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Yves Demazeau · Tom Holvoet ·
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Advances in Practical Applications of Agents, Multi-Agent Systems, and Trustworthiness

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Preface

Research on agents and multi-agent systems has matured during the last decade and many effective applications of this technology are now deployed. An international forum to present and discuss the latest scientific developments and their effective applications, to assess the impact of the approach, and to facilitate technology transfer, became a necessity and was created almost two decades ago.

PAAMS, the International Conference on Practical Applications of Agents and Multi-Agent Systems, is the international yearly tribune to present, discuss, and disseminate the latest developments and the most important outcomes related to real-world applications. It provides a unique opportunity to bring multi-disciplinary experts, academics, and practitioners together to exchange their experience in the development and deployment of agents and multi-agent systems.

This volume presents the papers that were accepted for the 2020 edition of PAAMS. These articles report on the application and validation of agent-based models, methods, and technologies in a number of key application areas, including: advanced models and learning, agent-based programming, decision-making, education and social interactions, formal and theoretic models, health and safety, mobility and the city, swarms, and task allocation. Each paper submitted to PAAMS went through a stringent peer-review process by three members of the Program Committee composed of 136 internationally renowned researchers from 27 countries. From the 64 submissions received, 12 were selected for full presentation at the conference; another 17 papers were accepted as short presentations. In addition, a demonstration track featuring innovative and emergent applications of agent and multi-agent systems and technologies in real-world domains was organized. In all, 17 demonstrations were shown, and this volume contains a description of each of them.

We would like to thank all the contributing authors, the members of the Program Committee, the sponsors (IBM, Armundia Group, EurAI, AEPIA, AFIA, APPIA, FBKI, CINI, CNRS, KUL, AIR Institute, and UNIVAQ), and the Organizing Committee for their hard and highly valuable work. We are thankful for the funding/support from the project “Intelligent and sustainable mobility supported by multi-agent systems and edge computing” (Id. RTI2018-095390-B-C32). Their work contributed to the success of the PAAMS 2020 event.

Thanks for your help – PAAMS 2020 would not exist without your contribution.

April 2020

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