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# Rough Sets and Knowledge Technology

10th International Conference, RSKT 2015  
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on Rough Sets, IJCRS 2015  
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Proceedings

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# Preface

This volume comprises papers accepted for presentation at the 10th International Conference on Rough Sets and Knowledge Technology (RSKT) conference, which along with the 15th Rough Sets, Fuzzy Sets, Data Mining and Granular Computing (RSFDGrC) International conference was held as a major part of the 2015 International Joint Conference on Rough Sets (IJCRS 2015) during November 20–23, 2015, in Tianjin, China. IJCRS is the main annual conference on rough sets. It follows the Joint Rough Set Symposium series, previously organized in 2007 in Toronto, Canada; in 2012 in Chengdu, China; in 2013 in Halifax, Canada; and in 2014 in Granada and Madrid, Spain. In addition to RSFDGrC and RSKT, IJCRS 2015 also hosted the Third International Workshop on Three-way Decisions, Uncertainty, and Granular Computing (TWDUG).

IJCRS 2015 received 97 submissions that were carefully reviewed by two to five Program Committee (PC) members or additional reviewers. After a rigorous process, 42 regular papers (acceptance rate 43.3) were accepted for presentation at the conference and publication in the two volumes of proceedings. Subsequently, some authors were selected to submit a revised version of their paper and after a second round of review, 24 more papers were accepted.

At IJCRS 2015 a ceremony was held to honor the new fellows of the International Rough Set Society. The fellows had the possibility to present their contributions in the rough set domain and to propose open questions. This volume contains six of the 12 contributions authored by the fellows Jerzy Grzymala-Busse, Tianrui Li, Duoqian Miao, Piero Pagliani, Andrzej Skowron, and Yiyu Yao.

Moreover, this volume contains the contribution by Hong Yu, invited speaker of the International Workshop on Three-Way Decisions, Uncertainty, and Granular Computing, and the tutorial by Andrzej Janusz, Sebastian Stawicki, Marcin Szczuka, and Dominik Ślęzak.

It is a pleasure to thank all those people who helped this volume to come into being and made IJCRS 2015 a successful and exciting event. First of all, we express our thanks to the authors without whom nothing would have been possible. We deeply appreciate the work of the PC members and additional reviewers who assured the high standards of accepted papers.

We deeply acknowledge the precious help of all the IJCRS chairs (Yiyu Yao, Qinghua Hu, Hong Yu, Jerzy Grzymala-Busse) as well as of the Steering Committee members (Duoqian Miao, Andrzej Skowron, Shusaku Tsumoto) for their work and suggestions with respect to the process of proceedings preparation and conference organization. Also, we want to pay tribute to the honorary chairs, Lotfi Zadeh, Roman Słowiński, Bo Zhang, and Jianwu Dang, whom we deeply respect for their countless contributions to the field.

We also gratefully thank our sponsors: the Tianjin Key Laboratory of Cognitive Computing and Application, School of Computer Science and Technology at Tianjin

University, for organizing and hosting the conference, the Institute of Innovative Technologies EMAG (Poland) for providing the data and funding the awards for the IJCRS 2015 Data Challenge, and Springer for sponsorship of the best paper awards.

Our immense gratitude goes once again to Qinghua Hu for taking charge of the organization of IJCRS 2015.

We are very grateful to Alfred Hofmann and the excellent LNCS team at Springer for their help and cooperation. We would also like to acknowledge the use of Easy-Chair, a great conference management system.

Finally, it is our sincere hope that the papers in the proceedings may be of interest to the readers and inspire them in their scientific activities.

November 2015

Davide Ciucci  
Guoyin Wang  
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