Jakob Nogler

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Education

Fall 2023	**Princeton University**, Exchange Semester in Computer Science	
2022 / current	**ETH Zurich**, Computer Science MSc - *Current GPA: 5.82/6.0*	
Fall 2021	**Massachusetts Institute of Technology**, Exchange Semester in Computer Science	
2019 / 2022	**ETH Zurich**, Computer Science BSc - *GPA: 5.93/6.0 - Graduated with merit*	

Research Positions

- **Visiting Scholar, University of California San Diego** — 2025-01 / 2025-06
  - Research on fine-grained complexity related questions with Prof. Saha.

- **Summer Intern, Max-Planck Institute for Informatics** — 2023-06 / 2023-08
  - Conducted research on approximate pattern matching with Prof. Kociumaka & Prof. Wellnitz and on fine-grained complexity related questions with Prof. Polak.

- **Summer Intern, Institute of Science and Technology Austria** — 2022-06 / 2022-09
  - Research on promised colorings of directed graphs with Prof. Opršal in Prof. Wagner's group.

Academic Service and Teaching

- **Teaching Assistant, ETH Zurich**
  - Held weekly tutorial sessions and office hours, designed and corrected graded assignments.
  - Held positions for undergraduate course *Algorithms and Probability* (Spring 2022 & 2023) and graduate courses *Computer Intelligence Lab* (Spring 2024) and *Advanced Algorithms* (Fall 2024).

- **Conference Reviewer for FSTTCS, ICALP (x2), SPIRE and QIP**

Software Development

- **Software Engineering Summer Intern, Lifeware AG, Zurich** — 2024-06 / 2024-09
  - Unified the existing transaction system across fifteen different banks to make it suitable for verification by insurance clients and for automated controls. Collaborated directly with insurance clients to integrate two additional banks.

Publications

- **Faster Weighted and Unweighted Tree Edit Distance and APSP Equivalence**
  J. Nogler, A. Polak, B. Saha, V. Vassilevska Williams, C. Ye, and Y. Xu | *Preprint on arXiv*

- **Near-Optimal-Time Quantum Algorithms for Approximate Pattern Matching**
  T. Kociumaka, J. Nogler, and P. Wellnitz | *Accepted and to be presented at **SODA 2025***

- **The Geometry of Cyclical Social Trends**
  B. Chazelle, K. Karntikoon, and J. Nogler | *Accepted and to be presented at **CDC 2024***

- **On the Communication Complexity of Approximate Pattern Matching**
  T. Kociumaka, J. Nogler, and P. Wellnitz | *Accepted and presented at **STOC 2024** | Presented at **HALG 2024***

- **Quantum Speed-ups for String Synchronizing Sets, LCS, and k-mismatch Matching**
  C. Jin and J. Nogler | *Accepted and presented at **SODA 2023** | Journal version accepted at **TALG** | Student Paper*

Competitions and Awards

- **International Collegiate Programming Competitions (ICPC):** Selected to represent Princeton University at *ICPC Greater NY Regional Contest 2023* and ETH Zurich at *ICPC Southwestern European Regional Contest 2023*.

- **International and National Computer Science Olympiads:** Represented Italy at the *International Olympiad in Informatics 2019* and the *Central European Olympiad in Informatics 2019* (bronze medal), following the *Italian Olympiad in Informatics 2019* (silver medal).

- **Biology Competitions at High-School Level:** Represented Italy at the *European Union Science Olympiad 2017* (silver medal), following the national selection contest (gold medal).