

2018 International Conference on Internet of Things, Embedded Systems and Communications (IINTEC 2018)

**Hammamet, Tunisia
20-21 December 2018**



**IEEE Catalog Number: CFP18M47-POD
ISBN: 978-1-5386-9132-8**

**Copyright © 2018 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:	CFP18M47-POD
ISBN (Print-On-Demand):	978-1-5386-9132-8
ISBN (Online):	978-1-5386-9131-1

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

CURRAN ASSOCIATES INC.
proceedings
.com

2018 International Conference on Internet of Things, Embedded Systems and Communications (IINTEC)

Table of contents

IoT and Smart Transport

An Infrastructurless Vehicle Blackbox System

- [Emna Jaidane](#) (National Engineering School of Tunis, Tunisia); [Mohamed Hamdi](#) (University of Carthage, Tunisia); [Taoufik Aguil](#) (ENIT, Tunisia)
- pp. 1-5

Intelligent Impaired Driving Detection and Road Emergency Services System

- [Jashneet Kaur](#) and [Maher N Elshakankiri](#) (University of Regina, Canada)
- pp. 6-11

Named Data Networking Architecture for VANET

- [Raissi Khadija](#) (Ecole National Ingénieur Tunis, Tunisia)
- pp. 12-15

A Self-Adaptive Traffic Light Control System Based on YOLO

- [Khaled Zaatouri](#) (UTM, ENIT, Tunisia); [Tahar Ezzedine](#) (Enit, Tunisia)
- pp. 16-19

High Speed Communications Systems

Substrate Integrated Waveguide Structures (SIW) Using via Holes with Angular Variance

- [Wissal Elahmar](#) (University of Tunis el Manar, Tunisia)
- pp. 20-23

Traceability of Engine Oil Aging for a Vehicle Fleet by a Microwave Sensor

- [Fethi Mejri](#) (University, Tunisia); [Taoufik Aguil](#) (School of Engineering, Tunisia)
- pp. 24-28

Coded Quaternary FSK and SFSK Performances Under the Narrow-Band PLC Channel Constraints

- [Safa Najjar](#) (Ecole Supérieure des Communications de Tunis, Tunisia); [Fatma Rouissi](#) (GRES'COM-Lab, Tunisia); [Han Vinck](#) (University of Duisburg-Essen & University of Johannesburg, Germany); [Adel Ghazel](#) (University of Carthage, Tunisia)
- pp. 29-33

All-Optical 216 Gbps Super-channel Data Switching Using Co-Polarized Pump in SOA

- [Amr Mohamed Ragheb](#) (King Saud University, Saudi Arabia); [Maged Abdullah Esmail](#) (Prince Sultan University, Saudi Arabia); [Habib Fathallah](#) (Faculty of Sciences of Bizerte, Carthage University, unknown); [Saleh A Alshebeili](#) (King Saud University, Saudi Arabia)
- pp. 34-37

WSN, IoT Mobility and tracking

Routing Algorithm Based Fuzzy Logic Optimization for Lifetime Enhancement and Packet Success in Heterogeneous Wireless Sensor Networks

- [Djamal Djabour](#) (National Engineers School of Tunis, Tunisia); [Tahar Ezzedine](#) (Tunis El Manar University, Tunisia)
- pp. 38-41

Leaks Detection and Localization in Water Distribution Network Based on Wireless Underground Sensor Networks

- [Jalal Dziri](#) (National Engineering School of Tunis, Tunisia)
- pp. 42-46

Realization and Evaluation of Marketplace Functionalities Using Ethereum Blockchain

- [Lars M Mikkelsen](#), [Kasper Mortensen](#), [Henrik Rasmusen](#), [Hans-Peter Schwefel](#) and [Tatiana Madsen](#) (Aalborg University, Denmark)
- pp. 47-52

Localization of Wireless Sensors Networks Using Dynamic Cell Structures Neural Networks

- [Mohsen Othmani](#) (Sys'Com, National Engineering School of Tunis, University Tunis El Manar, Tunisia & College of Telecommunications and Electronics in Jeddah, Technical and Vocational Training Corporation, Saudi Arabia); [Tahar Ezzedine](#) (Tunis El Manar University, Tunisia)
- pp. 53-58

Antenna & Propagation

Beamforming Using Linear Arrays of Antennas Based on Photonics Techniques

- [Yosra Bouchoucha](#) (Ecole Nationale d'Ingénieurs de Tunis, Tunisia); [Kheireddine Khemiri](#) (National Engineering School of Tunis, Tunisia); [Salem Hasnaoui](#) (National School of Engineering of Tunis, Tunisia)
- pp. 59-63

