

# Table of Contents

## Journal of Information Technology Research

Volume 12 • Issue 1 • January-March-2019 • ISSN: 1938-7857 • eISSN: 1938-7865

*An official publication of the Information Resources Management Association*

**SPECIAL ISSUE OF ROBOTICS AND MECHATRONICS (HSST)**

### GUEST EDITORIAL PREFACE

- VI Wai Chi Fang, National Chiao Tung University, Hsinchu, Taiwan  
Tai-hoon Kim, GVSA and UTAS, Australia  
Sabah Mohammed, Lakehead University, Thunder Bay, Canada  
Mincong Tang, Beijing Jiaotong University, China

### RESEARCH ARTICLES

- 1 **The Improved SIFT Algorithm Based on Rectangular Operator and Its Parallel Implementation**  
Weiwei Yang, Harbin Engineering University, Harbin, China  
Jing Yang, Harbin Engineering University, Harbin, China  
Haifeng Song, Northeast Forestry University, Harbin, China
- 18 **Human Action Recognition Based on Inertial Sensors and Complexity Classification**  
Lijue Liu, School of Information Science and Engineering, Central South University, Changsha, China  
Xiaoliang Lei, School of Information Science and Engineering, Central South University, Changsha, China  
Baifan Chen, School of Information Science and Engineering, Central South University, Changsha, China  
Lei Shu, School of Information Science and Engineering, Central South University, Changsha, China
- 36 **On the Conceptualization of Elastic Service Evaluation in Cloud Computing**  
Danqing Feng, Harbin Institute of Technology, Harbin, China; & AirForce Communication NCO Academy, Dalian, China  
Zhibo Wu, Harbin Institute of Technology, Harbin, China  
Zhan Zhang, Harbin Institute of Technology, Harbin, China  
Jinwei Fu, Harbin Institute of Technology, Harbin, China
- 49 **Research on Semi-Structured and Unstructured Data Storage and Management Model for Multi-Tenant**  
Xin Hu, Beijing Information Science & Technology University, Beijing, China  
Yabin Xu, Beijing Information Science & Technology University, Beijing, China
- 63 **Research on Resource Allocation Strategy of PaaS Platform**  
Hongen Peng, Beijing Information Science & Technology University, Beijing, China  
Yabin Xu, School of Computer, Beijing Information Science & Technology University, Beijing, China
- 77 **A New Hybrid Support Vector Machine Ensemble Classification Model for Credit Scoring**  
Jian-Rong Yao, ZheJiang University of Finance & Economics, Hangzhou, China  
Jia-Rui Chen, ZheJiang University of Finance & Economics, Hangzhou, China
- 89 **An Inductive Logic Programming Algorithm Based on Artificial Bee Colony**  
Yanjuan Li, College of Information and Computer Engineering, Northeast Forestry University, Harbin, China  
Mengting Niu, College of Information and Computer Engineering, Northeast Forestry University, Harbin, China  
Jifeng Guo, College of Information and Computer Engineering, Northeast Forestry University, Harbin, China
- 105 **PLSA-Based Personalized Information Retrieval with Network Regularization**  
Qiyu Zhu, School of Information Science and Technology, Beijing Forestry University, Beijing, China  
Dongmei Li, School of Information Science and Technology, Beijing Forestry University, Beijing, China  
Cong Dai, School of Information Science and Technology, Beijing Normal University, Beijing, China  
Qichen Han, School of Engineering Science, University of Chinese Academy of Sciences, Beijing, China  
Yi Lin, School of Information Science and Technology, Beijing Forestry University, Beijing, China
- 117 **The Research on the Osmotic Stress Gene Mining Model Based on the Arabidopsis Genome**  
Xiao Yu, College of Electrical and Information, Northeast Agricultural University, Harbin, China  
Xiang Li, College of Electrical and Information, Northeast Agricultural University, Harbin, China  
Huihui Deng, College of Electrical and Information, Northeast Agricultural University, Harbin, China  
Yuchen Tang, College of Electrical and Information, Northeast Agricultural University, Harbin, China  
Zhepeng Hou, College of Electrical and Information, Northeast Agricultural University, Harbin, China  
Qingming Kong, College of Electrical and Information, Northeast Agricultural University, Harbin, China
- 133 **A Design of Autopilot Based on the Feedback Linearization Optimal Heading Control Algorithm**  
Zhipeng Sun, Jilin University, Changchun, China  
Qin Wu, Jilin University, Changchun, China  
Xiaogang Li, College of Electronic Science and Engineering, Jilin University, Changchun, China  
Hongbo Wang, Jilin University, State Key Laboratory on Integrated Optoelectronics, College of Electronic Science, Changchun, China

### Copyright

The **Journal of Information Technology Research (JITR)** (ISSN 1938-7857; eISSN 1938-7865), Copyright © 2019 IGI Global. All rights, including translation into other languages reserved by the publisher. No part of this journal may be reproduced or used in any form or by any means without written permission from the publisher, except for noncommercial, educational use including classroom teaching purposes. Product or company names used in this journal are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark. The views expressed in this journal are those of the authors but not necessarily of IGI Global.

The *Journal of Information Technology Research* is indexed or listed in the following: ACM Digital Library; Bacon's Media Directory; Cabell's Directories; Compendex (Elsevier Engineering Index); CSA Illumina; DBLP; GetCited; Google Scholar; INSPEC; JournalFOCs; MediaFinder; SCOPUS; The Index of Information Systems Journals; The Standard Periodical Directory; Ulrich's Periodicals Directory; Web of Science; Web of Science Emerging Sources Citation Index (ESCI)