Rares–Darius Buhai

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Current Position

2025–present Postdoc, School of Computer and Communication Sciences, EPFL.
Hosted by: Prof. Ola Svensson (ola.svensson@epfl.ch).

Education

2020–2025 **Dr.Sc.**, Department of Computer Science, ETH Zurich.
Advisor: Prof. David Steurer (dsteurer@ethz.ch).

2019–2020 **M.Eng.**, Department of Electric Engineering and Computer Science, MIT.
Advisor: Prof. Guy Bresler (guy@mit.edu).

2015–2019 **B.Sc.**, Department of Electric Engineering and Computer Science, MIT.

Industry Experience

2017 Software Engineering Intern, Google.

2016 Software Engineering Intern, Facebook.

Awards

Gold medal at the International Olympiad in Informatics (IOI), years 2012, 2013, 2014, and 2015.

Publications

- **Finding Colorings in One-Sided Expanders**.
  Rares–Darius Buhai, Yiding Hua, David Steurer, Andor Vári–Kakas. FOCS 2025.
- **The Quasi-Polynomial Low-Degree Conjecture Is False**.
  Rares–Darius Buhai, Jun–Ting Hsieh, Aayush Jain, Pravesh K. Kothari. FOCS 2025.
- **Robust Mixture Learning when Outliers Overwhelm Small Groups**.
  Daniil Dmitriev, Rares–Darius Buhai, Stefan Tiegel, Alexander Wolters, Gleb Novikov, Amartya Sanyal, David Steurer, Fanny Yang. NeurIPS 2024.
- **Semirandom Planted Clique and the Restricted Isometry Property**.
  Jarosław Błasiok, Rares–Darius Buhai, Pravesh K. Kothari, David Steurer. FOCS 2024.
- **Computational–Statistical Gaps for Improper Learning in Sparse Linear Regression**.
  Rares–Darius Buhai, Jingqiu Ding, Stefan Tiegel. COLT 2024.
- **Beyond Parallel Pancakes: Quasi–Polynomial Time Guarantees for Non–Spherical Gaussian Mixtures**.
  Rares–Darius Buhai, David Steurer. COLT 2023.
- **Algorithms Approaching the Threshold for Semi–Random Planted Clique**.
  Rares–Darius Buhai, Pravesh K. Kothari, David Steurer. STOC 2023.

- **Learning Restricted Boltzmann Machines with Sparse Latent Variables**.
  Guy Bresler, Rares–Darius Buhai. NeurIPS 2020.

- **Empirical Study of the Benefits of Overparameterization in Learning Latent Variable Models**.
  Rares–Darius Buhai, Yoni Halpern, Yoon Kim, Andrej Risteski, David Steurer. ICML 2020.

- **Human-aware robotic assistant for collaborative assembly: Integrating human motion prediction with planning in time**.
  Vaibhav V Unhelkar, Przemyslaw A Lasota, Quirin Tyroller, Rares–Darius Buhai, Laurie Marceau, Barbara Deml, Julie A Shah. IEEE Robotics and Automation Letters 2018.

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