Guest Editorial: Special Issue on the "Sustainable Development of Smart Cities with Edge Computing Techniques"

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The advent of modern technologies has enabled the growth of smart cities with a variety of automated services. This leads to the massive deployment of smart infrastructure with advanced sensing capabilities that are networked into an automated smart city system. However, the process of computation of data received from numerous smart devices is highly critical with higher latency. Further Smart cities deal with various complexities including wired, wireless, mobile, sensor, optical, and other related network technologies. Hence, Edge Computing integrating technologies like IoT, Cloud Computing, and Big Data can provide an optimized solution in building a smart infrastructure to deliver state of the art services.

In the paper entitled "A Hybrid Method of Heuristic Algorithm and Constraint Programming for No-wait Integrated Scheduling Problem" by Zhiqiang Xie, Xiaowei Zhang, Yingchun Xia, Jing Yang, Yu Xin they presented a real-life process of the nonstandard products where the consideration is given to the great structure differences, processing parameter differences, no-wait constraint, and the need for further deep processing after assembly of jobs. Here.the required Minimal total tardiness is achieved by a hybrid method of Heuristic Algorithm and Constraint Programming (HA-CP) that enhances the ability to respond the dynamic orders of non-standard products. So, to provide effective and feasible solution, the jobs to be dispatched are mapped into an operation-based constraint programming model, then, during the execution interval of dispatched jobs, constraint programming solver starts to solve the jobs to be dispatched and update the current solution if the solver gets a better solution within the execution interval. The above procedures are repeated until all jobs are scheduled.

As the Guest Editors of this special issue, we would like to thank all reviewers and authors for their efforts in making helpful comments and significant contributions to this special. Furthermore, we wish to acknowledge the kind assistance of all those valued Colleagues, who have generously dedicated their time to the review of papers submitted for potential inclusion in this special issue. Finally, our special thanks go to Prof. Chao, the Editor-in-Chief of JIT journal, for his encouragement and support to publish this special issue.

Guest Editors

Ching-Hsien Hsu is Chair Professor and Dean of the College of Information and Electrical Engineering, Asia University, Taiwan. His research includes high performance computing, cloud computing, parallel and distributed systems, big data analytics, ubiquitous/ pervasive computing and intelligence. He has published 200 papers in top journals such as IEEE TPDS, IEEE TSC, ACM TOMM, IEEE TCC, IEEE TETC, IEEE System, IEEE Network, top conference proceedings, and book chapters in these areas. Dr. Hsu is the editor-in-chief of International Journal of Grid and High Performance Computing, and International Journal of Big Data Intelligence; and serving as editorial board for a number of prestigious journals, including IEEE Transactions on Service Computing, IEEE Transactions on Cloud Computing, International Journal of Communication Systems, International Journal of Computational Science, AutoSoft Journal. He has been acting as an author/co-author or an editor/co-editor of 10 books from Elsevier, Springer, IGI Global, World Scientific and McGraw-Hill. Dr. Hsu was awarded six times talent awards from Ministry of Science and Technology, Ministry of Education, and nine times distinguished award for excellence in research from Chung Hua University, Taiwan. Since 2008, he has been serving as executive committee of IEEE Technical Committee of Scalable Computing; IEEE Special Technical Committee Cloud Computing; Taiwan Association of Cloud Computing. Dr. Hsu is a Fellow of the IET (IEE); Vice Chair of IEEE Technical Committee on Cloud Computing (TCCLD), IEEE Technical Committee on Scalable Computing (TCSC), a Senior member of IEEE.

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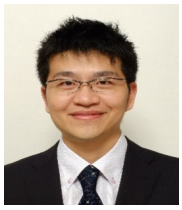

Mianxiong Dong received B.S., M.S. and Ph.D. in Computer Science and Engineering from The University of Aizu, Japan. He became the youngest ever Professor of Muroran Institute of Technology, Japan where he currently serves Advisor to Executive Director, and Vice Director of Office of Institutional Research. He was a JSPS Research Fellow with School of Computer Science and Engineering, The University of Aizu, Japan and was a visiting scholar with BBCR group at University of Waterloo, Canada supported by JSPS Excellent Young Researcher Overseas Visit Program from April 2010 to August 2011. Dr. Dong was selected as a Foreigner Research Fellow (a total of 3 recipients all over Japan) by NEC C&C Foundation in 2011. His research interests include Wireless Networks, Cloud Computing, and Cyber-Physical Systems. He has received best paper awards from IEEE HPCC 2008, IEEE ICESS 2008, ICA3PP 2014, GPC 2015, IEEE DASC 2015, IEEE VTC 2016-Fall, FCST 2017, 2017 IET Communications Premium Award and IEEE ComSoc CSIM Best Conference Paper Award 2018. Dr. Dong serves as an Editor for IEEE Transactions on Green Communications and Networking (TGCN), IEEE Communications Surveys and Tutorials, IEEE Network, IEEE Wireless Communications Letters, IEEE Cloud Computing, IEEE Access, as well as a leading guest editor for ACM Transactions on Multimedia Computing, Communications and Applications (TOMM), IEEE Transactions on Emerging Topics in Computing (TETC), IEEE Transactions on Computational Social Systems (TCSS). He has been serving as the Vice Chair of IEEE Communications Society Asia/Pacific Region Information Services Committee and Meetings and Conference Committee, Leading Symposium Chair of IEEE ICC 2019, Student Travel Grants Chair of IEEE GLOBECOM 2019, and Symposium Chair of IEEE GLOBECOM 2016, 2017. He is the recipient of IEEE TCSC Early Career Award 2016, IEEE SCSTC Outstanding Young Researcher Award 2017, The 12th IEEE ComSoc Asia-Pacific Young Researcher Award 2017, Funai Research Award 2018 and NISTEP Researcher 2018 (one of only 11 people in Japan) in recognition of significant contributions in science and technology. He is currently the Member of Board of Governors and Chair of Student Fellowship Committee of IEEE Vehicular Technology Society, and Treasurer of IEEE ComSoc Japan Joint Sections Chapter.