Contents

Editorial

Research

The Computer Design of Practical Filter- Zhang Li, Zhang Weixi 175

Fair Virtual Bandwidth Allocation Model in Virtual Data Centers- Ying Yuan, Cui-rong Wang, Cong Wang 179

A Novel Fault Identifying Method with Supervised Classification and Unsupervised Clustering- Tao Xu 184

Design of a Teaching Robot based on Fischertechnik Model- Zelun Li, Zhicheng Huang 190

Study of Methods for Constructing Families of Odd-periodic Perfect Complementary Sequence Pairs- Jin Hui-long Chen Jia-xing 194

Parameters Selection in the Discrete Particle Swarm Optimization Algorithm Solving Gate and Runway Combinational Optimization Problem- Jianli Ding, Yong Zhang 197

Research on the Anti-perspective Correction Algorithm of QR Barcode- Jianhua Li, Yi-Wen Wang, YiJun Wang, Yi Chen, Guocheng Wang 202

Fault Prediction of Nonlinear System Using Time Series Novelty Estimation- Shengchao Su, Wei Zhang 207

Spanning Tree Method for Minimum Communication Costs In Grouped Virtual MapReduce Cluster- Yang Yang, Xiang Long, Biaobiao Shi 213


Augmented Broadcaster Identity-based Broadcast Encryption- Jianhong Zhang, Yuwei Xu, Zhipeng Chen 227

The Statistical Analysis of Family Names of Donators For WenChuan- Liu Yufan, Chen Qinghua 235

Robust Zero-Watermarking Algorithm for CAD Models- Nan Liu, Sanyuan Zhang, Yin Zhang 240

An Efficient Secret Sharing Scheme with Multi-dealer- Xin Huang, Guohua Xiong 244

Algorithm of Distributed Mining Community Structure Used in Sports Psychology Based on Local Information- Cui Sidong 248

Book Review

Conference Notification

• The Fifth International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2013)
• The Eighth International Conference on Digital Information Management (ICDIM 2013)
Editorial

Computing is emerging as a major paradigm with numerous applications perhaps the most significant in the history of science and technology. Computing often produce output in many forms the practices in this field differ from one to other discipline. The processes and means through which computing domain produce, store, process and modify knowledge lead to the birth of many interdisciplinary sciences which often are eclectic and anarchistic. Whether this process is in infancy or matured, but so far there is no consensus on whether studies of such processes belong to the field of computer science or not.

In this backdrop this issue of Journal of Digital Information Management also has a few papers on related domains. People perhaps suggest expanding the horizons of computer science with meta-knowledge derived from perspectives from other disciplines.

With this perspective we published 15 interesting research pieces in this issue. Based on a selection of science and technology studies and case studies from the history of computing, an argument is made that understanding the social processes that create and maintain computer science is an important part of understanding computer science. Thus many papers in this issue have different and unique ACM Computing Classification Numbers. Hopefully ACM can come up with more expansion of its taxonomy so that all knowledge pieces are represented in its nomenclature and notations.

Hope all the papers of this issue generate good discussions.

Editors