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Algorithms and Architectures for Parallel Processing

18th International Conference, ICA3PP 2018 Guangzhou, China, November 15–17, 2018 Proceedings, Part I

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Preface

Welcome to the proceedings of the 18th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP 2018), which was organized by Guangzhou University and held in Guangzhou, China, during November 15–17, 2018.

ICA3PP 2018 was the 18th event in a series of conferences devoted to research on algorithms and architectures for parallel processing. Previous iterations of the conference include ICA3PP 2017 (Helsinki, Finland, November 2017), ICA3PP 2016 (Granada, Spain, December 2016), ICA3PP 2015 (Zhangjiajie, China, November 2015), ICA3PP 2014 (Dalian, China, August 2014), ICA3PP 2013 (Vietri sul Mare, Italy, December 2013), ICA3PP 2012 (Fukuoka, Japan, September 2012), ICA3PP 2011 (Melbourne, Australia, October 2011), ICA3PP 2010 (Busan, Korea, May 2010), ICA3PP 2009 (Taipei, Taiwan, June 2009), ICA3PP 2008 (Cyprus, June 2008), ICA3PP 2007 (Hangzhou, China, June 2007), ICA3PP 2005 (Melbourne, Australia, October 2005), ICA3PP 2002 (Beijing, China, October 2002), ICA3PP 2000 (Hong Kong, China, December 2000), ICA3PP 1997 (Melbourne, Australia, December 1997), ICA3PP 1996 (Singapore, June 1996), and ICA3PP 1995 (Brisbane, Australia, April 1995).

ICA3PP is now recognized as the main regular event in the area of parallel algorithms and architectures, which covers many dimensions including fundamental theoretical approaches, practical experimental projects, and commercial and industry applications. This conference provides a forum for academics and practitioners from countries and regions around the world to exchange ideas for improving the efficiency, performance, reliability, security, and interoperability of computing systems and applications.

ICA3PP 2018 attracted over 400 high-quality research papers highlighting the foundational work that strives to push beyond the limits of existing technologies, including experimental efforts, innovative systems, and investigations that identify weaknesses in existing parallel processing technology. Each submission was reviewed by at least two experts in the relevant areas, on the basis of their significance, novelty, technical quality, presentation, and practical impact. According to the review results, 141 full papers were selected to be presented at the conference, giving an acceptance rate of 35%. Besides, we also accepted 50 short papers and 24 workshop papers. In addition to the paper presentations, the program of the conference included four keynote speeches and two invited talks from esteemed scholars in the area, namely: Prof. Xuemin (Sherman) Shen, University of Waterloo, Canada; Prof. Wenjing Lou, Virginia Tech, USA; Prof. Witold Pedrycz, University of Alberta, Canada; Prof. Xiaohua Jia, City University of Hong Kong, Hong Kong; Prof. Xiaofeng Chen, Xidian University, China; Prof. Xinyi Huang, Fujian Normal University, China. We were extremely honored to have them as the conference keynote speakers and invited speakers.

ICA3PP 2018 was made possible by the behind-the-scene effort of selfless individuals and organizations who volunteered their time and energy to ensure the success

of this conference. We would like to express our special appreciation to Prof. Yang Xiang, Prof. Weijia Jia, Prof. Yi Pan, Prof. Laurence T. Yang, and Prof. Wanlei Zhou, the Steering Committee members, for giving us the opportunity to host this prestigious conference and for their guidance with the conference organization. We would like to emphasize our gratitude to the general chairs, Prof. Albert Zomaya and Prof. Minyi Guo, for their outstanding support in organizing the event. Thanks also to the publicity chairs, Prof. Zheli Liu and Dr Weizhi Meng, for the great job in publicizing this event. We would like to give our thanks to all the members of the Organizing Committee and Program Committee for their efforts and support.

The ICA3PP 2018 program included two workshops, namely, the ICA3PP 2018 Workshop on Intelligent Algorithms for Large-Scale Complex Optimization Problems and the ICA3PP 2018 Workshop on Security and Privacy in Data Processing. We would like to express our sincere appreciation to the workshop chairs: Prof. Ting Hu, Prof. Feng Wang, Prof. Hongwei Li and Prof. Qian Wang.

Last but not least, we would like to thank all the contributing authors and all conference attendees, as well as the great team at Springer that assisted in producing the conference proceedings, and the developers and maintainers of EasyChair.

November 2018

Jaideep Vaidya
Jin Li

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