures, Leonardo –Societa per Azioni Florence, Italy)</i>
19.30-22.00	Conference Dinner

WPSN 2019 (1st International Workshop on Wirelessly Powered Systems and Networks)

Thursday, 30 May

09.30-15.45	DCOSS Sessions
15.45-16.00	Coffee Break
16.00-16.05	WPSN 2019 opening remarks
16.05-16.45	Session I: User cooperation • Error Analysis of NOMA-Based User Cooperation with SWIPT <i>Suyue Li, Lina Bariah, Sami Muhaidat, Paschalis C. Sofotasios, Jie Liand and Anhong Wang</i> • Online Social Network Information Can Influence Wireless Crowd Charging <i>Theofanis P. Raptis</i>
16.45-17.25	Session II: Energy optimization • Placement Optimization in Wireless Charging Systems under the Vector Model <i>Ioannis Katsidimas, Emmanouil Kerimakis and Sotiris Nikolettseas</i> • On Distributed Sensor Fusion in Batteryless Intermittent Networks <i>Kasim Sinan Yildirim and Przemyslaw Pawelczak</i>
17.25-18.05	Session III: Communication Networks • Characteristic Models and Algorithmic Methods for Efficient Electromagnetic Radiation Control in Wirelessly Powered Adhoc Communication Networks <i>Gabriel Filios, Sotiris Nikolettseas, Adelina Madhja and Christoforos Raptopoulos</i> • Wireless-Powered Hybrid Terrestrial and Underwater Cooperative Communication System <i>Tharindu D. Perera Ponnimbaduge, Dushantha Nalin K. Jayakody, Sofeine Affess, Muthu Chidambaranathan and Chursin Yury</i>
19.30-22.00	Conference Dinner

SmaCE 2019 (1st International Workshop on Smart Circular Economy)

Thursday, 30 May

09.00-10.30	DCOSS Keynote Talk
10.30-11.00	Coffee Break
11.00-13.00	Session I: • Opening – Welcome Message (11.00-11.15) <i>Prof. David Langley, University of Groningen; TNO</i> • SmaCE Keynote (11.15-12.00) <i>Prof. David Langley, University of Groningen; TNO</i> • Towards Systematic Specification of Non-Functional Requirements for Sharing Economy Services (12.00- 12.25) <i>Mustafa A. Mustafa, Jessica Schroers, Iraklis Symeonidis and Gergely Biczók</i> • Thinking like Apple's recycling robots: towards the activation of responsibility in a post-environmentalist world (12.25- 12.50) <i>Stefan Laster and Alison Stowell</i>
13.00-14.00	Lunch Break
14.00-15.45	Session II: • The CE-IoT Framework for Green ICT Organizations (14.00- 14.25) <i>George Hatzivasilis, Nikos Christodoulakis, Christos Tzagkarakis, Sotiris Ioannidis, Konstantinos Fysarakis, Giorgos Demetriou and Marios Panayiotou</i> • IDEAL-CITIES – A Trustworthy and Sustainable Framework for Circular Smart Cities (14.25- 14.50) <i>Constantinos Marios Angelopoulos, Vasilios Katos, Theodoros Kostoulas, Andreas Miaoudakis, Nikolaos Petroulakis, George Alexandris, Giorgos Demetriou, Giuditta Morandi, Urszula Rak, Karolina Walędzik, Marios Panayiotou and Christos Iraklis Tsatsoulis</i> • Online Brine Platform: a tool for enabling industrial symbiosis in saline wastewater management domain (14.50- 15.15) <i>Despina Bakogianni, Evangelia Skourtanioti, Dimitris Meimaris, Dimitris Xevgenos and Maria Loizidou</i> • Organizing Network Management Logic with Circular Economy Principles (15.15- 15.35) <i>Christos Liaskos, Ageliki Tsioliariidou and Sotiris Ioannidis</i>
15.45-16.00	Coffee Break
16.00-17:00	Session III: • An Architecture for Blockchain over Edge-enabled IoT for Smart Circular Cities (16.00-16.25) <i>Amalia Damianou, Constantinos Marios Angelopoulos and Vasilis Katos</i> • Review of Security and Privacy for the Internet of Medical Things (IoMT) (16.25– 16.50) <i>George Hatzivasilis, Othonas Soultatos, Sotiris Ioannidis, Christos Verikoukis, Giorgos Demetriou and Christos Tsatsoulis</i>
19.30-22.00	Conference Dinner

