# Algorithmic Learning Theory 2021: Preface

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These proceedings contain the 46 papers accepted for presentation at the 32nd International Conference on Algorithmic Learning Theory (ALT 2021), held virtually due to the COVID-19 pandemic, on March 16–19, 2021. The 46 papers were selected by the program committee, with the help of additional expert reviewers, out of the record 157 submissions. Each accepted paper was presented in a 15-minute talk slot.

Besides the presentations of the accepted papers, the conference featured keynote talks by Joëlle Pineau and Constantinos Daskalakis and a tutorial by Shay Moran. In addition to the conference, this year ALT sponsored a 1-day Mentorship Workshop held virtually on March 4-5, 2021 and organized by the Learning Theory Alliance.

Steve Hanneke and Aryeh Kontorovich received the Best Paper Award for their work titled "Stable Sample Compression Schemes: New Applications and an Optimal SVM Margin Bound". Best Student Paper Awards were given to Badih Ghazi, Noah Golowich, Ravi Kumar, Pasin Manurangsi for their work titled "Near-tight closure bounds for the Littlestone and threshold dimensions", and to Gellért Weisz, Philip Amortila, Csaba Szepesvári for their work titled "Exponential Lower Bounds for Planning in MDPs With Linearly-Realizable Optimal Action-Value Functions".

We wish to thank our virtual organization chairs Quentin Berthet, Satyen Kale, and Vianney Perchet and our sponsorship chair Gergely Neu for their dedicated work that helped make the conference a success. We also thank all the members of the ALT steering committee for their guidance and support throughout the entire process. We would like to express our gratitude to the entire program committee and to the external reviewers for their hard work during the review process amid the challenging conditions of the pandemic. Finally, we would like to thank our generous sponsors: Apple, Baidu, Google, Kayufu and Qualcomm.

Vitaly Feldman, Katrina Ligett and Sivan Sabato, ALT 2021 Program Chairs and Publication Chair.

### ALT 2021 PREFACE

Program committee: Adam Tauman Kalai (Microsoft Research), Alessandro Rudi (INRIA), Alexander Rakhlin (MIT), Ambuj Tewari (University of Michigan), Andras György (DeepMind), Arnak Dalalyan (ENSAE), Aurelien Garivier (ENS Lyon), Avrim Blum (TTI Chicago), Chi Jin (Princeton University), Claire Vernade (DeepMind), Daniel Hsu (Columbia University), Dylan Foster (MIT), Emilie Kaufmann (CNRS), Eric Price (UT Austin), Gabor Lugosi (ICREA and Pompeu Fabra University), Gautam Kamath (University of Waterloo), Haipeng Luo (USC), Hanie Sedghi (Google Research), Ilias Diakonikolas (UW Madison), Jayadev Acharya (Cornell University), Karthik Sridharan (Cornell University), Kfir Levy (ETH), Kunal Talwar (Apple), Matus Telgarsky (University of Illinois), Maxim Raginsky (University of Illinois), Naman Agarwal (Google Research), Nicolo Cesa-Bianchi (University of Milan), Nika Haghtalab (UC Berkeley), Nikita Zhivotovskiy (Google Research), Ohad Shamir (Weizman Institute), Phil Long (Google Research), Pranjal Awasthi (Google Research), Prateek Jain (Microsoft Research), Quentin Berthet (Google Research), Raef Bassily (Ohio State University), Roi Livni (Tel Aviv University), Ruth Urner (York University), Samory Kpotufe (Columbia University), Sanjoy Dasgupta (UC San Diego), Santosh Vempala (Georgia Tech), Satyen Kale (Google Research), Shay Moran (Technion and Google Research), Sivan Sabato (Ben-Gurion University), Surbhi Goel (Microsoft Research), Steven Wu (Carnegie Mellon University), Tomer Koren (Tel Aviv University and Google Research), Varun Kanade (University of Oxford), Vianney Perchet (ENS Paris-Saclay & Criteo AI Lab), Yishay Mansour (Tel Aviv University and Google Research).