Alexandros Tzikas

Alexandros E. Tzikas ✉ alextzik@stanford.edu 💻 GitHub: alextzik

EDUCATION

Stanford University Stanford, USA

Department of Aeronautics and Astronautics

Doctor of Philosophy (expected graduation in 2026)

- Member of the Stanford Intelligent Systems Laboratory (SISL), supervised by Prof. M. Kochenderfer
- GPA 4.114/4.0
- Optimization, sequential decision making, and statistical methods

Stanford University Stanford, USA

School of Engineering

Master of Science (conferred in June 2025)

- Coursework on: (convex) optimization, planning and control, probability, and statistics
- GPA 4.162/4.0
- EE: *263*, *364A/B* AA: *203*, *222*, *228*, *273*, *277* STATS: *200*, *218*, *219* CME: *298*, *334*

Aristotle University of Thessaloniki Thessaloniki, Greece

Department of Electrical and Computer Engineering

Five-Year Undergraduate and First-Level Postgraduate Studies including Diploma Thesis

- *Summa Cum Laude* (GPA 9.50/10)
- Telecommunications and signal processing
- Enrolled at the age of sixteen in October 2015.
- Graduated 1st in order of merit in August 2020 (61 students) – 2nd in Class of 2015 (263 students).
- Diploma Thesis: *Color Shift Keying for Visible Light Communications*, supervised by Prof. G. Karagiannidis

SHAPE American High School, Supreme Headquarters Allied Powers Europe Mons, Belgium

Graduate of the Class of 2015

- *Summa Cum Laude* (GPA 4.071/4.0)
- Promoted early from 8th grade to 9th grade.
- Graduated two years before nominal graduation year, after Teachers' Council approval.

WORK EXPERIENCE

Quantitative Research Intern **Systematic Active Equity (SAE) Group | BlackRock**

Oct. 2024 – Now Palo Alto, CA

- Predicting alpha, quantifying uncertainty in alpha, and incorporating (multiple) alpha signals in portfolio construction.
- Developing convex optimization algorithms for multi-sleeve portfolios.
- Working under the guidance of Dr. Ronald Kahn, Dr. Yaki Tsaig, Prof. Stephen Boyd, Prof. Emmanuel Candès, and Prof. Trevor Hastie.

AI Labs Intern **AI Labs | BlackRock**

July – Sept. 2024 Palo Alto, CA

- Developed state estimation algorithms for the valuation of private companies, using convex optimization.
- Worked under the guidance of Prof. Stephen Boyd, Prof. Emmanuel Candès, and Prof. Trevor Hastie.

Engineering Intern **NATO Maritime Interdiction Operational Training Center**

Sept. – Oct. 2019 Crete, Greece

- Supported NATO Officers with IT tasks.

LANGUAGES

- Greek: Native
- English: Proficient
- Spanish: Fluent

PUBLICATIONS

A. E. Tzikas, A. Jamgochian, N. K. Ure, M. J. Kochenderfer, and S. P. Boyd, "Sliced Distribution Matching based on Cumulative Distribution Functions with Applications to Control." *arXiv preprint arXiv:2412.06220*, Sept. 2025. *(submitted to ACC 2026)*

A. E. Tzikas, N. K. Ure, M. Arief, M. J. Kochenderfer, and S. P. Boyd, "Resource Allocation under Stochastic Demands using Shrinking Horizon Optimization." *arXiv preprint arXiv:2509.25412*, Sept. 2025. *(submitted to ACC 2026)*

A. E. Tzikas, and M. J. Kochenderfer, "An Iterative Bayesian Approach for System Identification based on Linear Gaussian Models." *arXiv preprint arXiv:2501.16625*, Sept. 2025. *(submitted to ACC 2026)*

A. E. Tzikas, L. Fiechtner, A. Jamgochian, and M. J. Kochenderfer, "Distributionally Robust Control with Constraints on Linear Unidimensional Projections." *International Conference on Control, Decision and Information Technologies*, July 2025.

