## **Table of Contents**

Analysis of Performance of CCHP Systems for Large Hospitals  Francesco Patania, Antonio Gagliano, Francesco Nocera, and Aldo Galesi	1
Short-Term Energy Pattern Detection of Manufacturing Machines with In-Memory Databases - A Case Study Christian Schwarz, Felix Leupold, and Tobias Schubotz	7
A Parallel Rolling Horizon Scheme for Large Scale Security Constrained Unit Commitment Problems with Wind Power Generation  Eting Yuan, Jiaqiao Hu, and Eugene Feinberg	13
A Survey on Smart Grid Technologies in Europe Luca Ardito, Giuseppe Procaccianti, Giuseppe Menga, and Maurizio Morisio	22
Error Rate Performance of QPSK-Transmitted Signal for Power Line Communication under Nakagami-like Background Noise  Youngsun Kim, Hui-Myoung Oh, and Sungsoo Choi	29
Degrees of Freedom in Sharing Control of Smart Grid Connected Devices  Kristian Helmholt and Gerben Broenink	34
MIMO-OFDM based Broadband Power Line Communication using Antenna and Fading Diversity Sangho Choe and Jeonghwa Yoo	42
GREASE Framework - Generic Reconfigurable Evaluation and Aggregation of Sensor Data Matthias Vodel, Rene Bergelt, and Wolfram Hardt	47
Distributed Optimization of Energy Costs in Manufacturing using Multi-Agent System Technology Tobias Kuster, Marco Lutzenberger, Daniel Freund, and Sahin Albayrak	53
A Privacy Preserving and Secure Authentication Protocol for the Advanced Metering Infrastructure with Non-Repudiation Service  Chakib Bekara, Thomas Luckenbach, and Kheira Bekara	60
Decision Support Independence in a Smart Grid Kendall E. Nygard, Steve Bou Ghosn, Md Minhaz Chowdhury, Ryan McCulloch, Davin Loegering, Anand Pandey, Md M. Khan, and Prakash Ranganathan	69
Optimization of Energy and Emissions in High-Performance Grid Computing Data Centres  Mikko Majanen and Olli Mammela	75
Reducing Power Consumption Using the Border Gateway Protocol	83

Energy Efficiency of Server Virtualization Jukka Kommeri, Tapio Niemi, and Olli Helin 90