

Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques

APPROX/RANDOM 2020, August 17–19, 2020,
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Jarosław Byrka

Raghu Meka



Editors

Jarosław Byrka 

University of Wrocław, Poland
jby@cs.uni.wroc.pl

Raghu Meka

University of California, Los Angeles, USA
raghuvardhan@gmail.com

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■ Preface

This volume contains the papers presented at the 23rd International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2020) and the 24th International Conference on Randomization and Computation (RANDOM 2020), which due to the travel restrictions related to COVID-19 were organized as parallel virtual conferences during August 17–19, 2020.

APPROX focuses on algorithmic and complexity issues surrounding the development of efficient approximate solutions to computationally difficult problems, and was the 23rd in the series. RANDOM is concerned with applications of randomness to computational and combinatorial problems, and was the 24th in the series. Prior to 2003, APPROX took place in Aalborg (1998), Berkeley (1999), Saarbrücken (2000), Berkeley (2001), and Rome (2002), while RANDOM took place in Bologna (1997), Barcelona (1998), Berkeley (1999), Geneva (2000), Berkeley (2001), and Harvard (2002). Since 2003, APPROX and RANDOM have been collocated, taking place in Princeton (2003), Cambridge (2004), Berkeley (2005), Barcelona (2006), Princeton (2007), Boston (2008), Berkeley (2009), Barcelona (2010), Princeton (2011), Boston (2012), Berkeley (2013), Barcelona (2014), Princeton (2015), Paris (2016), Berkeley (2017), Princeton (2018), and Boston (2019).

Topics of interest for APPROX and RANDOM are: approximation algorithms, hardness of approximation, small space, sub-linear time and streaming algorithms, online algorithms, approaches that go beyond worst case analysis, distributed and parallel approximation, embeddings and metric space methods, mathematical programming methods, spectral methods, combinatorial optimization, algorithmic game theory, mechanism design and economics, computational geometric problems, approximate learning, design and analysis of randomized algorithms, randomized complexity theory, pseudorandomness and derandomization, random combinatorial structures, random walks/Markov chains, expander graphs and randomness extractors, probabilistic proof systems, random projections and embeddings, error-correcting codes, average-case analysis, smoothed analysis, property testing, and computational learning theory.

The volume contains 34 contributed papers, selected by the APPROX Program Committee out of 67 submissions, and 30 contributed papers, selected by the RANDOM Program Committee also out of 67 submissions. We would like to thank all of the authors who submitted papers, the members of the Program Committees, and the external reviewers. We are grateful for the guidance of the steering committees: Klaus Jansen, Samir Khuller, Monaldo Mastrolili, and László Végh for APPROX, and Oded Goldreich, Cris Moore, Anup Rao, Omer Reingold, Dana Ron, Ronitt Rubinfeld, Amit Sahai, Ronen Shaltiel, Alistair Sinclair, and Paul Spirakis for RANDOM.



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■ List of Authors

- Ishan Agarwal (43)
Courant Institute of Mathematical Sciences,
New York University, NY, USA
- Divesh Aggarwal (1)
National University of Singapore, Singapore
- Kwangjun Ahn  (2)
Department of EECS, Massachusetts Institute of
Technology, Cambridge, MA, USA
- Noga Alon (6)
Department of Mathematics, Princeton
University, NJ, USA; Schools of Mathematics
and Computer Science, Tel Aviv University,
Israel
- Afrouz Jabal Ameli  (44)
IDSIA, USI-SUPSI, Manno, Switzerland
- Nima Anari (56)
Department of Computer Science, Stanford
University, CA, USA
- Alexandr Andoni (50)
Columbia University, New York, NY, USA
- Sepehr Assadi (6)
Department of Computer Science, Rutgers
University, Piscataway, NJ, USA
- Ainesh Bakshi (64)
Carnegie Mellon University, Pittsburgh, PA,
USA
- Sayan Bandyopadhyay  (31)
Department of Informatics, University of Bergen,
Norway
- Calvin Beideman (17)
University of Illinois, Urbana-Champaign, IL,
USA
- Lior Ben Yamin (48)
Computer Science Department, Technion, Haifa,
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- Shalev Ben-David (28)
University of Waterloo, Canada
- Amey Bhangale (38)
University of California Riverside, CA, USA
- Anup Bhattacharya (23)
Indian Statistical Institute, Kolkata, India
- Abhishek Bhrushundi (29)
Rutgers University, Piscataway, NJ, USA
- Eric Blais (18)
University of Waterloo, Canada
- Markus Bläser (8)
Department of Computer Science, Saarland
University, Saarland Informatics Campus,
Saarbrücken, Germany
- Abhinav Bommireddi (18)
University of Waterloo, Canada
- Sylvia Boyd (61)
School of Electrical Engineering and Computer
Science, University of Ottawa, Canada
- Nader H. Bshouty (5)
Department of Computer Science, Technion,
Haifa, Israel
- Sébastien Bubeck (54)
Microsoft Research, Redmond, WA, USA
- Collin Burns (50)
Columbia University, New York, NY, USA
- Clément L. Canonne  (24)
IBM Research, Almaden, CA, USA
- Amit Chakrabarti  (22)
Dartmouth College, Hanover, NH, USA
- Diptarka Chakraborty (38)
National University of Singapore, Singapore
- Sourav Chakraborty (23)
Indian Statistical Institute, Kolkata, India
- Parinya Chalermsook (33)
Aalto University, Finland
- Chun-Hsiang Chan (63)
Department of Computer Science, University of
Michigan, Ann Arbor, MI, USA
- Karthekeyan Chandrasekaran (17)
University of Illinois, Urbana-Champaign, IL,
USA
- Nadiia Chepurko (64)
MIT, Cambridge, MA, USA
- Joseph Cheriyan (61)
Department of Combinatorics and Optimization,
University of Waterloo, Canada
- Eden Chlamtáć  (41)
Ben Gurion University of the Negev, Beer Sheva,
Israel

