2019 15th International Conference on Distributed Computing in Sensor Systems (DCOSS 2019)

Santorini Island, Greece 29 – 31 May 2019



IEEE Catalog Number: GISBN:

CFP19DCO-POD 978-1-7281-0571-0

Copyright © 2019 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number: CFP19DCO-POD ISBN (Print-On-Demand): 978-1-7281-0571-0 ISBN (Online): 978-1-7281-0570-3

ISSN: 2325-2936

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400

Fax: (845) 758-2633

E-mail: curran@proceedings.com Web: www.proceedings.com



2019 15th International Conference on Distributed Computing in Sensor Systems (DCOSS) DCOSS 2019

Table of Contents

Message from the General Chair and Program Chairs xviii
Organizing Committee xix
Steering Committee .xx
Technical Program Committee xxi
Message from the SecRIoT 2019 Workshop Chairs xxii
SecRIoT 2019 Committees xxiii
Message from the IoTI4 2019 Workshop Chairs xxiv
IoTI4 2019 Committees xxv
Message from the SmaCE 2019 Workshop Chair xxvi
SmaCE 2019 Committees xxvii
Message from the WPSN 2019 Workshop Chairs xxviii
WPSN 2019 Committees xxix
Message from the UrbCom 2019 Workshop Chairs xxx
UrbCom 2019 Committees xxxi
Message from the Wi-DroIT 2019 Workshop Chairs xxxii
Wi-DroIT 2019 Committees xxxiii
Message from the ISIoT 2019 Workshop Chairs xxxiv
ISIoT 2019 Committees xxxv
Message from the SAFE STRIP Special Session Workshop Chairs xxxvi
9
Main Event Denove
Main Event Papers
Session I: Ranging and Localization
R3: Reflection Resilient Concurrent Ranging with Ultra-Wideband Radios .1
Milad Heydariaan (University of Houston), Hessam Mohammadmoradi (University of Houston), and Omprakash Gnawali (University of Houston)
(University of Houston), and Omprakash Gnawali (University of Houston)
SRAC: Simultaneous Ranging and Communication in UWB Networks .9
Hessam Mohammadmoradi (University of Houston), Milad Heydariaan
(University of Houston), and Omprakash Gnawali (University of Houston)
Thermal Piloting: A Novel Approach for Sensor Localization in Data Center Monitoring .1.7
Mehdi Jafarizadeh (McMaster University), Peiying J. Tsai (McMaster
University) and Rong Zheng (McMaster University)

Map-aided Navigation for Emergency Searches .25. Johan Wahlström (University of Oxford), Pedro Porto Buarque de Gusmão (University of Oxford), Andrew Markham (University of Oxford), and Niki Trigoni (University of Oxford)
Session II: Best Paper Award Nominees
mID: Tracking and Identifying People with Millimeter Wave Radar .33
ZenCam: Context-Driven Control of Autonomous Body Cameras .41. Shiwei Fang (University of North Carolina at Chapel Hill), Ketan Mayer-Patel (University of North Carolina at Chapel Hill), and Shahriar Nirjon (University of North Carolina at Chapel Hill)
Energy-Efficient Radio Selection and Data Partitioning for Real-Time Data Transfer .49. Di Mu (State University of New York at Binghamton), Mo Sha (State University of New York at Binghamton), Kyoung-Don Kang (State University of New York at Binghamton), and Hyungdae Yi (State University of New York at Binghamton)
Session III: Internet of Things: Gateways, Policies, and Novel Platforms
Handling Inherent Delays in Virtual IoT Gateways .58
Securing the Insecure Link of Internet-of-Things Using Next-Generation Smart Gateways .66
CLAP: Compact Labeling Scheme for Attribute-Based IoT Policy control 74. mostafa Uddin (Nokia Bell Labs), Murali Kodialam (Nokia Bell Labs), Fang Hao (Nokia Bell Labs), and Sarit Mukherjee (Nokia Bell Labs)
Designing a Low-Cost IoT Sensing Platform for VOC Material Classification .82
Session IV: Applications
Shape Estimation Using Location-Unknown Distance Sensors: A Curvature Based Approach .9.0 Hiroki Ikeuchi (NTT Network Technology Laboratories, NTT Corporation) and Hiroshi Saito (Graduate School of Information Science and Thechnology, The University of Tokyo)

