

## Table of Contents

**Design and Implementation of ICT-Based System for Information Management of Livestock Farm** **1**

*Hyungi Kim, Seokkyun Jeong and Hyun Yoe*

**Design of City Logging System using Searchable Image Encryption System of Streaming Service** **7**

*NamHo Kim and SeongHo Lee*

**Effect of Urbanization on Local Climate in Changzhou City in Recent 60 Years** **15**

*YU Wen-zheng, ZhuHong-xia, QiYingXiang,  
Chen Tianliang, Shao Li and Wang Lin*

**Design and Implementation of the Smart Virtual Machine on iOS Platform for the Mobile Game Portability** **23**

*Yunsik Son, JaeHyun Kim and YangSun Lee*

**A Web Concurrency Control Agent running on a Home M2M Network** **33**

*Eungnam Ko and Soongohn Kim*

**Cluster Based and Energy Efficient Coverage Protocol for Wireless Sensor Networks** **39**

*Mahdi Mosleh, Hagar Noori and Arash Nikdel*

**Multi-Paths Multicast Overlay Tree in Hybrid Mobile Ad-Hoc Network (HYMANET)** **55**

*Jeonghoon Park and Iksoo Kim*

**An Improved MAC Protocol for WBAN Through Modified Frame Structure** **65**

*Jun Sung Choi and Jeong Gon Kim*

**Proposal for Improving Connectivity and adding Authentication and Security to KNXNet/IP Protocol** **77**

*J. A. Nazabal, F. Falcone, C. Fernández-Valdivielso and I. R. Matías*

**Design and Implementation of the Intelligent Music Recommender System on the Mobile Phone** **91**

*Ki-Young Lee, Jeong-Jin Kang, Aleum Kim, Myung-Jae Lim, Yong-Soon Im, Sung-Jai Choi and Jong-Jin Park*

**Activity centered Design of Smart Phone User Interface: Learning App Execution Patterns with Neural Network Model** **101**

*Doo Heon Song, Am-Suk Oh and Young Woon Woo*

**A ZigBee-based Building Energy and Environment Monitoring System Integrated with Campus GIS** **107**

*Kun Qian, Xudong Ma, Changhai Peng, Qing Ju and Mengyuan Xu*

**Analysis of Common Security Factor on Energy Industry** **115**

*Sanghyun Park, Sangkyo Oh and Kyungho Lee*

**Use of Artificial Neural Network for the Prediction of Ammonia Emission Concentration of Granulated Blast Furnace Slag Mortar** **123**

*Hongseok Jang, Malrey Lee and Seungyoung So*

**Introducing Virtuality to Enhance Game-related Physical Artifacts 137**

*Mizuki Sakamoto, Todorka Alexandrova, Tatsuo Nakajima*

**The Acquisition of the Thematic Roles of the English Verb Open by College Students 153**

*Namkil Kang and Hisashi Morita*

**Analysis of Acoustic Properties of the Forest in Winter and Spring 169**

*Doo-Heon Kyon, Jeong-Hee Lee, Ji-Seon Han and Myung-Jin Bae*

**Simulating House Cooling Methods to Decrease Energy Consumption by Creating Awareness and Attitude Change 177**

*Clinton Arendt, Trina Myers and Jarrod Trevathan*

**The Research on Price Prediction of Second-hand houses based on KNN and Stimulated Annealing Algorithm 191**

*Weikun Zhao, Cao Sun and Ji Wang*

**An Improved Ant Colony Optimization for the Multi-Robot Path Planning with Timeliness 201**

*Shuai Zhou, GuangmingXiong, Yong Li and Xiaoyun Li*

**Development and Analysis of Milling Model Coupled Thermal-Mechanical 211**

*Xiulin Sui, Xinyang Liu and Di Wang*

**Research on the Process-level Production Scheduling Optimization Based  
on the Manufacturing Process Simplifies** **217**

*Y. P. Wang, L. Gao, Z. M. Shi, K. X. Bi and J. H. Ge*

**Simulation System for Optimizing Urban Traffic Network Based on Multi-  
scale Fusion** **227**

*Xiuhe Wang*