A. E. Tzikas, J. Park, M. J. Kochenderfer, and R. E. Allen, "Distributed Online Planning for Min-Max Problems in Networked Markov Games." *IEEE Robotics and Automation Letters*, vol. 9, no. 7, pp. 6656-6663, July 2024.

A. E. Tzikas, L. Romao, M. Pilanci, A. Abate, and M. J. Kochenderfer, "Distributed Markov Chain Monte Carlo Sampling based on the Alternating Direction Method of Multipliers." *arXiv preprint arXiv:2401.15838*, Jan. 2024.

A. E. Tzikas, D. Knowles, G. Gao, and M. J. Kochenderfer, "Multi-robot Navigation using Partially Observable Markov Decision Processes with Belief-based Rewards." *AIAA Journal of Aerospace Information Systems*, vol. 20, no. 8, pp. 437-446, Aug. 2023.

A. Shetty, A. Dai, **A. E. Tzikas**, and G. Gao, "Safeguarding Learning-Based Planners under Motion and Sensing Uncertainties using Reachability Analysis." *IEEE International Conference on Robotics and Automation*, pp. 7872-7878, May 2023.

A. E. Tzikas, P. D. Diamantoulakis, and G. K. Karagiannidis, "Information Theoretic Analysis and Performance Gains of 3-Color Shift Keying." *IEEE Communications Letters*, vol. 25, no. 5, pp. 1596-1599, May 2021.

A. E. Tzikas, A. Sahinis, S. E. Trevlakis, S. A. Tegos, P. D. Diamantoulakis, and G. K. Karagiannidis, "3-Color Shift Keying for Indoor Visible Light Communications." *IEEE Communications Letters*, vol. 23, no. 12, pp. 2271-2274, Dec. 2019.

ACADEMIC EXPERIENCE

Peer-Reviewer ***Mar. 2020 – Now***

- Journal of Artificial Intelligence Research, Learning for Dynamics and Control Conference (L4DC), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), AIAA Journal of Aerospace Information Systems, ACM Journal on Autonomous Transportation Systems, IEEE Communications Letters, Elsevier Optics Communications, and Elsevier Physical Communication, IEEE Access, American Control Conference

Seminar Assistant, Bing Overseas Studies Program, Stanford University ***June 2025***

- Organized and led a two-week program in Argentina for Stanford undergrads, exploring the country's culture and technology.

Teaching Assistant, Stanford University

- AA 228 (CS 238): Decision Making under Uncertainty (Prof. M. J. Kochenderfer) ***Sept. 2024 – Dec. 2024***
  A class of over 500 students. Held office hours and designed assignments.
- MATH 104: Applied Matrix Theory (Prof. E. J. Candès) ***Nov. 2025***
  Guest lecture on principal component analysis and positive semi-definite matrices.

Research and Teaching Assistant, WCIP Group at AUTh

- Performed research on information theory and modulation constellations. ***Mar. 2020 – June 2020***

EXTRACURRICULAR CERTIFICATES

Generative AI with Large Language Models, by deeplearning.ai and AWS on Coursera ***2025***

Deep Learning Specialization, by deeplearning.ai on Coursera ***2019***

Game Theory, by Stanford University and the University of British Columbia on Coursera ***2019***

Machine Learning, by Stanford University on Coursera ***2018***

HONORS AND AWARDS

Award by the Technical Chamber of Greece for Excellence in Undergraduate Studies *2024*

Onassis Foundation Scholarship Recipient *2021*

National Greek University Entrance Exams: Ranked 1st among the 198 competing students. *2015*

U.S. President's Award for Educational Excellence *2015*

AP Scholar Award *2015*

National Honors Society Historian and Member *2013 – 2015*

18th National Greek Student Competition of Astronomy and Space Science: 5th place among the 96 qualified participating students *2013*