A Real-Time Audio Monitoring Framework with Limited Data for Constrained Devices .98
PotatoScanner – A Mobile Delay Tolerant Wireless Sensor Node for Smart Farming Applications .1.06
Session V: System Services
Active Replication for Centrally Coordinated Teams of Autonomous Vehicles .1.14
DeepRisk: A Deep Transfer Learning Approach to Migratable Traffic Risk Estimation in Intelligent Transportation Using Social Sensing .123
Power Efficient Algorithms for Wireless Charging under Phase Shift in the Vector Model .1.31
Session VI: Communication
Random Gossip Processes in Smartphone Peer-to-Peer Networks .1.39
A Model for Reliable Uplink Transmissions in LoRaWAN .1.47. Furqan Hameed Khan (School of ITEE, The University of Queensland Brisbane, Australia), Raja Jurdak (Distributed Sensing Systems, Data61 CSIRO Brisbane, Australia), and Marius Portmann (School of ITEE, The University of Queensland Brisbane, Australia)
Continuous Monitoring meets Synchronous Transmissions and In-Network Aggregation .1.5.7

Invited Poster Papers

erial Robotic Team for Complex Monitoring in Precision Agriculture .1.67
n Efficient Trajectory-Based Routing Using Virtual Coordinates for Low-Power WSNs with lobile Sinks .1.70
Xiaofei Cao (Missouri University of Science and Technology) and Sanjay Madria (Missouri University of Science and Technology)
xpressive Feature-oriented Multicast for the Internet of Things .1.73
tilizing Mobile Nodes for Congestion Control in Wireless Sensor Networks .1.76
Configurable Distributed Data Analytics Infrastructure for the Industrial Internet of ings .179
ognitive Game for OCD Effects Minimisation Using IoT .1.82
Regular Posters/Demos
nhancing Distributed Sensor Networks for Air-Quality Monitoring: A Social Informatics pproach .185
Hybridization of Mobile Crowdsensing, Twitter Analytics, and Sensor Data for the olistic Approach of Pollen onsets Detection .1.8
ecurity on the Farm: Safely Communicating with Legacy Agricultural Instrumentation .1.92 Tim Bell (BECS Technology, Inc.), Roger Chamberlain (Washington Univ. in St. Louis), Mike Chambers (BECS Technology, Inc.), Brian Rieck (AGCO Corporation), and Todd Steinbrueck (BECS Technology, Inc.)
raffic Density Based Distributed Congestion Control Strategy for Vehicular Communication .1.95 Oluwaseyi Akinlade (University of Windsor), Ikjot Saini (University of Windsor), Xiaofeng Liu (University of Windsor), and Arunita Jaekel (University of Windsor)

Workshop Papers

SecRIoT 2019: First International Workshop on Security and Reliability of IoT Systems

Performance of Secure Boot in Embedded Systems .198.