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- Karine Chubarian (36)
Department of Mathematics, Statistics and
Computer Science, University of Illinois at
Chicago, IL, USA
- Julia Chuzhoy (33)
Toyota Technological Institute at Chicago, IL,
USA
- Joanna Chybowska-Sokół  (52)
Faculty of Mathematics and Information Science,
Warsaw University of Technology, Poland
- Robert Cummings (61)
Department of Combinatorics and Optimization,
University of Waterloo, Canada
- Artur Czumaj (16)
Department of Computer Science and Centre for
Discrete Mathematics and its Applications
(DIMAP), University of Warwick, Coventry, UK
- Syamantak Das (55)
IIT Delhi, India
- Dean Doron (7)
Department of Computer Science, Stanford
University, CA, USA
- Jan Dreier  (14)
Department of Computer Science, RWTH
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Department of Computer Science, University of
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Department of Computer Science, TU
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Department of Informatics, University of Bergen,
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École Polytechnique Fédérale de Lausanne,
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Department of Computer Science, Princeton
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Norway
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UNSW Sydney, Australia
- Vadim Grinberg (57)
Toyota Technological Institute at Chicago,
Chicago, IL, USA
- Logan Grout (61)
Department of Combinatorics and Optimization,
University of Waterloo, Canada
- Spoorthy Gunda (51)
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Department of Computer Science and
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National Institute of Informatics, Tokyo, Japan
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- Diego Ihara  (45)
Department of Computer Science, University of Illinois at Chicago, IL, USA
- Lavina Jain (55)
IIT Delhi, India
- Pallavi Jain (51)
Indian Institute of Technology Jodhpur, India
- Klaus Jansen  (44)
University of Kiel, Germany
- Konstanty Junosza-Szaniawski  (52)
Faculty of Mathematics and Information Science, Warsaw University of Technology, Poland
- Dor Katzelnick (49)
Department of Computer Science, Technion, Haifa, Israel
- Tali Kaufman (25)
Department of Computer Science, Bar-Ilan University, Ramat Gan, Israel
- Arindam Khan  (44, 47)
Indian Institute of Science, Bangalore, India
- Tomasz Kociumaka  (46)
Department of Computer Science, Bar-Ilan University, Ramat Gan, Israel
- Petr Kolman  (41)
Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic
- Tsvi Kopelowitz  (46)
Department of Computer Science, Bar-Ilan University, Ramat Gan, Israel
- Swastik Kopparty (29)
Dept. of Computer Science & Dept. of Mathematics, Rutgers University, Piscataway, NJ, USA
- Guy Kortsarz (39)
Department of Computer Science, Rutgers University Camden, NJ, USA
- Pravesh K. Kothari (21)
Computer Science Department, Carnegie Mellon University, Pittsburgh, PA, USA
- Robin Kothari (28)
Microsoft Quantum and Microsoft Research, Redmond, WA, USA
- Ravishankar Krishnaswamy (40)
Microsoft Research India, Bangalore, India
- Philipp Kuinke  (14)
Department of Computer Science, RWTH Aachen University, Germany
- Janardhan Kulkarni (42)
The Algorithms Group, Microsoft Research, Redmond, WA, USA
- Mrinal Kumar (29)
Dept. of Computer Science & Engineering, IIT Bombay, India
- Nikhil Kumar (55)
IIT Delhi, India
- Rajendra Kumar (38)
IIT Kanpur, India; National University of Singapore, Singapore
- Bundit Laekhanukit  (39, 63)
ITCS, Shanghai University of Finance and Economics, China
- Eunou Lee (59)
Pennsylvania State University, State College, University Park, PA, USA
- Reut Levi  (19)
Efi Arazi School of Computer Science, The Interdisciplinary Center, Herzliya, Israel
- Jing Li (48)
Department of Computer Science, New Jersey Institute of Technology, Newark, NJ, USA
- Ray Li (9)
Department of Computer Science, Stanford University, CA, USA
- Shi Li (39, 42)
Department of Computer Science and Engineering, University at Buffalo, NY, USA
- Yi Li (50)
Nanyang Technological University, Singapore, Singapore

