

Alexandros Themelis

 themelisalex@gmail.com

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 <https://alexthemelis.github.io/>

Education

- 2025 – ...  **M.Sc. Pure Mathematics**, Université Grenoble Alpes
Algebraic, Differential and Probabilistic Complex Geometry, Lie Groups and Discrete Groups
- 2024 – 2025  **M.Sc. Pure Mathematics**, University of Athens. (Incomplete)
- 2023 – 2024  **M.Sc. Theoretical Computer Science, Parisian Master of Research in Computer Science (MPRI)**, Université Paris Cité.
Specialization in Cryptography (post-quantum cryptography, provable security)
Thesis title: *Threshold signature schemes based on lattice assumptions*, supervised by Geofroy Couteau and Sihang Pu.
- 2019 – 2023  **B.Sc. Computer Science**, University of Athens
Erasmus CIVIS exchange student, Universidad Autónoma de Madrid
Specialization: Foundations of Computer Science
Thesis title: *Hash-based signatures via zk-SNARKs*, supervised by Pyrros Chaidos.
- 2019  **Graduated from Music High School of Pallini**

Experience

- 2024  **Research Internship**, IRIF (Institut de Recherche en Informatique Fondamentale), Paris
Threshold signature schemes based on lattice assumptions, supervised by Geoffroy Couteau and Sihang Pu.
- 2023  **Summer Internship**, Eulambia Advanced Technologies Ltd, Athens
Presentations on post-quantum primitives (Lattice-based cryptography), Experimentation with existing implementations on post-quantum KEMs, Hybrid (QKD/PQC) construction.

Participations

Talks

- Nov. 2025  Graduate Student Seminar on Gauge Theory: An Overview of De Rham Cohomology and Hodge Theory
- 2023  Various talks in the Quantum Computing Student Seminar, coordinated by Aikaterini Mandilara

Seminars/Workshops

- Dec. 2025  Masterclass, Introduction to shifted symplectic structures, by Tristan Bozec, Angers, France
- (Ongoing)  Weekly Graduate Student Seminar on Gauge Theory, organised by Iakovos Androulidakis, Manousos Maridakis, Fani Petalidou and Panagiotis Batakidis
- 2025  8th MATH@NTUA Summer School "Algebra: classic topics and current trends"
-  10th Greek Algebra and Number Theory Conference
- 2024  Warsaw IACR Summer School on Post-Quantum Cryptography
-  Diophantine Equations Seminar: Elliptic Curves, Modular Forms and Modular Method, 2-month weekly seminar, AUTH
-  Sage Days 123 - I-sage-ny Days, January 2024, Leuven

Participations (continued)

- 2023
 - 18th Athens Colloquium on Algorithms and Complexity
 - Athecrypt 2023
- 2022-2023
 - 57th/58th Summer School at NCSR DEMOKRITOS
- 2022
 - 20th Annual Athens Programming Language Seminar
 - Summer School in Post-Quantum Cryptography 2022, Budapest
 - 4th MATH@NTUA summer school on Number Theory and Cryptography

Contests

- 2023
 - Participated in 1st BEST Patras Hackathon 2023, Cloud architecture design on Amazon Web Services
- 2020
 - Participated in the IMC (International Mathematics Competition) - Online
- 2019-2023
 - Participated in preparation lessons for the SEEMOUS and IMC contests

Skills

- Languages
 - Greek: Native, English: Excellent, French: Basic
- Math Software
 - SageMath, MatLab
- Coding
 - C, C++, Python, Java
- Misc. Coding
 - OCaml-based provers (Why3, CryptoVerif), Prolog, Assembly(MIPS), SQL
- Misc.
 - Specialization trainings from the NKUA, Accessibility Unit: Support for students on the Autism Spectrum, Guiding techniques for blind students, Interaction with assistance dogs, Guiding techniques for students who use wheelchairs, Support for students with hearing loss, Support for students with print-disabilities

Miscellaneous

Extracurricular Activities

- 2023-2024
 - **Member** of the Université Paris Cité Endurance Running Team
- 2021
 - **3rd place** in the Track and Field Greek National Championship U23 - 4x400
- 2017-2018
 - **Member** of the High School debate team

Volunteering

- 2023
 - **Technical Support** in the seminar "Cinema and Disabilities", Cinema Sector, University of Athens Cultural Club.
- 2022
 - **Lab assistant** for the undergraduate class "Introduction to Programming".
- 2021 – 2025
 - **Volunteer** for Voluntary Service Accessibility Unit NKUA:
Mentored students on the autism spectrum in the courses Digital Signal Processing, Operating Systems, and Cryptography.
Mentored a student with ADHD in the courses Object-oriented programming and Systems programming.
Dictation transcription of lecture notes in the courses Algebraic Geometry and Riemannian Geometry for a student with visual impairment.