Table of Contents

Multi-User Scheduling for Narrow Band Internet of Things 1
Shu-Feng Cheng, Hsin-An Hou, Li-Chun Wang, Kai-Ten Feng, and Jen-Yuan Hsu

Realizing Challenging Internet of Things Applications via Aerospace Infrastructures 6
Emmanouel T. Michailidis, Stelios M. Potirakis, and Athanasios G. Kanatas

Optimal Relay Location and Opp?rtunistic User-Scheduling for Stratospheric Communications 11
Emmanouel T. Michailidis, Nikolaos Nomikos, Petros Bithas, Demosthenes Vouyioukas, and Athanasios G. Kanatas

28 GHz Monolithic Transmitter on GaN Chip for 5G Application 17
Rajinikanth Yella, Krishna Pande, Ke Horng Chen, and Edward Chang

Leveraging Commercial Software-Defined Radio for Low Cost Deep Space Testing 23
Timothy Pham and Leslie White

Web-based Geographical Information System for Real-time Flood Monitoring of the River Arachthos in Epirus Region, Greece 28
Stavros Kolios, Petros Karvelis, and Chrysostomos Stylios

Software Quality Test Method of Satellite Control System Using Software Test Automation System 32
Cheol Oh Jeong, Byoung-Sun Lee, In Jun Kim, Yoola Hwang, and Soojeon Lee

The Effect of Radar Cross Section and Speed of Target on the Detection of MIMO Radar 38
Raed Daraghma

GPS AOA Estimation Technique Based on a Null Despreader 43
Suk-seung Hwang

Design of S band Cylindrical Waveguide Slot Omnidirectional Antenna 48
Zhengxin Fang

Design of an UWB Meter-wave Oblique Polarized Array Antenna 51
Jia Fang, Hao Qin, and Yongdong Zang

Outage Probability of Triple-Hop Mixed RF/FSO/RF Stratospheric Communication Systems 54
Emmanouel T. Michailidis, Nikolaos Nomikos, Petros Bithas, Demosthenes Vouyioukas, and Athanasios G. Kanatas

Generation and Propagation Characteristics Analysis Through Atmosphere of Gaussian-Bessel-correlated Schell-model Beam 60

Zeyu Zhou and Xiuhua Yuan

Application of Aperture Truncated Airy Beams in Free Space Optical Communications 65
Minghao Wang, Xiuhua Yuan, Peng Deng, Wei Yao, and Timothy Kane

Reliable Routing and Spectrum Allocation Over Network Coding Enabled Elastic Optical Networks 71
Xin Wang, Yuefeng Ji, and Lin Bai

Free Space Optical Communication Networks 76
Peng Deng, Tim Kane, Xiuhua Yuan, Minghao Wang, and Wentao Xia