Christos Profentzas (Chalmers University of Technology), Mirac Günes (Chalmers University of Technology), Yiannis Nikolakopoulos (Chalmers University of Technology), Olaf Landsiedel (Kiel University), and Magnus Almgren (Chalmers University of Technology) Collaborative Agent-based Detection of DDoS IoT Botnets .205..... Nikolaos Giachoudis (University of Thessaly), Georgios-Paraskevas Damiris (University of Thessaly), Georgios Theodoridis (University of Thessaly), and Georgios Spathoulas (University of Thessaly) A New Security Approach in Telecom Infrastructures: The RESISTO Concept .212..... Maria Belesioti (Hellenic Telecommunications Organization S.A. (OTE), Research Programs Section), Rodoula Makri (2Microwaves and Fiber Optics Lab, Institute of Communication and Computer Systems, N.T.U.A), Mirjam Fehling-Kaschek (Safety Technology and Protective Structures, Fraunhofer Institute for High-Speed Dynamics), Marco Carli (COMLAB -Telecommunication Lab Engineering Department, Università degli Studi Roma TRE), Alexandros Kostopoulos (Hellenic Telecommunications Organization S.A. (OTE), Research Programs Section), Ioannis P. Chochliouros (Hellenic Telecommunications Organization S.A. (OTE), Research Programs Section), Alberto Neri (Security and Information Systems, Homeland Security & Critical Infrastructures, Leonardo -Societa per Azioni), and Federico Frosali (Security and Information Systems, Homeland Security & Critical Infrastructures, Leonardo -Societa per Azioni) Security Challenges in the eHealth Domain: The VICINITY Approach .219..... Maria Belesioti (Hellenic Telecommunications Organization S.A. (OTE). Fixed Network R&D Programs Section), Evangelos Sfakianakis (Hellenic Telecommunications Organization S.A. (OTE), Fixed Network R&D Programs Section), Viktor Oravec (bAvenir, s.r.o.), Athanasios Tryferidis (CERTH/ITI - Centre for Research and Technology Hellas/Information Technologies Institute), Kostis Kaggelides (Gnomon Informatics S.A.), Ioannis P. Chochliouros (Hellenic Telecommunications Organization S.A. (OTE), Fixed Network R&D Programs Section), Maria Koutli (CERTH/ITI -Centre for Research and Technology Hellas/Information Technologies Institute), and Dimitrios Tzovaras (CERTH/ITI - Centre for Research and Technology Hellas/Information Technologies Institute) Monitoring Supply Current Thresholds for Smart Device's Security Enhancement .224...... Dimitrios Myridakis (University of Thessaly), Georgios Spathoulas (University of Thessaly), Athanasios Kakarountas (University of Thessaly), Dimitrios Schinianakis (Cyber Security Munich (CSM), NOKIA Bell Labs), and Joachim Lueken (Cyber Security Munich (CSM), NOKIA Bell Labs)

A Novel Hierarchical Intrusion Detection System Based on Models .228	Maglaras (De a University),
Threat Analysis in Dynamic Environments: The Case of the Georgios Kavallieratos (NTNU Norwegian University o Technology), Vasileios Gkioulos (NTNU Norwegian Un and Technology), and Sokratis K. Katsikas (NTNU Nor of Science and Technology; Open University of Cypru	f Science and niversity of Science wegian University
VICINITY: IoT Semantic Interoperability Based on the Web Andrea Cimmino (Universidad Politécnica de Madrid), (bAvenir), Fernando Serena (Universidad Politécnica de Kostelnik (InterSoft A.S.), María Poveda-Villalón (Universidad Politécnica de Madrid), Athanasios Tryferidis (CERTH, Research and Technology Hellas/Information Technologial García-Castro (Universidad Politécnica de Madri (bAvenir), Dimitrios Tzovaras (CERTH/ITI - Centre for Formation Technology Hellas/Information Technologies Institute), Grimm (Kaiserslautern University of Technology)	, Viktor Oravec de Madrid), Peter ersidad /ITI - Centre for ogies Institute), id), Stefan Vanya Research and
VICINITY Platform-based Load Scheduling Method by Cor Appliance 248	University), . Vásquez
Simulation based validation of a Smart Energy Use Case v Johannes Kölsch (TU Kaiserslautern), Axel Ratzke (TU Christoph Grimm (TU Kaiserslautern), Christopher Hei Kaiserslautern), and Gomathi Nandagopal (R&D Institu Technology, Chennai)	l Kaiserslautern), nz (TU
Secure IoT e-Health Applications using VICINITY Framework Maria Koutli (CERTH/ITI), Natalia Theologou (CERTH/ITI) Tryferidis (CERTH/ITI), Dimitrios Tzovaras (CERTH/ITI) Kagkini (Gnomon Informatics), Dimitrios Zandes (Gnomon Konstantinos Karkaletsis (Gnomon Informatics), Konst (Gnomon Informatics), Jorge Almela Miralles (bAvenir, Oravec (bAvenir, s.r.o.), and Stefan Vanya (bAvenir, s.r.o.)	TI), Athanasios I, Aimilia mon Informatics), antinos Kaggelides . s.r.o.), Viktor
Resilient Self-Calibration in Distributed Visual Sensor Netw Jennifer Simonjan (Alpen-Adria-Universität Klagenfurt) Dieber (Joanneum Research), and Bernhard Rinner (Alpen-Adria-Universität Klagenfurt)	
Spyduino: Arduino as a HID Exploiting the BadUSB Vulner Evangelos Karystinos (University of Pireaus), Antonios (Hellenic Air Force Academy), and Christos Douligeris Pireaus)	Andreatos
Security and Privacy in the Internet of Things Using Blocko Georgios Spathoulas (University of Thessaly) and Ang Karageorgopoulou (University of Thessaly)	

IoTI4: International Workshop on IoT Applications and Industry 4.0

An IoT-Based Prototype of a Driverless Bulldozer 291.

