

Alexandros Tzikas

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EDUCATION

Stanford University

Stanford, USA

Department of Aeronautics and Astronautics

Doctor of Philosophy

- 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

- Coursework on: (convex) optimization, planning and control, probability, and statistics
- EE: 263, 364A/B AA: 203, 222, 228, 273, 277
- GPA 4.162/4.0 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 – June 2026

Palo Alto, CA

- Predicting alpha, incorporating (multiple) alpha signals in portfolio construction, and finding underperforming assets.
- Estimating risk models, and 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, E. J. Candès, T. Hastie, S. P. Boyd, M. J. Kochenderfer, and R. Kahn, "Enhancing a Risk Model by Adding Transient Statistical Factors." *arXiv preprint arXiv:2605.12977*, May 2026.
- 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. (accepted at 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. (accepted at 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. (accepted at 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.
- AA 222 (CS 361/CME 222): Engineering Design Optimization (Prof. M. J. Kochenderfer) April 2026 – June 2026
A class of 200 students. Held office hours, advised final projects, and graded 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