

Amirhossein Karimi

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Human and Robot Interaction Laboratory
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EDUCATION

Bachelor of Science, Mechanical Engineering
Isfahan University of Technology(IUT), Isfahan, Iran, 2008-2011
Concentration: Mechatronic Systems
Thesis title: Analysis and Optimal Path Planning for a Biped Robot via Zero Moment Point (ZMP)
GPA: 17.20/20.

Master of Science, Mechatronic Engineering
University of Tehran, Tehran, Iran, 2011-Present
Anticipated Graduation Date: 2013
Thesis title: Kinematic Optimization and Dimensional Synthesis of Parallel Robots
GPA: 19.20/20 (Highest GPA among all ME students).

COMPUTER SKILLS

Computer algebra system: Matlab, Maple
Engineering software: Adams, Catia, SolidWorks, Visual Nastran, Mastercam
Programming languages: C++, Java

RESEARCH INTERESTS

Kinematics & Dynamics of Serial and Parallel Robots, Convex Programming, Synthesis of Parallel Robots, Optimization of Robotic Mechanical Systems, Model Predictive Control, Optimal Control, Biped Robots, Screw Theory, Algebraic Geometry, Kinematic Sensitivity, Interval Analysis, Redundant Manipulators, Cable Robots.

PUBLICATION

1. A.Karimi, M.Danesh, A. Tabibian, and A. Nouri, "Dynamic Analysis and Path Planning for a Redundant Actuated Biped Robot", Proc. IEEE. Int. Conf. on Control, Instrumentation and Automation (ICCIA), 2011, pp. 1074-1079.
2. M. Mousavi, A. Karimi, and M. Tale Masoule, "On the Approximated and Maximal Singularity-free Workspace of 6-UPS Parallel Mechanisms Using Convex Optimization", Proc. IEEE. Int. Conf. on Robotics and Mechatronics (ICRoM), 2013.
3. A. Karimi, M. Tale Masoule, and P. Cardou, "Obtaining the Maximal Singularity-free Workspace of 6-UPS Parallel Mechanisms via Convex Optimization", to be submitted to Int. Workshop on Computational Kinematics, 2013.

HONORS & AWARDS

1. Ranked 1st place among Mechatronic Engineering students throughout MSc., University of Tehran, Iran
2. Awarded by the University President for academic achievements, University of Tehran, Iran, 2012
3. Registered patent, No.72148 issued by Iranian Organization of Patents Registration, 30.10.2011

4. 2nd place in Iran Open teen-size humanoid robot competition, Tehran, Iran, 2011

SELECTED COURSES Advanced Engineering Mathematics (20/20), Optimal Control (20/20), Advanced Robotics (19/20), Modern Control (19.5/20), Machine Vision (19/20), Mechatronic Systems(18.6/20), Signal Processing (20/20), Introduction to Mechatronic Systems (19.25/20).

MATHEMATICAL BACKGROUND Linear Algebra, Complex Analysis, Optimization and Convexity, Numerical Methods, Differential Equations, Probability, Graph Theory, Fourier Analysis, Algebraic Geometry, Perturbation Methods.

LANGUAGE English (TOEFL IBT score: 91)
Farsi: Native
Russian: fair