Antonis Skarlatos

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linkedin, github, bitbucket

Education

2021 - Present **PhD in Theoretical Computer Science**.
- University of Salzburg
- Supervisor: Prof. Sebastian Forster

2018 - 2021 (2.5 years) **Graduate Student in Theoretical Computer Science**, *CGPA: 9.63/10*.
- Department of Informatics and Telecommunications, Department of Mathematics, School of Electrical and Computer Engineering
- National and Kapodistrian University of Athens, National Technical University of Athens
- Thesis: *Approximation Algorithms for the Precedence Constrained Minimum Knapsack and Capacitated Covering Integer Programs*
- Supervisor: Prof. Stavros Kolliopoulos

2014 - 2018 **Undergraduate Student in Computer Science**, *CGPA: 8.43/10*.
- Department of Informatics and Telecommunications
- National and Kapodistrian University of Athens
- Thesis: *Algorithms and Parameters Related to Treewidth*
- Supervisor: Prof. Stavros Kolliopoulos

Summer School **Computer Science Student at the Cornell, Maryland, Max Planck Predoctoral Research School 2020**.
- Attended lectures and interacted with internationally leading scientists.
- Exposed to state-of-the-art research and discussed how to pursue an academic or industrial research career in computer science.

Work Experience

Internship **Student Researcher at Max Planck Institute for Informatics**, *November 2020 - April 2021*.
- We developed an exact polynomial-time algorithm for computing the minimum-perimeter intersecting polygon of possibly intersecting segments in the plane.
- Supervisors: Prof. Antonios Antoniadis, Prof. Sándor Kisfaludi-Bak

Freelancing **Freelance Projects**.
- Part-time freelance projects in C, C++, Java, Python, PHP, JavaScript.

Open source chat **Ting**.
- Ting (https://github.com/dionyziz/ting) is primarily created for educational purposes. It uses DJANGO for the back-end and REACT.JS for the front-end.

University Projects **Machine Learning and Big Data**.
- Used the scikit-learn library in Python for classifying articles.
- Used the Locality-Sensitive Hashing (LSH) technique for finding the closest curves based on a distance.
- Used the LSH technique with minhashing for identifying families based on their internet connection.

Publications

Authors are listed in alphabetic order.

SODA 2025 **Dynamic Consistent k-Center Clustering with Optimal Recourse**.
- Authors: Sebastian Forster, Antonis Skarlatos
- Symposium on Discrete Algorithms

SODA 2024 **Dynamic Algorithms for k-Center on Graphs**.
- Authors: Emilio Cruciani, Sebastian Forster, Gramoz Goranci, Yasamin Nazari, Antonis Skarlatos
- Symposium on Discrete Algorithms

GandALF 2023 **Fast Algorithms for Energy Games in Special Cases**.
- Authors: Sebastian Forster, Antonis Skarlatos, Tijn de Vos,
- 14th International Symposium on Games, Automata, Logics, and Formal Verification

ESA 2023 **Bootstrapping Dynamic Distance Oracles**.
- Authors: Sebastian Forster, Gramoz Goranci, Yasamin Nazari, Antonis Skarlatos
- 31st European Symposium on Algorithms

ESA 2022 **Computing Smallest Convex Intersecting Polygons**.
- Authors: Antonios Antoniadis, Mark de Berg, Sándor Kisfaludi-Bak, Antonis Skarlatos
- 30th European Symposium on Algorithms

WAOA 2021 **Precedence-Constrained Covering Problems with Multiplicity Constraints**.
- Authors: Stavros G. Kolliopoulos, Antonis Skarlatos
- 19th Workshop on Approximation and Online Algorithms, 2021
- Journal of Combinatorial Optimization, Volume 45

Technical Skills

Prog. Languages (Preferred) C, C++, Python

Prog. Languages (Also used) Java, C#, PHP, Prolog, Haskell, JavaScript, SQL

Skills Algorithms, Data Structures, Graph Theory

Extracurricular Activities

- Organized a theory seminar and reading group at the University of Salzburg, where I also presented multiple times.
- Introduced sorting algorithms to high school students from Austria during a course held at the University of Salzburg.

- Introduced basic algorithmic techniques to high school students from Greece as part of the Greek Summer School, which prepared them for competitive programming.
- Presented principles of Theory of Computation and Turing machines to high school students.

Hobbies and Interests

Computer Science	Solving algorithmic problems and participating in competitions online (Competitive Programming). Achievements include qualifying for Round 2 of Facebook Cup in 2016, 2017, 2018.
Others	Music, guitar, football (soccer), travelling.