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*IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

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The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

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Zhongzhi Shi · Mihir Chakraborty ·  
Samarjit Kar (Eds.)

# Intelligence Science III

4th IFIP TC 12 International Conference, ICIS 2020  
Durgapur, India, February 24–27, 2021  
Revised Selected Papers

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# Preface

This volume comprises the proceedings of the 4th International Conference on Intelligence Science (ICIS 2020). Artificial intelligence research has made substantial progress in some special areas so far. However, deeper knowledge on the essence of intelligence is far from sufficient and, therefore, many state-of-the-art intelligent systems are still not able to compete with human intelligence. To advance the research in artificial intelligence, it is necessary to investigate intelligence, both artificial and natural, in an interdisciplinary context. The objective of this conference series is to bring together researchers from brain science, cognitive science, and artificial intelligence to explore the essence of intelligence and the related technologies. The conference provides a platform for discussing some of the key issues facing intelligence science.

For ICIS 2020, we received more than 42 papers, of which 28 were included in the conference program as regular papers. All of the papers submitted were reviewed by three referees. We are grateful for the dedicated work of both the authors and the referees, and we hope that these proceedings will continue to bear fruit over the years to come.

A conference such as this could not succeed without help from many individuals, who contributed their valuable time and expertise. We want to express our sincere gratitude to the Program Committee members and referees, who invested many hours for reviews and deliberations. They provided detailed and constructive review reports that significantly improved the papers included in the conference program.

We are very grateful for the sponsorship of the following organizations: the Chinese Association for Artificial Intelligence (CAAI), the International Federation for Information Processing Technical Committee on Artificial Intelligence (IFIP TC12), the China Chapter of the International Society for Information Studies, and the National Institute of Technology, Durgapur, India, supported by the Institute of Computing Technology, Chinese Academy of Sciences, China. Thanks go to Professor Samarjit Kar as Chair of the Organizing Committee. We specially thank Shi Wang and Zeqin Huang for carefully checking materials for the proceedings.

Finally, we hope that you find this volume inspiring and informative.

March 2021

Zhongzhi Shi  
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