- Daniel Lokshtanov (51)
University of California, Santa Barbara, CA, USA
- Ben Lund  (30)
Department of Mathematics, Princeton University, NJ, USA
- Sepideh Mahabadi (50)
Toyota Technological Institute at Chicago, IL, USA
- Bernard Mans (11)
Macquarie University, Sydney, Australia
- Moti Medina  (19)
School of Electrical & Computer Engineering, Ben-Gurion University of the Negev, Beer Sheva, Israel
- Nicole Megow  (37)
Department for Mathematics and Computer Science, University of Bremen, Germany
- Patryk Mikos  (52)
Institute of Theoretical Computer Science, Faculty of Mathematics and Computer Science, Jagiellonian University, Kraków, Poland
- Sarah Miracle (3)
University of St. Thomas, St. Paul, MN, USA
- Gopinath Mishra (23)
Indian Statistical Institute, Kolkata, India
- Neshat Mohammadi (45)
Department of Computer Science, University of Illinois at Chicago, IL, USA
- Jonathan Mosheiff (9)
Computer Science Department, Carnegie Mellon University, Pittsburgh, PA, USA
- Lukas Nölke  (37)
Department for Mathematics and Computer Science, University of Bremen, Germany
- Maciej Obremski (1)
National University of Singapore, Singapore
- Jakub Opršal  (34)
Computer Science Department, Durham University, UK
- Anurag Pandey (8)
Max Planck Institut für Informatik, Saarland Informatics Campus, Saarbrücken, Germany
- Fahad Panolan  (32)
Department of Computer Science and Engineering, IIT Hyderabad, India
- Manaswi Paraashar (23)
Indian Statistical Institute, Kolkata, India
- Ojas Parekh (59)
Sandia National Laboratories, Albuquerque, NM, USA
- Pan Peng  (16)
Department of Computer Science, University of Sheffield, UK
- Jeff M. Phillips (12)
School of Computing, University of Utah, Salt Lake City, UT, USA
- Madhusudhan Reddy Pittu (47)
Indian Institute of Technology, Kharagpur, India
- Adam Polak  (52)
Institute of Theoretical Computer Science, Faculty of Mathematics and Computer Science, Jagiellonian University, Kraków, Poland
- Ely Porat  (46)
Department of Computer Science, Bar-Ilan University, Ramat Gan, Israel
- Aaron Potechin (58)
University of Chicago, IL, USA
- Aditya Potukuchi  (30)
Department of Computer Science, Rutgers University, Piscataway, NJ, USA
- Ali Pourmiri (11)
Macquarie University, Sydney, Australia
- Eric Price (13)
Department of Computer Science, University of Texas at Austin, TX, USA
- Yuval Rabani (54)
Hebrew University of Jerusalem, Israel
- Cyrus Rashtchian (26)
Department of Computer Science & Engineering, UC San Diego, CA, USA
- Malin Rau  (44)
Univ. Grenoble Alpes, CNRS, Inria, Grenoble INP*, LIG, Grenoble, France
- Ran Raz (21)
Department of Computer Science, Princeton University, NJ, USA
- Oded Regev (43)
Courant Institute of Mathematical Sciences, New York University, NY, USA

