

## Table of Contents

Implementation of MCU Invariant I2C Slave Driver Using Bit Banging <i>Arindam Halder, Ranjan Dasgupta, Jayakar Chepada, and Nrusingh Prasad Dash</i>	1
A Programmable Interconnection Network for Multiple Communication Patterns <i>Vaclav Dvorak and Jiri Jaros</i>	6
A Cyber-Physical System Design Approach <i>Miroslav Sveda and Radimir Vrba</i>	12
Event Driven Programming for Embedded Systems - A Finite State Machine Based Approach <i>Nrusingh Prasad Dash, Ranjan Dasgupta, Jayakar Chepada, and Arindam Halder</i>	19
Optimizing Collective Communications on the K-port Spidergon Network <i>Jiri Jaros and Vaclav Dvorak</i>	24
A Hardware-in-the-Loop Testing Platform Based on a Common Off-The-Shelf Non-Real-Time Simulation PC <i>Daniel Ulmer, Steffen Wittel, Karsten Huenlich, and Wolfgang Rosenstiel</i>	30
Novel Modulo $2n+1$ Subtractor and Multiplier <i>Dina Younes and Pavel Steffan</i>	36
Real-time Component Labelling with Centre of Gravity Calculation on FPGA <i>Abdul Waheed Malik, Benny Thornberg, Xin Cheng, and Najeem Lawal</i>	39
Improved Performance of a Microstrip Antenna Array Using a tree structure patch fed by electromagnetic coupling <i>Tomader Mazri, Fatima Riouch, and Najiba El Amrani El Idrissi</i>	44
Access Control for Coordinated Multi-antenna Cellular Architecture with Scheduling <i>Xiaodong Xu, Dan Hu, Xiaofeng Tao, and Zhijie Hao</i>	48
Using Grounded Theory as a Supportive Technique for System Requirements Analysis <i>Mohanad Halaweh</i>	54
Mobile agent for orchestrating web services <i>Charif Mahmoudi and Fabrice Mourlin</i>	60
Architecture Patterns for a Ubiquitous Identity Management System <i>Anders Fongen</i>	66

Instantaneous Autonomous Aerial Reconnaissance for Civil Applications <i>Florian Segor, Axel Burkle, Matthias Kollmann, and Rainer Schonbein</i>	72
Multifactor Authentication Device <i>Jaroslav Kadlec, Radimir Vrba, and Radek Kuchta</i>	77
Protect Critical Information Infrastructure Systems in Financial and Healthcare Sectors: Actor Network Theory <i>Cheng-Chieh Huang and Ching-Cha Hsieh</i>	83
Mobile RFID Mutual Authentication and Ownership Transfer <i>Jia-Ning Luo and Ming Hour Yang</i>	88
Intrusion Detection System for wide Automation Network Based on the Ethernet Compatible Communication Protocols <i>Jaroslav Kadlec, Radimir Vrba, and Radek Kuchta</i>	95
End-User Development Success Factors and their Application to Composite Web Development Environments <i>David Lizcano, Fernando Alonso, Javier Soriano, and Genoveva Lopez</i>	99
Towards building health systems <i>Elaine Lawrence</i>	109
Comparative Analysis of the Practice of Telecom Operators in the Realization of IPTV Systems Based on ITIL V3 Recommendations for the Supplier Management Process <i>Anel Tanovic and Fahrudin Orucevic</i>	115
An Approach to Service Deployment to the Service Cloud <i>Juha Puttonen, Andrei Lobov, and Jose Luis Martinez Lastra</i>	122
Qualitative Assessment Dynamics For Trust Management in e-Business Environments <i>Denis Trcek and Eva Zupancic</i>	128
An Experimentation System for Bus Route Planning and Testing Metaheuristics Algorithms <i>Krzysztof Golonka, Leszek Koszalka, Iwona Pozniak-Koszalka, and Andrzej Kasprzak</i>	134
Reconstruction Quality of Congested Freeway Traffic Patterns from Probe Vehicles Based on Kerner's Three-Phase Traffic Theory <i>Jochen Palmer and Hubert Rehborn</i>	139
Innovation Process – Managing Complexity through Financial Aspects <i>Borut Likar and Peter Fatur</i>	145
A Service-Oriented Monitoring System of Pressurized Air in Industrial Systems for Energy Awareness	150