IoT4 (International Workshop on IoT Applications and Industry 4.0) – 2nd day

Friday, 31 May

09.15-10.30	• Joint Compressed Sensing and Manipulation of Wireless Emissions with Intelligent Surfaces <i>Christos Liaskos, Ageliki Tsioliaridou, Alexandros Pitilakis, George Prialakos, Odysseas Tsilipakos, Anna Tasolamprou, Nikolaos Kantartzis, Sotiris Ioannidis, Maria Kafesaki, Andreas Pitsillides and Ian Akyildiz</i> • Energy efficient algorithm for multihop BLE networks on resource-constrained devices <i>Andreas Bardoutsos, Gabriel Filios, Ioannis Katsidimas and Sotiris Nikolettseas</i> • An Architecture model for Smart Farming <i>Anna Triantafyllou, Dimosthenis C. Tsouros, Panagiotis Sarigiannidis and Matina Bibi</i>
10.30-11.00	Coffee Break
11.00-12.15	• Connectivity Validation for Indoor IoT Applications with Weightless Protocol <i>Benoit Despatis-Paquette, Louis Rivest and Robert Pellerin</i> • Scene and Environment Monitoring Using Aerial Imagery and Deep Learning <i>Mahdi Maktab Dar Oghaz, Manzoor Razaak, Hamideh Kerdegari, Vasileios Argyriou and Paolo Remagnino</i> • Power Allocation in Downlink Non-Orthogonal Multiple Access IoT-enabled Systems: A Particle Swarm Optimization Approach <i>Dimitrios Pliatsios and Panagiotis Sarigiannidis</i>
13:00-14:00	Lunch Break
14.00-15.15	• Energy harvesting and smart management platform for low power IoT systems <i>Gabriel Filios, Sotiris Nikolettseas, Ioannis Katsidimas and Ioannis Tsenempis</i> • Data acquisition and analysis methods in UAVbased applications for Precision Agriculture <i>Dimosthenis Tsouros, Anna Triantafyllou, Matina Bibi and Panagiotis Sarigiannidis</i> • Smart IoT Cameras for Crowd Analysis based on augmentation for automatic pedestrian detection, simulation and annotation <i>Antoine Rimboux, Rob Dupre, Eldriona Daci, Thomas Lagkas, Panagiotis Sarigiannidis, Paolo Remagnino and Vasileios Argyriou</i>

Wi-DroIT 2019 (Wireless Drones over Internet of Things)

09:00-09:10	Welcome (Program preview, and Invited speaker introduction)
09:10-10:25	Session I: Drone Network Architecture and Drone Communications • A Network Architecture for High Volume Data Collection in Agricultural Applications (9:10-9:35) <i>Dimitrios Zorbas and Brendan O'Flynn (University College Cork, Ireland)</i> • Coverage Analysis of Drone-Assisted Backscatter Communication for IoT Sensor Network (9:35-10:00) <i>Ali Hayajneh and Syed Ali Raza Zaidi (University of Leeds, UK), Maryam Hafeez (University of Huddersfield, UK), Des McLernon (University of Leeds, UK) and Moe Win (Massachusetts Institute of Technology, USA)</i> • Experimental Validation of Air-to-Ground Propagation Models for Low-Altitude Platforms (10:00-10:25) <i>Oleksandr Andryeyev, Umut Onus, Victor Casas and Andreas Mitschele-Thiel. (Technische Universität Ilmenau, Germany)</i>
10:30-10:55	Coffee break
11:00-11:35	Invited Talk: Monitoring human rights in conflict – The use of drones is still a chimera <i>Cono Giardullo, Rule of Law Adviser at the Organization for Security and Co-operation in Europe</i>
11:35-11:45	Discussion
11:45-13:00	Session II: Navigation and Drone Software/Hardware • CAPER: A Connectivity-Aware Path Planner with Regulatory Compliance for UAVs (11:45-12:10) <i>Anusha Mujumdar, Pooja Kashyap, Swarup Mohalik (Ericsson Research, Bangalore, India) and Jim Feng Ericsson (Ericsson Research, Stockholm, Sweden)</i> • An Open Source and Open Hardware Deep Learning-powered Visual Navigation Engine for Autonomous Nano-UAVs (12:10-12:35) <i>Daniele Palossi and Francesco Conti (ETH, Zurich), and Luca Benini (University of Bologna, Italy)</i> • A Smart VPN Bonding Technique for Drone Communication Applications (12:35-13:00) <i>Corrado Rametta, Francesco Beritelli, Roberta Avanzato (University of Catania, Italy), and Michele Russo (Vicosystems, Catania, Italy)</i>
13:00-14:00	Lunch Break

14:00-15:30	Session III: Applications • Project Vulture: A Prototype for Using Drones in Search and Rescue Operations (14:00-14:25) <i>Andres Quan, Charles Herrmann and Hamdy Soliman (New Mexico Tech, USA)</i> • UAVs as a leverage to provide energy and network for Cyber-Physical Observation Units on the Arctic Tundra (14:25-14:50) <i>Issam Raïs, John Markus Bjørndalen, Ken-Arne Jensen, Lukasz Sergiusz Michalik, Håvard Mjøen, Øystein Tveito, Otto Anshus and Phuong Hoai Ha (The Arctic University of Norway)</i> • Automated Picking System Employing a Drone (14:50-15:15) <i>Francesco Betti Sorbelli and Cristina M. Pinotti (University of Perugia, Italy), Federico Coro (GSSI, L'Aquila, Italy), and Anil Shende (Roanoke College, VA, USA)</i> • An Innovative Mobile Terminal Positioning Technique based on UAV-Femtocell Systems (15:15-15:30) <i>Roberta Avanzato, Francesco Beritelli, Corrado Rameta and Mario Vaccaro (University of Catania, Italy)</i>
15:30-15:40	Concluding Remarks (Remind special Issue)

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This image shows a full page of a handwriting practice worksheet. It consists of multiple sets of three horizontal dashed lines, providing a guide for letter height and placement. The lines are evenly spaced and extend across the entire width of the page, leaving ample space for writing practice. There is no text or other markings on the page.

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