Design of a Wideband and High Directive Log Spiral THz Antenna for Photoconductive Sources

- [Amira Dhiflaoui](#) (ENIT, Tunisia); [Lotfi Ladhari](#) (King Abdulaziz University - Jeddah, Saudi Arabia); [Mohammed Aseeri](#) (KACST, Saudi Arabia); [Taoufik Aguil](#) (Laboratoire des Systèmes de Communications, Tunisia); [Nermeen Ahmed Eltresy](#) (Faculty of Engineering, Ain Shams University & Electronics Research Institute, Egypt); [Hatem Rmili](#) (King Abdulaziz University & Faculty of Engineering, Saudi Arabia)
- pp. 64-68

Comparative Study of a Novel E-patch Antenna Loaded with Slot Split-Ring Resonators on Different Distance of Superstrate

- [Zeineb Zaalouni](#) (Faculty of Science University Tunis ELManar & Unit of Research Circuits and Electronics Systems High Frequency, Tunisia); [Sabri Beldi](#) (Centre for Research in Microelectronics & Nanotechnology Sousse, Tunisia)
- pp. 69-72

IoT; E-health; Big Data; Data Mining

Efficient Algorithm in Extracting Left Ventricular Ejection Fraction from Isotopic Ventriculography for Heart Pathologies Diagnosis

- [Halima Dziri](#) (Higher Institute of Medical Technology of Tunis, Tunisia); [Mohamed Ali Cherni](#) (University of Tunis, Tunisia)
- pp. 73-78

Life Style Related Risk Association Mining

- [Emmanuel Effiok](#), [Enjie Liu](#) and [Jon Hitchcock](#) (University of Bedfordshire, United Kingdom (Great Britain))
- pp. 79-84

A Comparison of Monitoring Approaches for Virtualized Services at the Network Edge

- [Marcel Großmann](#) and [Christian Schenk](#) (University of Bamberg, Germany)
- pp. 85-90

Effect of Preparation on Force and Muscular Activity During an Isometric Contraction a Study from a Signal Processing Point of View

- [Yosra Saidane](#) (University of Carthage & Higher School of Communications of Tunis, Tunisia); [Sofia BenJebara](#) (Ecole Supérieure des Communications de Tunis & COSIM Lab., Tunisia)
- pp. 91-96

Mobile & Wireless Communications

Joint Power and Location Optimization of Relay for Amplify-and-Forward Cooperative Relaying

- [Hamid Amiriara](#) (Babol Noshirvani University of Technology (BNUT), Iran); [MohammadReza Zahabi](#) (Babol Noshirvani University of Technology, Iran); [Vahid Meghdadi](#) (University of Limoges, France)
- pp. 97-102

Low Power Implentation of FBMC Transceiver for 5G Wireless Network

- [Mohamed Elsayes](#) (Delta University for Science & Technology & Faculty of Enginnering, Egypt); [Aliaa Nader](#) (Demonstrator At Delta Higher Institute of Engineering and Technology, Egypt); [Mohamed Nasr](#) (Faculty of Engineering, Tanta University, Tanta, Egypt)
- pp. 103-108

Weighted Sum Rate Maximization for MIMO Interfering Channels

- [Moufida Hajjaj](#) (SUP'COM, Tunisia); [Ridha R. Bouallegue, B.](#) (Ecole Supérieure des Communications de Tunis, Tunisia); [Wafa Abid](#) (University of Carthage, Tunisia)
- pp. 109-113

Performance Evaluation of a Jamming-Resistant of MAC Protocol with Self-Interested Users

- [Lmater Moulay Abdellatif, Lm](#) (FST of SETAT, Morocco); [Haqiq Abdelkrim](#) (Hassan 1 university, Morocco); [Abdelillah Karouit](#) (Université d'Avignon et des Pays de Vaucluse, France); [Majed Haddad](#) (University of Avignon, France)
- pp. 114-119

A Large Anti-Jamming Cooperation Scheme in the Presence of Jammers Sensitive to Sensing Errors

- [Lmater Moulay Abdellatif, Lm](#) (FST of SETAT, Morocco); [Majed Haddad](#) (University of Avignon, France); [Abdelillah Karouit](#) (Université d'Avignon et des Pays de Vaucluse, France); [Haqiq Abdelkrim](#) (Hassan 1 university, Morocco)
- pp. 120-125

IoT, Smart Cities Applications

Multi-user Dynamic Scheduling-Based Resource Management for Internet of Things Applications

