Ioannis Tsikelis

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Education

Ecole Doctorale IAEM   **Université de Lorraine, France**
PhD Candidate   *Oct 2024 – Ongoing*

Computer Engineering and Informatics Department   **University Of Patras, Greece**
Diploma (Integrated MSc), GPA: 8.08/10   *Oct 2018 – Jul 2024*

1st Lyceum of Gerakas   **Pallini, Greece**
High School Graduate, GPA: 19.2/20   *Sep 2015 – Jun 2018*

Diploma Thesis

Title: *Motion Planning Of Robotic Systems Using Numerical Methods*

Supervisors: Prof. Dr. Emmanouil Psarakis, Prof. Dr. 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

LARSEN Team   **Centre Inria de l'Université de Lorraine, France**
Doctoral Researcher   *Oct 2024 – Ongoing*
Research focused on combining model-based methods and machine learning for robotic motion planning and control. Supervised by Dr. Enrico Mingo Hoffman

Open Robotics Summer School   **Open Robotics Group, University Of Patras**
Workshop Organiser, Patras, Greece   *Jul 2023 – 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.

PLAISIOBOTS The Race 2.0   **Patras, Greece**
Team Coach   *Feb 2023 – 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.

Open Robotics Summer School   **Open Robotics Group, University Of Patras**
Workshop Organiser, Patras, Greece   *Jul 2022 – 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

Electronics Lab, Computer Engineering And Informatics Department   **University Of Patras**
Teaching Assistant, Patras, Greece   *Nov 2019 – 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

University Of Patras **Patras, Greece**
University Of Patras Robotics Club *Mar 2019 – Ongoing*
Multiple awards (1st-2nd-3rd place) in international competitions among hundreds of competing teams. [1]

- 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

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

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

Robotic Arena 2020 **Wroclaw, Poland**
1st Place Line Following Enhanc3d *Jan 2020*

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

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

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.

Scientific Activities

Program Comittee Member

- **LION19**:The Learning and Intelligent Optimization Conference (2025)

Peer Reviewer

- Academic Journals
  - **RA-L**: IEEE Robotics and Automation Letters
- Scientific Conferences
  - **ICRA**: IEEE International Conference on Robotics and Automation
  - **LION**:The Learning and Intelligent Optimization Conference