

## Table of Contents

**A Rabbit Farm Environmental Monitoring System based on Internet of Things** **1**

*Jingjing Yang, Cunxin Li, Xiao Zhang and Benzhen Guo*

**Levelized Recommendation Method in Internet of Things Environment** **11**

*Joonhee Kwon and Sungrim Kim*

**The Forecasting of Weekly Tourists Visiting a Scenic Area in Off-Season by Using Goodness of Fit Weight** **21**

*Ma Yin-chao, Liang Chang-yong and Lu Cai-hong*

**Based on Digital Elevation Model (DEM) for Farmland Landscape Pattern** **31**

*Wang Yansong, Wang Huili, LiYanyan and Zhang Pengyan*

**Noise Elimination Method in Automatic Fire Detection Equipment in Accordance with the Communication Distance** **41**

*Ha-Sung Kong, Kwang-Sun Kang and Jong-Seog Yang*

**Study on an Improved PSO Algorithm and its Application for Solving Function Problem** **51**

*Liu Yi*

**Plant Production System Based on Heliostats and LEDs Using Automatic Sliding Cultivation Shelves** **63**

*Bong-Jo Ryu, Youngshik Kim and Soonbae Chung*

**Application On Planning and Operation of Spatial Information Technology  
in Industrial Technology Innovation Strategic Alliance** **75**

*Zhu Youming*

**Optimization Research of Effective Stimulation for Carbonate Reservoir and  
its Application** **83**

*Anle He, Dawei Zhu, Chong Liang, Hewen Zhang, Jun Yan and Jianjun Xu*

**System Modelling Approach Based on Data Acquisition and Analysis for  
Underground Facility Surveillance** **93**

*Muhammad Sohail Khan, Dong-Hwan Park and DoHyeun Kim*

**A Comprehensive Theory of Multi-Aspect Interaction with Cyber Physical  
Systems** **103**

*Junfeng Wang and Suihuai Yu*

**Bridge Surface Crack Detection Method under Multi-Scale and Multi-  
Perspective** **119**

*Tingping Zhang, Jianxi Yang and Xinyu Liang*

**Voltage Scaling Based Wireless LAN Specific UART Design Based on 90nm  
FPGA** **131**

*Rashmi Sharma, Lakshay Rohilla, Arjun Oberai, Sujeet Pandey,  
Vaashu Sharma and Kartik Kalia*

**A Method for Missing Data Recovery of Air Pollutants Monitoring in  
Henhouse Based on QGSA-SVM** **139**

*Jinming Liu, Qiuju Xie, Guiyang Liu and Yong Sun*

**Evacuation Safety Evaluation of Inundated Stairs Using 3D Numerical Simulation** **149**

*Du Han Lee, Myounghwan Kim and Dong Sop Rhee*

**FPGA Implementation of Image Acquisition for Quadruped Search Robot Monitor** **159**

*Wang Peng, Wu Jian, Zhang Yuan, Li Jixiang and Zhang Peng*

**Optimization Study on Bias Angle of a Swirl Burner with Tangential Inlet Air** **171**

*LV Ziqiang, Lius Guangqiang and Liu Yingjie*

**Design Goal Based Implementation of Energy Efficient Greek Unicode Reader for Natural Language Processing** **181**

*Gaurav Verma, Vikas Verma, Divya Sharma, Adesh Kumar,  
Himanshu Verma and Kartik Kalia*

**An Embedded Software Power Consumption Model based on Software Architecture and Support Vector Machine Regression** **191**

*Xiong Wei, Xiaobin Liu, Bing Guo, Shen Yan and Wenli Zhang*

**Extension Neural Network Learning Algorithms and Models and their Applications in Fault Diagnosis of Rolling Bearing** **201**

*Zhang Su and Zheng Ying*

**Smart Pet Care System using Internet of Things** **211**

*Seungcheon Kim*

**An Improved Evaluation of College Students' Decision-making Behavior Based on Online Survey: Improving Management Performance through Network** **219**

*Qingqian Dai*

**Optimization Layout of Anhui Provincial Construction Engineering Quality Inspection Institutions** **229**

*Yingrui Wang, Heping Pan and Minhong Ye*

**An Optimal Energy Management Strategy for Thermally Networked Microgrids in Grid-Connected Mode** **239**

*Akhtar Hussain, Ji-Hye Lee and Hak-Man Kim*

**Second-Order Power Analysis Attacks against Precomputation based Masking Countermeasure** **259**

*Weijian Li and Haibo Yi*

**NLOS Channel Identification Based on Energy Detector for 60GHz Wireless Communication Systems** **271**

*Xiao-Lin Liang, Hao Zhang, Ting-Ting Lu and T. Aaron. Gulliver*

**Implementation of Boolean Control Network Based Intelligent System in Smart Home** **285**

*M. Humayun Kabir, M. Robiul Hoque and Sung-Hyun Yang*

**Development of a Smart Home Control System Based on Mobile Internet Technology** **293**

*Yu Chunjiang*

**Performance Analysis of Roof-Integrated Water-Type PVT Heating System** **301**

Jin-Hee Kim and Jun-Tae Kim

**Research on the Impact of B2C E-commerce and Third Party Platform: An Empirical Analysis based on Factor Analysis** **315**

*Xiong Hu*

**Research on Industry Competition, Ownership Structure and Earnings Management: Empirical Analysis based on Listed Bank** **325**

*Lu Shen*

