

# Lorenzo Beretta

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## EDUCATION

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**Ph.D. Basic Algorithm Research Copenhagen (BARC)** 2020 – now  
*Supervisors: Mikkel Thorup & Mikkel Abrahamsen.*

**Scuola Normale Superiore (Honor Class)** 2015 – 2020  
*I took 115 ECTS ( $\sim 2$  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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1. “Min-Weight Bipartite Matching and Earth-Mover Distance in Sublinear Time”; with Aviad Rubinfeld. *To be submitted to STOC 2024.*
2. “Multi-Swap  $k$ -Means++”; with Vincent Cohen-Addad, Silvio Lattanzi, Nikos Parotsidis. **NeurIPS 2023.**
3. “Locally Uniform Hashing”; with Ioana Bercea, Jonas Klausen, Jakob Bæk Tejs Houen and Mikkel Thorup. **FOCS 2023.**
4. “Online Sorting and Translational Packing of Convex Polygons”; with Anders Aamand, Mikkel Abrahamsen and Linda Kleist. **SODA 2023.**
5. “Better Sum Estimation via Weighted Sampling”; with Jakub Tetek. **SODA 2022. Best Student Paper Award.**  
**Invited to HALG 2022 and TALG special issue.**
6. “Online Packing to Minimize Area or Perimeter”; with Mikkel Abrahamsen. **SoCG 2021.**
7. “An Optimal Algorithm to Find Champions of Tournament Graphs”; with Franco Maria Nardini, Roberto Trani and Rossano Venturini.  
**IEEE Transactions on Knowledge and Data Engineering (TKDE)**  
(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 tuition and boarding throughout my bachelor and master in Pisa.*

## **SERVICE**

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### **Conference Sub-Review**

*ESA, ITCS, SOSA, FOCS*

## **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.*