

Curriculum Vitae

Eleftherios Petavratzis

PhD Candidate

Laboratory of Nonlinear – Circuits & Complexity (LANSCOM)

Department of Physics

Aristotle University of Thessaloniki, Greece

emails: elpetavr@physics.auth.gr, leftpet@hotmail.com

Webpages: <https://www.researchgate.net/profile/Eleftherios-Petavratzis>

Personal Data

Date of Birth

26-07-1988

Place of Birth

Thessaloniki, Greece

Nationality

Greek

Summary of Scientific – Academic Activities

- 5 International Journal publications and 7 IEEE Conference contributions.

Education

2014-2017 MSc. Theoretical Computer Science and Systems & Control Theory. Department of Mathematics, AUTH.
GPA: 9.1/10

2006-2010 Bachelor. Department of Mathematics, AUTH. GPA: 6.46/10.

Research Interests

- Control Systems – MPC Controllers Applications of chaos in:
- Chaotic Systems ➤ Random Number Generators
- Path Planning ➤ Area Exploration and Surveillance

Scholarships

2022 PhD studies, IKY Scholarship Programme.

Publications in Journals

- **Petavratzis, E. K.**, Volos, C. K., Pham, V. T., & Stouboulos, I. K. (2023). Design of a Multi-System Chaotic Path Planner for an Autonomous Mobile Robot. In *New Perspectives on Nonlinear Dynamics and Complexity* (pp. 105-125). Springer, Cham.
- **Petavratzis, E.**, Moysis, L., Volos, C., Stouboulos, I., Nistazakis, H., & Valavanis, K. (2021). A chaotic path planning generator enhanced by a memory technique. *Robotics and Autonomous Systems*, 143, 103826.
- **Petavratzis, E.**, Moysis, L., Volos, C., Nistazakis, H., & Stouboulos, I. (2020). Chaotic path planning for grid coverage using a modified logistic-may map. *Journal of Automation, Mobile Robotics and Intelligent Systems*, 3-9.
- **Petavratzis, E. K.**, Volos, C. K., Moysis, L., Stouboulos, I. N., Nistazakis, H. E., Tombras, G. S., & Valavanis, K. P. (2019). An inverse pheromone approach in a chaotic mobile robot's path planning based on a modified logistic map. *Technologies*, 7(4), 84.
- **Petavratzis, E. K.**, Volos, C. K., Nistazakis, H. E., Stouboulos, I. N., & Kyprianidis, I., (2018). An Improved Motion Controller of a Mobile Robot Based on a Hyperchaotic System. *International Journal of Mechanics*.

Publications in Conferences

- **Petavratzis, E.**, Volos, C., Moysis, L., Nistazakis, H., Giakoumis, A., & Stouboulos, I. (2022, June). Experimental Coverage Performance of a Chaotic Autonomous Mobile Robot. In *2022 11th International Conference on Modern Circuits and Systems Technologies (MOCASST)* (pp. 1-4). IEEE.
- **Petavratzis, E.**, Volos, C., Ouannas, A., Nistazakis, H., Valavanis, K., & Stouboulos, I. (2021, July). A 2D Discrete Chaotic Memristive Map and Its Application in Robot's Path Planning. In *2021 10th International Conference on Modern Circuits and Systems Technologies (MOCASST)* (pp. 1-4). IEEE.
- **Petavratzis, E.**, Moysis, L., Volos, C., Pham, V. T., & Stouboulos, I. (2020, November). Autonomous Mobile Robot with a Multi-System Chaotic Path Planner. 1st Online Conference on Nonlinear Dynamics and Complexity.
- **Petavratzis, E.**, Moysis, L., Volos, C., Gupta, M. K., Stouboulos, I., & Goudos, S. (2020, October). Chaotic motion control of a mobile robot using a memory technique. In *2020 24th International Conference on System Theory, Control and Computing (ICSTCC)* (pp. 506-511). IEEE.
- **Petavratzis, E.**, Moysis, L., Volos, C., Nistazakis, H., Munoz-Pacheco, J. M., & Stouboulos, I. (2020, September). Motion Control of a Mobile Robot Based on a Chaotic Iterative Map. In *2020 9th International Conference on Modern Circuits and Systems Technologies (MOCASST)* (pp. 1-4). IEEE.
- **Petavratzis, E. K.**, Volos, C. K., Stouboulos, I. N., Nistazakis, H. E., Kyritsi, K. G., & Valavanis, K. P. (2019, May). Coverage performance of a chaotic mobile robot using an inverse pheromone model. In *2019 8th International Conference on Modern Circuits and Systems Technologies (MOCASST)* (pp. 1-4). IEEE.

- **Petavratzis, E. K.,** Volos, C. K., Stouboulos, I. N., Kyprianidis, I. M., Nistazakis, H. E., & Tombras, G. S. (2018, May). Robot's path planning based on emulated finite resistive grids. In *2018 7th International Conference on Modern Circuits and Systems Technologies (MOCASST)* (pp. 1-4). IEEE.