- Nicolas Resch (9)
Computer Science Department, Carnegie Mellon University, Pittsburgh, PA, USA
- João Ribeiro  (1)
Imperial College London, UK
- Dana Ron  (27)
Tel Aviv University, Israel
- Asaf Rosin (27)
Tel Aviv University, Israel
- Peter Rossmanith  (14)
Department of Computer Science, RWTH Aachen University, Germany
- Sai Sandeep (34, 40)
Computer Science Department, Carnegie Mellon University, Pittsburgh, PA, USA
- Thatchaphol Saranurak (33)
Toyota Technological Institute at Chicago, IL, USA
- Kanthy Sarpatwar  (48)
IBM T. J. Watson Research Center, Yorktown Heights, NY, USA
- Saket Saurabh (51)
The Institute of Mathematical Sciences, HBNI, Chennai, India; University of Bergen, Norway
- Jonathan Scarlett (13)
Department of Computer Science & Department of Mathematics, National University of Singapore, Singapore
- Baruch Schieber (48)
Department of Computer Science, New Jersey Institute of Technology, Newark, NJ, USA
- Roy Schwartz (49, 53)
Department of Computer Science, Technion, Haifa, Israel
- Francesco Sgherzi (45)
Department of Computer Science, University of Illinois at Chicago, IL, USA
- Hadas Shachnai (48)
Computer Science Department, Technion, Haifa, Israel
- Ronen Shaltiel (10)
University of Haifa, Israel
- Ella Sharakanski (25)
Department of Computer Science, Bar-Ilan University, Ramat Gan, Israel
- Yotam Sharoni (53)
Department of Computer Science, Technion, Haifa, Israel
- Anastasios Sidiropoulos (36, 45)
Department of Computer Science, University of Illinois at Chicago, IL, USA
- Shashwat Silas (9)
Department of Computer Science, Stanford University, CA, USA
- Kirill Simonov  (32)
Department of Informatics, University of Bergen, Norway
- Christian Sohler (16)
Department of Mathematics and Computer Science, University of Cologne, Germany
- Tatiana Starikovskaya (35)
DIENS, École normale supérieure, PSL Research University, Paris, France
- Noah Stephens-Davidowitz (1)
Cornell University, Ithaca, NY, USA
- Amanda Pascoe Streib (3)
Center for Computing Sciences, Bowie, MD, USA
- Noah Streib (3)
Center for Computing Sciences, Bowie, MD, USA
- Michal Svagerka (35)
ETH Zürich, Switzerland
- Zoltán Szigeti (61)
University Grenoble Alpes, CNRS, G-SCOP, France
- Amnon Ta-Shma (7)
The Blavatnik School of Computer Science, Tel-Aviv University, Israel
- Wai Ming Tai (12)
School of Computing, University of Utah, Salt Lake City, UT, USA
- Prafullkumar Tale (51)
Max Planck Institute for Informatics, Saarland Informatics Campus, Saarbrücken, Germany
- Yi Tang (43)
Courant Institute of Mathematical Sciences, New York University, NY, USA
- Roei Tell (7)
Department of Computer Science and Applied Mathematics, Weizmann Institute of Science, Rehovot, Israel

- Justin Thaler (22)
Georgetown University, Washington, DC, USA
- Theophile Thiery (62)
School of Mathematical Sciences, Queen Mary
University of London, UK
- Linh Tran (20)
Department of Mathematics, Yale University,
New Haven, CT, USA
- Przemysław Uznański  (35, 46)
Institute of Computer Science, University of
Wrocław, Poland
- Mina Valizadeh (45)
Department of Computer Science, University of
Illinois at Chicago, IL, USA
- Daniel Vaz (39)
Operations Research Group, TU Munich,
Germany
- Van Vu (20)
Department of Mathematics, Yale University,
New Haven, CT, USA
- Thuy-Duong Vuong (56)
Department of Computer Science, Stanford
University, CA, USA
- Lu Wang (61)
Department of Combinatorics and Optimization,
University of Waterloo, Canada
- Justin Ward (62)
School of Mathematical Sciences, Queen Mary
University of London, UK
- Osamu Watanabe (15)
Tokyo Institute of Technology, Japan
- Thomas Watson (28)
University of Memphis, TN, USA
- Alexander Wei (60)
Harvard University, Cambridge, MA, USA
- Hao-Ting Wei (63)
Department of IEOR, Columbia University, New
York, NY, USA
- Karl Wimmer (24)
Duquesne University, Pittsburgh, PA, USA
- David P. Woodruff (26, 50, 64)
Computer Science Department, Carnegie Mellon
University, Pittsburgh, PA, USA
- Mary Wootters (9)
Department of Computer Science, Stanford
University, CA, USA
- Jiayi Xian (39, 42)
Department of Computer Science and
Engineering, University at Buffalo, NY, USA
- Chao Xu (17)
The Voleon Group, Berkeley, CA, USA
- Yuhao Zhang (63)
Department of Computer Science, The
University of Hong Kong, China
- Hanlin Zhu (26)
Institute for Interdisciplinary Information
Sciences, Tsinghua University, Beijing, China