

# Spyridon (Spyros) G. Tarantos

Curriculum vitae ai fini della pubblicazione  
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## RESEARCH INTERESTS

Dynamic modeling, motion planning with safety considerations, optimal control and nonlinear model predictive control, applied to robotic systems with particular focus on mobile manipulators.

## EDUCATION

- 11.2018 – present: **Sapienza University of Rome** *Rome, Italy*  
PhD Candidate  
PhD Program in Automatic Control, Bioengineering and Operations Research  
Curriculum: Automatic Control  
Supervisor: Prof. Giuseppe Oriolo
- 9.2012 – 11.2017: **National Technical University of Athens (NTUA)** *Athens, Greece*  
5-year Diploma in Mechanical Engineering  
**GPA:** 8.58/10.00 - **Ranking:** 17 out of 177 graduates in 2017  
**Thesis:** “Optimal Grasp Points Selection for Cooperative Underwater Vehicle-Manipulator Systems”, Supervisor: Prof. Kostas J. Kyriakopoulos **Grade:** 10.0/10.0
- 2009 – 2012: **1<sup>st</sup> Lyceum of Corfu** *Corfu, Greece*  
Apolytirion - **GPA:** 19.7/20.0 (Excellent)

## RESEARCH EXPERIENCE

- 09.2018 – present: **DIAG Robotics Lab, Sapienza University of Rome** (Giuseppe Oriolo Group) *Rome, Italy*  
PhD candidate
  - real-time motion generation for mobile manipulators under balance considerations
  - motion planning in the presence of moving obstacles
- 10.2016 – 08.2018: **Control Systems Lab, NTUA** (Kostas Kyriakopoulos Group) *Athens, Greece*  
Research assistant (11.2017 – 08.2018)  
Undergraduate research trainee (10.2016 – 11.2017)
  - cooperative grasping for underwater vehicle manipulator systems

## TEACHING EXPERIENCE

- Supervisor for the students project “Motion planning for mobile manipulators with sampling-based MPC” as part of the course “Autonomous and Mobile Robotics”, 2019

## POSTGRADUATE COURSES/TRAINING

- 07.2019: PhD course “Model Reduction by Moment Matching for Linear and Nonlinear Systems”, SIDRA 2019 PhD Summer School *Bertinoro, Italy*
- 07.2019: PhD course “Intelligent Collaborative Robotics”, SIDRA 2019 PhD Summer School *Bertinoro, Italy*
- 03.2019 – 04.2019: PhD course “Model Predictive Control”, IMT School for Advanced Studies Lucca *Lucca, Italy*

## ACADEMIC PROJECTS

- 2015: Design of Hydraulic Motor and Hydraulic Circuit for a Tunnel Boring Machine (TBM)  
Case Study for the Course of *Hydraulic and Pneumatic Systems*  
Responsible for the analysis and design of TBM’s hydraulic circuit.

2014: Analysis and Design of a Gearbox for Passenger Vehicle  
Case Study for the Course of *Machine Elements II*  
Responsible for the analysis and design of Gearbox's synchronizers.

## SOCIETY MEMBERSHIPS

- Technical Chamber of Greece

## HONORS AND AWARDS

2018: Winner of the "PhD Scholarship for Foreign Candidates", Sapienza University of Rome  
2010: Award for the success in the 71<sup>st</sup> Mathematical Competition "Thales" 2010, Hellenic Mathematical Society

## SKILLS

**Languages:** Greek (Native), English (Excellent knowledge), French (Good knowledge), Italian

**Programming:** MATLAB, C++, C, Python, Fortran, R

**Design and Simulation Software:** SolidWorks, Ansys, LS-DYNA, Coppeliasim, Simscape

**Other Software:** Microsoft Office, LATEX

## HOBBIES AND INTERESTS

tennis, swimming, skiing, piano, photography

## OTHER PARTICIPATIONS

08.2012: European Youth Parliament, Ionian International Forum **Corfu, Greece**  
Participated as a delegate

04.2011: Euroscola **Strasbourg, France**  
Member of the Greek team  
Member of the winning team of "Eurogame"