

Ioannis Tsikelis

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🌐 [itsikelis.github.io](https://github.com/itsikelis)

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Education

- Oct 2024 – **PhD Candidate**, Université de Lorraine - Inria Nancy, Nancy, France
Sep 2027
- Oct 2018 – **Diploma (Integrated MSc)**, *Computer Engineering and Informatics Department*, University Of Patras, Greece, *GPA: 8.08/10*
Jul 2024
- Sep 2015 – **High School Graduate**, *1st Lyceum of Gerakas, Pallini*, Greece, *GPA: 19.2/20*
Jun 2018

Diploma Thesis

- Title *Motion Planning Of Robotic Systems Using Numerical Methods*
- Supervisors Professor Emmanouil Psarakis, Professor Konstantinos Chatzilygeroudis
- Description Attempted to solve the trajectory optimisation problem for multiple dynamical systems using an interior-point method optimiser. Wrote a C++ library for the generation of robot trajectories using cubic Hermite splines. Created an API for the generation of optimal trajectories for a Single Rigid Body Dynamics (SRBD) model through phase-based locomotion.

Professional Experience

- Oct 2024 – **Doctoral Researcher**, *LARSEN Team*, Inria Nancy, Nancy, France
Sep 2027 Research focused on combining model-based methods and machine learning for robotic motion planning and control. Supervised by Dr. Enrico Mingo Hoffman
- Jul 2023 – **Workshop Organiser**, *Open Robotics Summer School*, Open Robotics Group, University Of Patras, Patras, Greece
Jul 2023
 - Organised workshops and performed seminars on robotic system design and control for high-school and university students attending the summer school organised by the Mechanical and Aeronautic Engineering Department.
- Feb 2023 – **Team Coach**, *PLAISIOBOTS The Race 2.0*, Patras, Greece
Jun 2023
 - Instructed a team of 4 high school students to build an IoT system for the monitoring of crops in a field using wireless sensor nodes and displaying the data on a website.
 - Won 2nd Place between 58 teams from all over Greece.
- Jul 2022 – **Workshop Organiser**, *Open Robotics Summer School*, Open Robotics Group, University Of Patras, Patras, Greece
Jul 2022
 - Organised workshops and performed seminars on robotic system design and control for high-school students attending the summer school organised by the Mechanical and Aeronautic Engineering Department.

Other Work Experience

- Nov 2019 – **Teaching Assistant**, *Electronics Lab, Computer Engineering And Informatics Department*, University Of Patras, Patras, Greece
May 2023
 - Tutored and graded 2nd-year university students during their lab exercises (3-9 hours/week).
 - Inspected and repaired lab equipment when needed.

Activities

Mar 2019 – **University Of Patras Robotics Club**, *University Of Patras*, Patras, Greece

- Ongoing Multiple awards (1st-2nd-3rd place) in international competitions among hundreds of competing teams.
- Participated in the design and construction of multiple small mobile mechatronic systems, set to compete in different scenarios (line following, maze solving, sumo fighting) as well as systems (physical devices and software tools) to support further development of the team's projects.
 - Implemented principles learned from university courses (robotics, signal processing, control theory, algorithms, software engineering) in real systems with other students in a multidisciplinary team.
 - Led a team of students as Team Leader in the creation of a maze solving robot and trained new club members on existing knowledge and the team's current work.

Skills

Languages Greek (Native), English (C2), German (B1)

Programming Languages C++, C, Python, Arduino, MATLAB

Operating Systems Linux, Windows

Equipment Electronics Lab Equipment, Soldering Station, 3D Printer, Machining Tools

Awards

Jun 2023 **2nd Place (F.A. Project)**, *PLAISIOBOTS The Race 2.0*, Athens, Greece

Nov 2022 **1st Place Line Following Enhanced**, *Robotex International 2022*, Tallinn, Estonia

Jan 2020 **1st Place Line Following Enhanced3d**, *Robotic Arena 2020*, Wroclaw, Poland

Jan 2020 **3rd Place Line Following Drag**, *Robotic Arena 2020*, Wroclaw, Poland

Oct 2019 **2nd Place Line Following Enhanced**, *Robochallenge 2019*, Bucharest, Romania

Publications

Papers

Ioannis Tsikelis and Konstantinos Chatzilygeroudis. Gait optimization for legged systems through mixed distribution cross-entropy optimization. In *IEEE-RAS International Conference on Humanoid Robots (Humanoids)*, 2024.