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Research Topic

Project title: Autonomous Marine Vehicle Control and Navigation Systems for the inspection of Offshore Energy devices
Related Work Packages: WP6

Short Biography

- Master of Science in Mechatronics Eng., Sharif University of Technology, January, 2012, Ranked 3rd
- Bachelor of Science in Mechanical Engineering, Solid Mechanics, Kashan University, July, 2009, Ranked First

Selected Publications

- A. Banazadeh and M. T. Ghorbani , "Frequency Domain Identification of the Nomoto Model to Facilitate Kalman Filter Estimation and PID Heading Control of a Patrol Vessel," *Ocean Engineering*, Vol. 72, pp 344-355, November 2013
- M. T. Ghorbani and M. Livani, "Pseudospectral optimal control of active magnetic bearing systems," *SCIENTIA IRANICA* Vol. 21, pp 1719-1725, 2014.

Current Research

Current research work deals with cooperative control and navigation of fleets of autonomous underwater and surface vehicles in order to inspect offshore wind and wave energy structures.

A strong focus will be maintained regarding the applications:

- Mid/close range to offshore devices: Accurate Navigation and path following of AUVs for survey operations.
- Close/very close range to offshore devices: Accurate Navigation and stabilization of AUVs/ROVs for intervention and inspection operations using acoustic systems (e.g. sonar).

Supervisor(s)

Prof. Antonio Pascoal