Nelson H. Carreras Guzman (Technical University of Denmark), Adam
Gergo Mezovari (Technical University of Denmark), Ying Yan (Technical University of Denmark), and Martin Lordal Petersen (Technical University of Denmark) Smart Interconnected Infrastructure for Security and Safety in Public Places .297..... Angelos Chatzimichail (Information Technologies Institute Centre for Research and Technology Hellas), Christos Chatzigeorgiou (University of West Attica), Fotis Andritsopoulos (iTrack Services Ltd), Christina Karaberi (e-Trikala S.A.), Georgios Meditskos (Information Technologies Institute Centre for Research and Technology Hellas,), Panagiotis Kasnesis (University of West Attica), Dimitrios Kogias (iTrack Services Ltd), Georgios Gorgogetas (e-Trikala S.A.), Athina Tsanousa (Information Technologies Institute Centre for Research and Technology Hellas), Stefanos Vrochidis (Information Technologies Institute Centre for Research and Technology Hellas), Charalampos Patrikakis (University of West Attica), and Ioannis Kompatsiaris (Information Technologies Institute Centre for Research and Technology Hellas) Smart IoT Cameras for Crowd Analysis based on augmentation for automatic pedestrian detection, simulation and annotation .30.4. Antoine Rimboux (Kingston University), Rob Dupre (Kingston University), Eldriona Daci (Link Campus University), Thomas Lagkas (University of Sheffield), Panagiotis Sarigiannidis (University of Western Macedonia), Paolo Remagnino (Kingston University), and Vasileios Argyriou (Kingston University) Forecasting Bath and Metal Height Features in Electrolysis Process .312..... Achilleas Pasias (Centre for Research and Technology-Hellas (CERTH) -Information Technologies Institute (ITI)), T. Vafeiadis (Centre for Research and Technology-Hellas (CERTH) - Information Technologies Institute (ITI)), D. Ioannidis (Centre for Research and Technology-Hellas (CERTH) - Information Technologies Institute (ITI)), and D. Tzovaras (Centre for Research and Technology-Hellas (CERTH) -Information Technologies Institute (ITI)) Joint Compressed Sensing and Manipulation of Wireless Emissions with Intelligent Surfaces .318.... Christos Liaskos (Foundation for Research and Technology - Hellas (FORTH)), Ageliki Tsioliaridou (Foundation for Research and Technology - Hellas (FORTH)), Alexandros Pitilakis (Aristotle University of Thessaloniki - Hellas (AUTH)), George Pirialakos (Aristotle University of Thessaloniki - Hellas (AUTH)), Odysseas Tsilipakos (Foundation for Research and Technology - Hellas (FORTH), Anna Tasolamprou (Foundation for Research and Technology - Hellas (FORTH)), Nikolaos Kantartzis (Aristotle University of Thessaloniki - Hellas (AUTH)), Sotiris Ioannidis (Foundation for Research and Technology - Hellas (FORTH)). Maria Kafesaki (Foundation for Research and Technology - Hellas (FORTH)), Andreas Pitsillides (University of Cyprus (UCY)), and Ian Akyildiz (University of Cyprus (UCY) & Georgia Tech USA)

