

# Lorenzo Beretta

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DBLP: [dblp.org/pid/34/8239-1.html](https://dblp.org/pid/34/8239-1.html)

## ACADEMIC EXPERIENCE

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PostDoc at University of California, Santa Cruz 2024 – 2026

*Host: Vaggos Chatziafratis.*

Ph.D. Basic Algorithm Research Copenhagen (BARC) 2020 – 2024

*Supervisors: Mikkel Thorup & Mikkel Abrahamsen.*

Scuola Normale Superiore (Honor Class) 2015 – 2020

*I took 115 ECTS (~ 2 years workload) of additional math and physics courses.*

M.S. Computer Science, University of Pisa 2018 – 2020

*Grade 110/110 cum Laude.*

B.S. Mathematics, University of Pisa 2015 – 2018

*Grade 110/110 cum Laude.*

## RESEARCH PAPERS

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In theoretical computer science, authors are sorted in alphabetical order.

1. *Sketched Lanczos uncertainty score: a low-memory summary of the Fisher information*  
Marco Miani, Lorenzo Beretta, Søren Hauberg  
**NeurIPS 2024.**
2. *Online sorting and online TSP: randomized, stochastic, and high-dimensional*  
Mikkel Abrahamsen, Ioana Bercea, Lorenzo Beretta, Jonas Klausen and László Kozma  
**ESA 2024.**
3. *Approximate Earth Mover's Distance in Truly-Subquadratic Time*  
Lorenzo Beretta, Aviad Rubinfeld  
**STOC 2024.**
4. *Multi-Swap  $k$ -Means++*  
Lorenzo Beretta, Vincent Cohen-Addad, Silvio Lattanzi, Nikos Parotsidis  
**NeurIPS 2023.**
5. *Locally Uniform Hashing*  
Ioana Bercea, Lorenzo Beretta, Jonas Klausen, Jakob Bæk Tejs Houen, Mikkel Thorup  
**FOCS 2023.**
6. *Online Sorting and Translational Packing of Convex Polygons*  
Anders Aamand, Mikkel Abrahamsen, Lorenzo Beretta, Linda Kleist  
**SODA 2023.**

7. *Better Sum Estimation via Weighted Sampling*  
Lorenzo Beretta, Jakub Tetek  
**SODA 2022. Best Student Paper Award.**  
**Invited to HALG 2022 and TALG special issue.**
8. *Online Packing to Minimize Area or Perimeter*  
Mikkel Abrahamsen, Lorenzo Beretta  
**SoCG 2021.**
9. *An Optimal Algorithm to Find Champions of Tournament Graphs*  
Lorenzo Beretta, Franco Maria Nardini, Roberto Trani, Rossano Venturini  
**TKDE** (IEEE Transactions on Knowledge and Data Engineering)  
(A preliminary version appeared at **SPIRE 2019**).

## FELLOWSHIPS AND SCHOLARSHIPS

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**EU TALENT Doctoral Fellowship Grant** 2020 – 2023  
*Horizon 2020 program, Marie Skłodowska-Curie grant agreement No 801199.*

**Undergraduate Full Scholarship** 2015 – 2020  
*Admitted to honor classes in math (Scuola Normale Superiore) and engineering (Scuola Superiore Sant'Anna). Scuola Normale Superiore provided me with a full scholarship which covered boarding and tuition throughout my bachelor and master in Pisa.*

## PROFESSIONAL SERVICE

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**Conference Sub-Review**  
*ESA (2022, 2023, 2024), ITCS (2024), SOSA (2024), FOCS (2023), SWAT(2024)*

## INTERNSHIPS AND TEACHING

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**Student Researcher, Google Research** 2022  
*As a research intern I worked on clustering problems both in theory and practice.*

**Teaching Assistant, Copenhagen University** 2021 - 2022  
*I served twice as a T.A. in the “Randomized Algorithm” course at Copenhagen University.*

**Quantitative Investment Internship, Société Générale, London** 2019  
*Ten weeks internship spent working on the “optimal intraday execution” problem.*

**High School Teacher** 2018  
*Teaching additional math lectures at a local high school in Pisa.*

## MISCELLANEA

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**ACM ICPC Programming Contest: SWERC** 2018  
*Representing Scuola Normale Superiore, Bronze Medal, 10th place.*

**Scout Leader Volunteer** 2017 – 2020

*Leading a troop of about 30 teenagers.*

**National Mathematics and Physics Olympiads**

2015

*Silver medal in Mathematics and Bronze medal in Physics.*