#### **Table of Contents**

Nonlinear Analysis Chaotic Characteristics of Leak Signal of Pipeline based on Reconstructed Phase Space 1

Lei Shi, Jianjun Xu, Guohui Qu and Limei Yan

A Proposal of Emergency Rescue Location (ERL) using Optimization of Inertial Measurement Unit (IMU) based Pedestrian Simultaneously Localization and Mapping (SLAM)

9

Wan Mohd Yaakob Wan Bejuri, Mohd Murtadha Mohamad Raja Zahilah Raja Mohd Radzi

An Enterprise Application Development Framework Which Changes According to Need – SmartADF 23

Li Min and Li Shoulin

Middleware Technology Research and Interface Design Based on Internet of Things 35

Yingmei Wang

Greenhouse Management Framework based on Localization Using RGPSi and AoA 45

Jangwoo Park, Hong-geun Kim, Yongyun Cho, Changsun Shin, Kyungryong Cho, Dong-guk Park

Based on the Internet of Street Lamp Illumination by Automatic Control System 57

Lan Wu, Mingyue Li, Zhanying Pan and Xiaoding Cheng

A RFID Based Automatic Attendance System in Educational Institutions of Nigeria 65

A.A. Olanipekun and O.K. Boyinbode

# Effect of Discharge Location on Temperature Distribution during Electrical Discharge Machining 75

Baocheng Xie, Yanwen Zhang, Yuan Zhang, Ye Dai and Xianli Liu

### A Big-Data-Based Urban Flood Defense Decision Support System 81

Taimeng Yang, Guanlin Chen and Xinxin Sun

# Prediction of Solar Global Radiation in Bogotá Colombia Based on Mathematical Models 91

Nicolas Marrugo and Dario Amaya

## An Improved DV-Hop Localization Algorithm Against Wormhole Attack in WSN 101

Jiuhu Zheng and Huanyan Qian

#### Urban Landscape Innovative Design and Its Evaluation

113

Li Yan and Yichuan Zhang

Development of HCO6 Bluetooth Based Switching Automation of Domestic Electrical Powered Appliances through an Application Software on Android Phone Platform 121

Oyebola B. O.

#### The Multi-channel Embedded Video Surveillance Alarm System 131

Chen Guolong, Xin Zhenghua

# Spatial Heterogeneity of Soil Mite Community and its Spatial Relationship with Environmental Factors in Maoer Mountains 141

Limei Zhang, Lingjun Meng, Chuanwei Guo, Meixiang Gao, Dong Liu and Xueping Zhang

161

## Global Anomaly Crowd Behavior Detection Using Crowd Behavior Feature Vector 149

Yong Yin, Qiannan Liu and Shibiao Mao

### Solar Street Light Controller for Harsh Environments

Ping Xue, Yan-liang Song and Hong-min Wang

Research into the Personalized Digital Signage Display Contents Information through a Short Distance Indoor Positioning 171

Sungwook Yoon and Hyenki Kim

Study on Main Road Capacity Influenced by Harbor Style Bus Stop 179

Jiao Yao, Shibo Ma, Jieqiong Xu and Jing Zhao

Threats Analysis, Requirements and Considerations for Secure Internet of Things 191

Yunjung Lee and DoHyeun Kim

A Simplified Synchronous Pulse-Width Modulation Method for Threelevel Inverter of High-speed Train 199

> Fei Lin, Qiaona Lian, Jialiang Yuan, Zhongping Yang, Zhiqiang Zhang, Yue Xu and Jinghai Jiao

Evaluating Wealth Management Centers in the Pearl River Delta by Using Principal Component Analysis 215

Weijun Xu, Shaoying Huang and Zhiqiang Wang

Moving Object Detection Based on Improved ViBe Algorithm 225

Gu Bo, Song Kefeng, Qiu Daoyin and Zhang Hongtao

The Improvement and Evaluation of the Implementation Ability for Deriving Timing Constraints Context in Service-Oriented Home Network 233

BenYan, Hua-Ping Yao, Masahide Nakamura and Shinsuke Matsumoto

Design and Implementation of a TV Schedule Editor for Internet TV Systems 245

Gyeyoung Lee, Jaegeol Yim

A Low-cost IMU/GNSS Cooperative Positioning Method for VANETs in the Urban Environments 255

Yong Hao and Feng Shen

Implementation of Textile Air Conditioning Intelligent Monitoring System Based on Internet of Things 267

Huaizhong Chen

Research on Traffic Congestion Mathematical Model in Traffic Signal Control System 279

Lifang Li

Wireless Remote Water Meter Design of Automatic Meter Reading System 289

Zhu HengJun and Zhu YiSheng

Evaluating Construction Cost of Green Building Based on Life-cycle Cost Analysis: An empirical analysis from Nanjing, China 299

Hongmei Liu

Agent Based Intelligent Traffic Management System for Smart Cities 307

Sabhijiit Singh Sandhu, Naman Jain, Aditya Gaurav and N. Ch. Sriman Narayana Iyengar