Un	veiling Trends and Predictions in Digital Factories .326
Dat	ta Analytics Platform for the Optimization of Waste Management Procedures .333 Thanasis Vafeiadis (Centre for Research and Technology Hellas-Information Technologies Institute (CERTH/ITI)), Alexandros Nizamis (Centre for Research and Technology Hellas-Information Technologies Institute (CERTH/ITI)), Vissarion Pavlopoulos (Centre for Research and Technology Hellas-Information Technologies Institute (CERTH/ITI)), Luigi Giugliano (MLW, Links Foundation), Vaia Rousopoulou (Centre for Research and Technology Hellas-Information Technologies Institute (CERTH/ITI)), Dimosthenis Ioannidis (Centre for Research and Technology Hellas-Information Technologies Institute (CERTH/ITI)), and Dimitrios Tzovaras (Centre for Research and Technology Hellas-Information Technologies Institute (CERTH/ITI))
Ene	ergy Harvesting and Smart Management Platform for Low Power IoT Systems .339
A S	Semantic-driven Approach for Industry 4.0 .347 Sangje Cho (Ecole Polytechnique Fédérale de Lausanne), Gökan May (Ecole Polytechnique Fédérale de Lausanne), and Dimitris Kiritsis (Ecole Polytechnique Fédérale de Lausanne)
Kno	owledge Management for Manufacturing SMEs using Industrial IoT .355
Sce	ene and Environment Monitoring Using Aerial Imagery and Deep Learning .362
Mic	ddleware for Real-Time Event Detection andPredictive Analytics in Smart Manufacturing .370 Muhammad Intizar Ali (National University of Ireland, Galway), Pankesh Patel (Fraunhofer CESE, USA), and John G. Breslin (National University of Ireland, Galway)
Dat	ta Acquisition and Analysis Methods in UAV- based Applications for Precision Agriculture 37.7 Dimosthenis C. Tsouros (University of Western Macedonia), Anna Triantafyllou (University of Western Macedonia), Stamatia Bibi (University of Western Macedonia), and Panagiotis G. Sarigannidis (University of Western Macedonia)
An	Architecture model for Smart Farming .385. Anna Triantafyllou (University of Western Macedonia), Dimosthenis C. Tsouros (University of Western Macedonia), Panagiotis Sarigiannidis (University of Western Macedonia), and Stamatia Bibi (University of Western Macedonia)

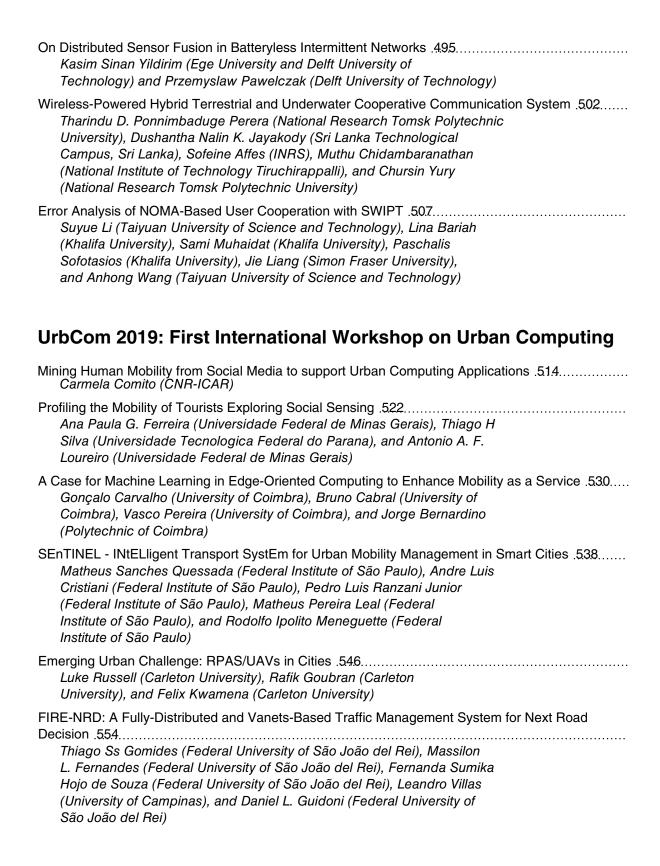
Connectivity Validation for Indoor IoT Applications with Weightless Protocol 393. Benoit Despatis-Paquette (Polytechnique Montreal), Louis Rivest (École de technologie supérieure), and Robert Pellerin (Polytechnique Montreal) Energy Efficient Algorithm for Multihop BLE Networks on Resource-Constrained Devices .400...... Andreas Bardoutsos (University of Patras, Greece and Computer Technology Institute and Press "Diophantus", Greece), Gabriel Filios (University of Patras, Greece and Computer Technology Institute and Press "Diophantus", Greece), Ioannis Katsidimas (University of Patras, Greece and Computer Technology Institute and Press "Diophantus", Greece), and Sotiris Nikoletseas (University of Patras, Greece and Computer Technology Institute and Press "Diophantus", Greece) Water in the Cloud: Understanding Water Chemistry via the Internet of Things .408..... Roger Chamberlain (Washington Univ. in St. Louis), Mike Chambers (BECS Technology, Inc.), Darren Greenwalt (BECS Technology, Inc.), Maria Scharth (BECS Technology, Inc.), Brett Steinbrueck (BECS Technology, Inc.), Todd Steinbrueck (BECS Technology, Inc.), and David Thomas (BECS Technology, Inc.) Power Allocation in Downlink Non-orthogonal Multiple Access IoT-enabled Systems: A Particle Swarm Optimization Approach .416. Dimitrios Pliatsios (University of Western Macedonia) and Panagiotis Sarigiannidis (University of Western Macedonia) SmaCE 2019: First International Workshop on Smart Circular **Economy** Towards Systematic Specification of Non-Functional Requirements for Sharing Economy Systems .423..... Schroers (Centre for IT \& IP Law and imec, KU Leuven), Mustafa A. Mustafa (School of Computer Science, University of Manchester), and Gergely Biczók (CrySyS Lab, Budapest University of Technology and Economics) Online Brine Platform: a Tool for Enabling Industrial Symbiosis in Saline Wastewater Management Domain .430..... Despina Bakogianni (National Technical University of Athens (NTUA)), Evangelia Skourtanioti (National Technical University of Athens (NTUA)), Dimitris Meimaris (National Technical University of Athens (NTUA)), Dimitris Xevgenos (SEALEAU B.V.), and Maria Loizidou (National Technical University of Athens (NTUA)) The CE-IoT Framework for Green ICT Organizations: The interplay of CE-IoT as an enabler for green innovation and e-waste management in ICT .436. George Hatzivasilis (Foundation for Research and Technology – Hellas), Nikos Christodoulakis (Foundation for Research and Technology -Hellas), Christos Tzagkarakis (Nodalpoint Systems), Sotiris Ioannidis (Foundation for Research and Technology – Hellas), Giorgos Demetriou

