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Timoteo Carletti
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Artificial Life and Evolutionary Computation

18th Italian Workshop, WIVACE 2024
Namur, Belgium, September 11–13, 2024
Revised Selected Papers


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Timoteo Carletti · Thierry-Sainclair Njougouo ·
Elio Tuci
Editors

Artificial Life and Evolutionary Computation

18th Italian Workshop, WIVACE 2024
Namur, Belgium, September 11–13, 2024
Revised Selected Papers

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Preface

This volume of Communications in Computer and Information Science contains the proceedings of WIVACE 2024, the XVIII Workshop on Artificial Life and Evolutionary Computation. The event was successfully held on the Campus of the University of Namur, Belgium, during September 11–13, 2024. This is the second edition of the WIVACE conference series outside Italy; indeed after a long series of Italian locations, Samperi (2007), Venice (2008), Naples (2009), Parma (2012), Milan (2013), Vietri sul Mare (2014), Bari (2015), Salerno (2016), Venice (2017), Parma (2018), Rende (2019), Gaeta (2022), and Venice (2023), WIVACE has been organized in Winterthur (Switzerland) in 2021 and now in Namur (Belgium), strengthening in this way the international dimension of the workshop.

The International Workshop on Artificial Life and Evolutionary Computation aims at bringing together researchers to present and share their results and ideas in a multi-disciplinary context. The workshop provides a forum for the discussion of new research directions and applications in Artificial Life, Evolutionary Computation and related fields, where different disciplines and research areas could effectively meet. In particular, the workshop brings together computer scientists, mathematicians, biologists, psychologists and cognitive scientists to discuss issues related to the origins of life, evolution and adaptation, collective and social behaviours and other topics related to the development of technological solutions inspired by biological principles.

The workshop was organized on two and half days, based on single-track sessions, with oral (22) and poster presentations (7). The workshop was structured using a format specifically designed to allow doctoral students and early career researchers to meet in order to discuss their ideas and to disseminate their work in a collaborative and constructive environment. We managed to have five keynote speakers of international renown; we are thus deeply indebted for their participation to Monika Scholz (Max Planck Institute for Neurobiology and Center of Advanced European Studies and Research (caesar), Germany), Yara Khaluf (Wageningen University, The Netherlands), Pietro Liò (University of Cambridge, UK) and Aldo Genovesio (Università del Piemonte Orientale “A. Avogadro”, Italy). A special thanks goes to the origami artist Dewi Brunet (Dewi Origami, Belgium), who showed the links between art and science.

Overall, we received 42 submissions, out of which 23 were selected for this volume of proceedings after a two-round single-blind review process performed by Program Committee members for an acceptance rate of about 54%. We would like to warmly thank the PC members for their help in the selection process. We take the opportunity to also thank the Local Organizing Committee composed of Nemanja Antonic, Aymeric Vellinger, Martin Moriamé and Jean-François de Kemmeter from the Namur Institute of Complex Systems, naXys, for their valuable help. Last but not least, we thank various members of the staff of the University of Namur and the host institution for making the infrastructure available. A special thanks to all authors for having contributed to the success of this workshop.

Let us finally acknowledge the precious advice of the staff at Springer, who provided their professional support through all the phases that led to this volume.

February 2025

Timoteo Carletti
Thierry-Sainclair Njougouo
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