12th Innovations in Theoretical Computer Science Conference

ITCS 2021, January 6–8, 2021, Virtual Conference

Edited by

James R. Lee

LIPIcs – Vol. 185 – ITCS 2021 www.dagstuhl.de/lipics

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ACM Classification 2012
Mathematics of computing; Theory of computation

ISBN 978-3-95977-177-1

Published online and open access by
Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at https://www.dagstuhl.de/dagpub/978-3-95977-177-1.

Publication date
February, 2021

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at https://portal.dnb.de.

Digital Object Identifier: 10.4230/LIPIcs.ITCS.2021.0

LIPIcs – Leibniz International Proceedings in Informatics

LIPIcs is a series of high-quality conference proceedings across all fields in informatics. LIPIcs volumes are published according to the principle of Open Access, i.e., they are available online and free of charge.

ISSN 1868-8969

https://www.dagstuhl.de/lipics

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Leibniz International Proceedings in Informatics
Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

Preface

The papers in this volume were presented at the 12th Innovations in Theoretical Computer Science (ITCS 2021) conference. The conference was held *online* from January 6–8, 2021. ITCS seeks to promote research that carries a strong conceptual message, for instance, introducing a new concept or model, opening a new line of inquiry within traditional or cross-interdisciplinary areas, introducing new techniques, or making novel connections between existing areas and ideas. The conference format is single-session and aims to promote the exchange of ideas between different areas of theoretical computer science and with other disciplines. A record 214 submissions were received and, of these, the program committee selected 89 papers. The submission pool was strong across the board, and it's very fulfilling to see the tradition of ITCS continue to grow.

The program committee consisted of 37 members (in addition to the chair): Andris Ambainis, University of Latvia; Nima Anari, Stanford; Elette Boyle, IDC Herzliya; Mark Braverman, Princeton; Sebastien Bubeck, Microsoft Research; Claire Mathieu, CNRS, Paris; Edith Cohen, Google; Anindya De, University of Pennsylania; Uriel Feige, Weizmann Institute; Kira Goldner, Columbia; Monika Henzinger, University of Vienna; Maurice Herlihy, Brown; Sam Hopkins, UC Berkeley and MIT; Tali Kaufman, Bar-Ilan University; Adam Klivans, UT Austin; Gillat Kol, Princeton; Alexandra Kolla, University of Colorado, Boulder; Lap Chi Lau, University of Waterloo; Jamie Morgenstern, University of Washington; Anand Natajaran, MIT; Alantha Newman, Université Grenoble Alpes; Lorenzo Orecchia, University of Chicago; Debmalya Panigrahi, Duke University; Richard Peng, Georgia Tech; Ron Rothblum, Technion; Aviad Rubinstein, Stanford; Tselil Schramm, Stanford; Leonard Schulman, California Institute of Technology; Anastasios Sidiropoulos, University of Illinois at Chicago; Nikhil Srivastava, UC Berkeley; Ola Svensson, EPFL; Avishay Tal, UC Berkeley; Luca Trevisan, Bocconi University; Jan Vondrak, Stanford; Matt Weinberg, Princeton; Amir Yehudayoff, Technion; Mark Zhandry, Princeton and NTT Research.

Planning and execution of the conference were made more challenging by a global pandemic, and in this light I am especially grateful to the committee for agreeing to serve, and then investing substantial time and effort in producing a fantastic program. Similarly, I am thankful to the hundreds of subreviewers who assisted in the reviewing process. Special thanks are also due to Gautam Kamath from the University of Waterloo, and the Simons Institute for the Theory of Computing for their help in organizing the virtual conference. I'm grateful to the ITCS Steering Committee – and especially its chair Umesh Vazirani – for their advice and guidance in forming the program and, finally, to all the authors, presenters, and audience members for making ITCS a unique and innovative experience.

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