- [Afifa Ghenai](#), [Youcef Kabouche](#) and [Walid Dahmani](#) (Constantine 2 University, Algeria)
- pp. 126-131

Throughput Analysis for Decode-and-Forward Relaying Protocol with Wireless Energy Harvesting and Information Processing

- [Hamid Meghdadi](#), [Elahe Gholami Matikolaee](#) and [Ali Shahzadi](#) (Semnan University, Iran)
- pp. 132-135

Optimization of IoT Routing Based on Machine Learning Techniques. Case Study of Passenger Flow Control in Airport 3.0

- [Mohamed Mira](#) (University of tunis, Tunisia); [Mohamed hechmi Jeridi](#) (University of Tunis El Manar (UTM) National Engineering School of Tunis (ENIT), Tunisia); [Djamal Djabour](#) (National Engineers School of Tunis, Tunisia); [Tahar Ezzedine](#) (Tunis El Manar University, Tunisia)
- pp. 136-141

On the Detection of Disasters: Optical Sensors and IoT Technologies

- [Amira Zrelli](#) (Enit & Enit, Tunisia); [Hamadi Lirathni](#) (Tunis el Manar University, Tunisia)
- pp. 142-146

Embedded Systems and Real Time Computing

An Efficient Implementation of GLCM Algorithm in FPGA

- [Mohamed Amin Ben Atitallah](#) (ENIG, Tunisia); [Rostom Kachouri](#) (ESIEE Paris, France); [Manel Kammoun](#) (Sfax University & National Engineering School of Sfax, Tunisia); [Hassene Mnif](#) (National Engineering School of Sfax, University of Sfax, Tunisia)
- pp. 147-152

Codesign of an IoT Using a Metaheuristic IP

- [Monia Ettouil](#) (Iset Jendouba, DGET, Tunisia); [Habib Smei](#) (ISET Rades, Tunisia); [Abderrazak Jemai](#) (INSAT Institute & Researcher at LIP2/FST, Tunisia); [Mohamed Ghazel](#) (IFSTTAR, France)
- pp. 153-157

Performance Evaluation of GBE and GBit AFDX Networks to Be Used in Automotive Control Systems

- [Azer Hasnaoui](#), [Manel Takrouni](#) and [Ikbel Meiri](#) (National Engineering School of Tunis, Tunisia); [Tahar Ezzeddine](#) (ENIT, Tunisia); [Salem Hasnaoui](#) (National School of Engineering of Tunis, Tunisia)
- pp. 158-165

Multicore MIMO-OFDM LTE Optimising

- [Kais Jallouli](#) (National Engineering School of Tunis, Tunisia); [Mohamed Mazouzi](#) (Higher Institute of Business Administration of Sfax, Tunisia); [Achraf Ben Ahmed](#) (CENTAN, Inc, Japan); [Salem Hasnaoui](#) (National School of Engineering of Tunis, Tunisia); [Alireza Monemi](#) (Universiti Teknologi Malaysia, Malaysia)
- pp. 166-170

Quality Assurance for Component-based Systems in Embedded Environments

- [Wenbin Li](#) and [Franck Le Gall](#) (Easy Global Market, France); [Panagiotis Vlachas](#) (WINGS ICT SOLUTIONS, Greece); [Alexey Cheptsov](#) (High Performance Computing Center Stuttgart & University of Stuttgart, Germany)
- pp. 171-176

A Model-based Synthesis Framework for the Execution of Dynamic Dataflow Actors

- [Omair Rafique](#) and [Klaus Schneider](#) (University of Kaiserslautern, Germany)
- pp. 177-182

Information Security

An Assessment of Blockchain Consensus Protocols for the Internet of Things

- [Xavier Bellekens](#) (University of Abertay Dundee, United Kingdom (Great Britain)); [Ian Ferguson](#) (University of Abertay, United Kingdom (Great Britain)); [Beverley MacKenzie](#) (Bell Street & Logical, United Kingdom (Great Britain))
- pp. 183-190

HADS: Hybrid Anomaly Detection System for IoT Environments

- [Parth Bhatt](#) and [Anderson Morais](#) (Samsung R&D Institute Brazil, Brazil)
- pp. 191-196

A Survey of Industrial Control System Devices on the Internet

- [Guannan Guo](#) (University of Science and Technology of China, P.R. China); [Jianwei Zhuge](#), [Mengmeng Yang](#), [Genggian Zhou](#) and [Yixiong Wu](#) (Tsinghua University, P.R. China)
- pp. 197-202