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# Theoretical Computer Science

36th National Conference, NCTCS 2018  
Shanghai, China, October 13–14, 2018  
Proceedings

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# Preface

The National Conference of Theoretical Computer Science (NCTCS) is the main academic activity in the area of theoretical computer science in China. To date, NCTCS has been successfully held 35 times in over 20 cities. It provides a platform for researchers in theoretical computer science or related areas to exchange ideas and start cooperations.

This volume contains the papers presented at NCTCS 2018: the 36th National Conference of Theoretical Computer Science held during October 13–14, 2018, in Shanghai, China. Sponsored by the China Computer Forum (CCF), NCTCS 2018 was hosted by the CCF Theoretical Computer Science Committee and Institute for Theoretical Computer Science at Shanghai University of Finance and Economics (SUFE).

NCTCS 2018 received 49 English submissions (including 18 published papers accepted only for communication at the conference) in the area of algorithms and complexity, software theory and methods, data science and machine learning theory, web science base theory, parallel and distributed computing and computational models, etc. Each of the 31 submissions was reviewed by at least three Program Committee members. The committee decided to accept 11 papers that are included in these proceedings published Springer's *Communications in Computer and Information Science* (CCIS) series.

NCTCS 2018 invited well-reputed researchers in the field of theoretical computer science to give keynote speeches, carry out a wide range of academic activities, and introduce recent advanced research results. We had eight invited plenary speakers at NCTCS 2018: Yijia Chen (Fudan University), Yi Deng (Institute of Information Engineering, Chinese Academy of Sciences), Nick Gravin (Shanghai University of Finance and Economics), Angsheng Li (Institute of Software Chinese Academy of Sciences), Jianzhong Li (Harbin Institute of Technology), Xiangyang Li (University of Science and Technology of China), Shengyu Zhang (The Chinese University of Hong Kong), and Zhihua Zhang (Peking University). We express our sincere thanks to them for their contributions to the conference and the proceedings.

We would like to thank the Program Committee members and external reviewers for their hard work in reviewing and selecting papers. We are also very grateful to all the editors at Springer and the local organization chairs for their hard work in the preparation of the conference.

September 2018

Lian Li  
Pinyan Lu  
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