

## Conference on Learning Theory 2019: Preface

**Alina Beygelzimer**

*Yahoo Research*

BEYGEL@VERIZONMEDIA.COM

**Daniel Hsu**

*Columbia University*

DJHSU@CS.COLUMBIA.EDU

**Editors:** Alina Beygelzimer and Daniel Hsu

These proceedings contain the 118 papers accepted to and presented at the 32nd Conference on Learning Theory (COLT), held in Phoenix, Arizona, on June 25-28, 2019, as part of the ACM Federated Computing Research Conference. These papers were selected by the program committee, with the additional help of external expert reviewers, from 393 submissions. Every paper was presented in a 10 minute talk and in a poster session. These proceedings also contain six open problems. They were selected by the Open Problems Chair, Jacob Abernethy, and external reviewers from among eight submissions.

The paper “Statistical Learning with a Nuisance Component” by Dylan Foster and Vasilis Syrgkanis received the best paper award. The papers “The Complexity of Making the Gradient Small in Stochastic Convex Optimization” by Dylan Foster, Ayush Sekhari, Ohad Shamir, Nathan Srebro, Karthik Sridharan, and Blake Woodworth; and “VC Classes are Adversarially Robustly Learnable, but Only Improperly” by Omar Montasser, Steve Hanneke, Nathan Srebro shared the best student paper awards.

In addition to the papers and open problems published in these proceedings, the conference program included two invited talks: one by Emma Brunskill and another by Moritz Hardt.

The Local Arrangement Chairs were Peter Grünwald and Yishay Mansour. The Sponsorship Chairs were Satyen Kale and Robert Schapire. The Women in Machine Learning Theory lunch, sponsored by Women in Machine Learning, was organized by Ruth Uner. Our Webmaster was Philippe Rigollet. We would like to express our gratitude to the entire program committee, to the external reviewers, and to the other organizers and chairs for their invaluable contributions to the success of the conference.

Finally, we would like to thank our generous sponsors. The platinum sponsors were Amazon Web Services, American Express, Google, Jump Trading, and Western Digital. The gold sponsors were Baidu, Microsoft, and Oracle. The silver sponsors were DE Shaw & Co, Mobileye, Two Sigma, and Yahoo Research. The student paper awards were supported by the Machine Learning Journal and the Mark Fulk Foundation.

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