(Ecole des Ponts Business School), Konstantinos Fysarakis (Sphynx

Technology Solutions AG), and Marios Panayiotou (Cablenet

Communication Systems Ltd.)

IDEAL-CITIES - A Trustworthy and Sustainable Framework for Circular Smart Cities .443
Organizing Network Management Logic with Circular Economy Principles .45.1. Christos Liaskos (Foundation for Research and Technology - Hellas (FORTH)), Ageliki Tsioliaridou (Foundation for Research and Technology - Hellas (FORTH)), and Sotiris Ioannidis (Foundation for Research and Technology - Hellas (FORTH))
Review of Security and Privacy for the Internet of Medical Things (IoMT) .457. George Hatzivasilis (Foundation for Research and Technology – Hellas), Othonas Soultatos (Foundation for Research and Technology – Hellas), Sotiris Ioannidis (Foundation for Research and Technology – Hellas), Christos Verikoukis (Telecommunications Technological Center of Catalonia (CTTC)), Giorgos Demetriou (Ecole des Ponts Business School), and Christos Tsatsoulis (Nodalpoint Systems)
An Architecture for Blockchain over Edge-enabled IoT for Smart Circular Cities .465
WPSN 2019: First International Workshop on Wirelessly Powered Systems and Networks
Placement Optimization in Wireless Charging Systems under the Vector Model .473
Online Social Network Information Can Influence Wireless Crowd Charging .48.1. Theofanis P. Raptis (Institute of Informatics and Telematics, National Research Council, Italy)
Characteristic Models and Algorithmic Methods for Efficient Electromagnetic Radiation Control in Wirelessly Powered Adhoc Communication Networks .487



