

Algorithmic Learning Theory 2018: Preface

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These proceedings contain the 33 papers accepted for presentation at the 29th International Conference on Algorithmic Learning Theory (ALT 2018), held at Lanzarote, Spain, during the period of April 7-9, 2018. The 33 papers accepted were selected by the program committee out of 95 papers submissions. Each accepted paper was allotted 20 minutes for presentation.

In addition to these presentations, the conference program included two invited talks, one by Eva Tardos titled *Learning in Games*, and one by Claudio Gentile titled *Online clustering of bandit algorithms*. The conference program also included two tutorial talks, one by Renato Paes Leme and Andres Muñoz Medina titled *Learning to Optimize Revenue in Auctions* and the other by Lev Reyzin titled *A Tutorial on Statistical Queries*.

Antonio Blanca, Zongchen Chen, Daniel Stefankovic and Eric Vigoda received the Best Paper Award this year for their paper titled *Structure Learning of H-colorings*. Michael Cohen and Yuanzhi Li received this year's Best Student Paper Award for their paper *Sparsity, variance and curvature in multi-armed bandits* co-authored by Sébastien Bubeck.

This year's edition of the conference saw a significant increase in the number of submissions with a very high quality. This, together with a strong program including our invited talks and selected tutorials make ALT a top conference in learning theory dedicated to all theoretical and algorithmic aspects of machine learning.

We warmly thank Vicenç Gómez and Gergely Neu who served as the Local Arrangements Chairs for ALT this year, Firdaus Janoos who was our Publication Chair, and Tim Roughgarden our Tutorial Chair. We are also particularly grateful to Sandra Zilles, the Chair of the ALT steering committee, for her guidance and help throughout, as well as to the rest of the steering committee for their support.

We wish to express our deepest gratitude to all of the program committee for taking on the load of carefully reviewing all submissions and discussing all contributions. We are also thankful to all external reviewers for their attentive help in the reviewing process.

Finally, we would like to thank our generous sponsors: Adobe, Amazon, D. E. Shaw & Co., Google, Mobileye, TwoSigma and Universitat Pompeu Fabra.

Mehryar Mohri and Karthik Sridharan
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