

# Preface

This volume contains the papers presented at CMSB 2017, the 15th Conference on Computational Methods in Systems Biology held on September 27–29, 2017 at the Technische Universität Darmstadt (Germany).

The CMSB annual conference series, initiated in 2003, provides a unique discussion forum for computer scientists, biologists, mathematicians, engineers, and physicists interested in a system-level understanding of biological processes. Topics of interest include formalisms for modeling biological processes; models and their biological applications; frameworks for model verification, validation, analysis, and simulation of biological systems; high-performance computational systems biology and parallel implementations; model inference from experimental data; model integration from biological databases; multi-scale modeling and analysis methods; and computational approaches for synthetic biology. Case studies in systems and synthetic biology are especially encouraged.

There were 30 regular submissions, 5 tool-paper submissions, 1 presentation-only submission (for works already published in a journal), and 5 poster submissions. Each regular submission, tool-paper submission, and presentation-only submission was reviewed by 3 Program Committee members. The committee decided to accept 15 regular papers, 4 tool papers, the presentation, and 4 submitted posters. To complement the contributed papers, we also included in the program one tutorial on Biocham, by François Fages and Sylvain Solymán, and four invited lectures by: Michael Brenner (Harvard University, USA), Russ Harmer (CNRS and École normale supérieure de Lyon, France), Stefan Grill (Technische Universität Dresden, Germany), and Philipp Hennig (Max Planck Institute for Intelligent Systems, Tübingen, Germany).

As program co-chairs, we have many people to thank. We are extremely grateful to the members of the Program Committee and the external reviewers for their peer reviews and the valuable feedback they provided to the authors. We thank also the authors of the accepted papers for revising their papers according to the suggestions of the Program Committee and for their responsiveness in providing the camera-ready copies within the deadline. Our special thanks goes to François Fages and Ezio Bartocci, and all the members of the CMSB Steering Committee, for their advice on organizing and running the conference. We acknowledge the support of the EasyChair conference system during the reviewing process and the production of these proceedings. We also thank Springer. Our gratitude also goes to the tool track chair, Pierre Boutillier, and also to Christine Cramer, for her help and support before, during, and after the conference. It is our pleasant duty to acknowledge the financial support of our sponsors Analytikjena, Dispendix, the Profile Area Internet and Digitization of the Technische Universität Darmstadt, IBM Research Zurich, IEEE, LOEWE CompuGene, Nikon, and the support of the Bioinspired Communication Systems Lab at the

Technische Universität Darmstadt, where this year's event was hosted. Finally, we would like to thank all the participants of the conference. It was the quality of their presentations and their contribution to the discussions that made the meeting a scientific success.

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