CURRICULUM VITAE

Lampros Gavalakis

Professional Appointment

Université Gustave Eiffel, MathInGreaterParis Postdoctoral Fellow **Nov 2022 —**
LAMA (Laboratoire d'analyse et de mathématiques appliquées)
Cofunded by Marie Sklodowska-Curie Actions

Education

University of Cambridge, Ph.D. in Engineering **Oct 2018 — Sept 2022**
Signal Processing and Communications Laboratory

Title of Thesis: "Entropy in Data Compression, Additive Combinatorics and Probability."

Athens University of Economics and Business, Undergraduate degree in Computer Science **Oct 2014 — June 2018**
GPA: 9.13/10, top 1% of admission year

Specialisation: "Theoretical Computer Science" & "Applied Mathematics and Scientific Computing"

Awards & Scholarships

Cambridge Trust: **Cambridge European Scholarship** 01/10/2018 — 31/03/2022

EPSRC: **DTP Fees Award** 01/10/2018 — 30/09/2021

Athens University of Economics and Business: **Michalis Mitilinaios Award**
For particularly high performance in the courses: "Automata and Complexity", "Logic" and "Computability and Complexity".

Athens University of Economics and Business: **Mathematics Award**
For excellent performance in the mathematical courses of the first year.

Teaching Experience

Examples Class Instructor **2021 — 2022**
For the master's course "Information Theory" of Part III of the Cambridge Mathematical Tripos.

Supervisor **2018 — 2021**
For the third-year course "Information Theory and Coding" of the Cambridge Engineering Tripos.

Demonstrator **2018 — 2021**
For the third-year project "Data Analysis" of the Cambridge Engineering Tripos.

Publications

Journal papers

- L. Gavalakis and I. Kontoyiannis, "An information-theoretic proof of a finite de Finetti theorem," *Electronic Communications in Probability*, vol. 26, pp. 1 – 5, 2021. [Online]. Available: `https://doi.org/10.1214/21-ECP428`.
- L. Gavalakis and I. Kontoyiannis, "Fundamental limits of lossless data compression with side information," *IEEE Transactions on Information Theory*, vol. 67, no. 5, pp. 2680–2692, 2021.
- L. Gavalakis and I. Kontoyiannis, "Sharp second-order pointwise asymptotics for lossless compression with side information," *Entropy*, vol. 22, no. 6, p. 705, 2020.

Conference papers

- L. Gavalakis and I. Kontoyiannis, "The Entropic Central Limit Theorem for Discrete Random Variables," in *2022 IEEE International Symposium on Information Theory (ISIT)*. IEEE, 2022, pp. 708–713.
- L. Gavalakis and I. Kontoyiannis, "Lossless data compression with side information: Nonasymptotics and dispersion," in *2020 IEEE International Symposium on Information Theory (ISIT)*. IEEE, 2020, pp. 2179–2183.

Preprints

- L. Gavalakis, "Approximate Discrete Entropy Monotonicity for Log-Concave Sums," *arXiv preprint arXiv:2210.06624, submitted for publication*, 2022.
- L. Gavalakis and I. Kontoyiannis, "Information in probability: Another information-theoretic proof of a finite de Finetti theorem," *arXiv preprint arXiv:2204.05033, submitted for publication*, 2022.
- L. Gavalakis and I. Kontoyiannis, "Entropy and the discrete central limit theorem," *arXiv preprint arXiv:2106.00514, submitted for publication*, 2021.
- L. Gavalakis, I. Kontoyiannis and M.Madiman, "Gaussian inputs come within a bit of capacity for additive noise channels," *In preparation*, 2021.

Reviewing

- IEEE Transactions on Information Theory
- International Symposium on Information Theory

Computing Skills

MATLAB, Java, C++, C, Python, R, SQL

Languages

Greek (native), English, German (Abitur)

Personal Information

Date of Birth: 31 March 1995

Place of Birth: Athens, Greece

Citizenship: Greek

Contact Information

Email: labros.gavalakis@gmail.com

Phone: +30 6949472682

Web: https://www-sigproc.eng.cam.ac.uk/Main/LG560