assifying Venue Categories of Unlabeled Check-ins Using Mobility Patterns .562	••
owards a Traffic Data Enrichment Sensor Based on Heterogeneous Data Fusion for ITS .570 Paulo Henrique Lopes Rettore (Federal University of Minas Gerais), Roberto Rigolin F. Lopes (Fraunhofer FKIE), Guilherme Maia (Federal University of Minas Gerais), Leandro Aparecido Villas (University of Campinas), and Antonio Alfredo Ferreira Loureiro (Federal University of Minas Gerais)	•••
/i-DroIT 2019: Wireless Drones over Internet of Things	
Network Architecture for High Volume Data Collection in Agricultural Applications .578 Dimitrios Zorbas (Tyndall National Institute, University College Cork) and Brendan O'Flynn (Tyndall National Institute, University College Cork)	•••
overage Analysis of Drone-Assisted Backscatter Communication for IoT Sensor Network .584 Ali Hayajneh (University of Leeds), Syed Ali Raza Zaidi (University of Leeds), Maryam Hafeez (University of Huddersfield), Des McLernon (University of Leeds), and Moe Win (Massachusetts Institute of Technology)	
sperimental Validation of Air-to-Ground Propagation Models for Low-Altitude Platforms .59.1 Oleksandr Andryeyev (Technische Universität Ilmenau), Umut Onus (Technische Universität Ilmenau), Victor Casas (Technische Universität Ilmenau), and Andreas Mitschele-Thiel (Technische Universität Ilmenau)	•••
APER: A Connectivity-Aware Path Planner with Regulatory Compliance for UAVs .596	•••
n Open Source and Open Hardware Deep Learning-Powered Visual Navigation Engine for autonomous Nano-UAVs .604	•••
Smart VPN Bonding Technique for Drone Communication Applications .612	•••
oject Vulture: A Prototype for Using Drones in Search and Rescue Operations .619	•••

UAVs as a Leverage to Provide Energy and Network for Cyber-Physical Observation Units on the Arctic Tundra .625
Automated Picking System Employing a Drone .633. Francesco Betti Sorbelli (University of Perugia), Federico Corò (Gran Sasso Science Institute (GSSI)), Cristina M. Pinotti (University of Perugia), and Anil Shende (Roanoke College)
An Innovative Mobile Terminal Positioning Technique Based on UAV-Femtocell Systems .64.1
ISIoT 2019: First International Workshop on Intelligent Systems for IoT
Decentralized Spectrum Learning for IoT Wireless Networks Collision Mitigation .644
Classifying Security Attacks in IoT Networks Using Supervised Learning .652 Christiana Ioannou (University of Cyprus and RISE Research Center on Interactive Media, Smart Systems and Emerging Technologies) and Vasos Vassiliou (University of Cyprus and RISE - Research Center on Interactive Media, Smart Systems and Emerging Technologies)
Delay-Bounded Scheduling in IEEE 802.15.4e DSME Using Linear Programming .659
Improving the Network Lifetime and Performance of Wireless Sensor Networks for IoT Applications Based on Fuzzy Logic .667
Mobility Management Solutions in Industrial Wireless Sensor Networks .675
Model-Adaptive Event-triggering for Efficient Public Transportation Tracking .682
ParkChain: An IoT Parking Service Based on Blockchain .687 Zinon Zinonos (Neapolis University Pafos, Cyprus), Panayiotis Christodoulou (Cyprus University of Technology), Andreas Andreou (Cyprus University of Technology), and Savvas Chatzichristofis (Neapolis University Pafos, Cyprus)

Target Tracking using Cognitive Radar and Foveal Nodes .69.4
The Quest for Sense: Physical phenomena Classification in the Internet of things .7.0.1
Virtual Light Sensors in Industrial Environment Based on Machine Learning Algorithms .709
Special Session on Smart Transport (by the SAFE STRIP EU Project)
Implementation and Validation Approach of the C-ITS Novel Solution Proposed by SAFE STRIP for Self-Explanatory and forgiving Infrastructures .7.1.7
An Encapsulated Energy Harvesting Platform for On-road Low Power Sensing Systems .725
Cooperative Safety Applications for C-ITS Equipped and Non-equipped Vehicles Supported by an Extended Local Dynamic Map built on SAFE STRIP Technology .7.33
HMI to Exploit the Potential of Distributed Computing in Sensor Systems .7.4.1
Intelligent Roads as Part of the C-ITS Reference Architecture .7.48. Erwin Vermassen (ERTICO - ITS Europe)
Author Index 7.55