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Preface

This two-volume set contains proceedings of EvoApplications 2017, the European Conference on the Applications of Evolutionary Computation. The event was held in Amsterdam, The Netherlands, during April 19–21.

EvoAPPS, as it is called, is part of EVO*, the leading European event on bio-inspired computation. EvoAPPS aimed to show the latest applications of research, ranging from proof of concepts to industrial case studies. At the same time, under the EVO* umbrella, EuroGP focused on the technique of genetic programming, EvoCOP targeted evolutionary computation in combinatorial optimization, and EvoMUSART was dedicated to evolved and bio-inspired music, sound, art, and design. The proceedings for all of these co-located events are available in the LNCS series.

If EVO* coalesces four different conferences, EvoAPPS exhibits an even higher granularity: It started as a collection of few workshops and slowly grew into a 14-track conference, steadily able to attract more than 100 papers per year. This year marked our 20th anniversary, but, despite the success, we do not want to stop to celebrate. In an ever-evolving scientific landscape, EvoAPPS needs to mutate to adapt and survive: its scope is constantly broadening or shrinking according to new developments, new tracks are proposed while others are merged or suspended.

This edition covered 14 different domains: business analytics and finance (EvoBAFIN track); computational biology (EvoBIO track); communication networks and other parallel and distributed systems (EvoCOMNET track); complex systems (EvoCOMPLEX track); energy-related optimization (EvoENERGY track); games and multi-agent systems (EvoGAMES track); image analysis, signal processing, and pattern recognition (EvoIASP track); real-world industrial and commercial environments (EvoINDUSTRY track); knowledge incorporation in evolutionary computation (EvoKNOW track); continuous parameter optimization (EvoNUM track); parallel architectures and distributed infrastructures (EvoPAR track); evolutionary robotics (EvoROBOT track); nature-inspired algorithms in software engineering and testing (EvoSET track); and stochastic and dynamic environments (EvoSTOC track).

This year, we received 108 high-quality submissions, most of them well suited to fit in more than one track. We selected 46 papers for full oral presentation, while 26 works were given limited space and were shown as posters. All such contributions, regardless of the presentation format, appear as full papers in these two volumes (LNCS 10199 and LNCS 10200).

Many people contributed to this edition: We express our gratitude to the authors for submitting their works, and to the members of the Program Committees for devoting such a big effort to review papers within our tight schedule.

The papers were submitted, reviewed, and selected through the MyReview conference management system, and we are grateful to Marc Schoenauer (Inria, Saclay-Île-de-France, France) for providing, hosting, and managing the platform.

We thank the local organizers, Evert Haasdijk and Jacqueline Heinerman, from the Vrije Universiteit Amsterdam.

We thank Pablo García Sánchez (University of Cádiz, Spain) for maintaining the EVO* website and handling publicity.

We thank the invited speakers, Kenneth De Jong and Arthur Kordon, for their inspiring presentations.

We thank SPECIES, the Society for the Promotion of Evolutionary Computation in Europe and Its Surroundings, and its individual members (Marc Schoenauer, President; Anna I. Esparcia-Alcázar, Secretary and Vice-President; Wolfgang Banzhaf, Treasurer) for the coordination and financial administration.

And we all express our special gratitude to Jennifer Willies for her dedicated and continued involvement in EVO*. Since 1998, she has been essential for building our unique atmosphere.

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