Ana C. Huamán Quispe

Humanoid Robotics Lab
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RESEARCH INTERESTS

My Research focuses on enabling humanoid robots to perform useful tasks. I am particularly interested in two interrelated areas: Developing algorithms for robot manipulation in everyday environments, and robot locomotion for humanoids.

EDUCATION

Georgia Institute of Technology - USA *August 2010 - present*
PhD in Robotics

Georgia Institute of Technology - USA *August 2012 - May 2013*
Master in Computer Science
(with specialization in Computational Perception and Robotics)

Universidad Nacional de Ingenieria - Perú *August 2003 - August 2008*
Bachelor of Science in Mechatronics Engineering

RESEARCH EXPERIENCE

Graduate Research Assistant Fall 2010 - Present
Humanoids Lab - Georgia Institute of Technology
Currently I am working in generating smooth locomotion gaits to be applied in a real humanoid robot (Hubo). Previous related work included planning algorithms for manipulation using redundant robotic arms.

Research Programmer Summer 2009
BioRobotics Lab - Carnegie Mellon University

Programmer in Projects for NAO Robots Fall 2009
CMRobobits Course - Carnegie Mellon University

WORK EXPERIENCE

OpenCV - Google Summer of Code *Summer 2011*
Position: Student Developer
I wrote tutorials and source code using OpenCV (C++ Computer Vision Library) My work is currently hosted in the official documentation website of the library (tutorials section)

TEACHING EXPERIENCE

- *Volunteer - Counselor* Fall 2011 - Fall 2012
  Institution: Whiz Kidz Science and Technology Centers
  Course: STEM classes for K-9 kids
- *Tutor* Fall 2011 - Fall 2012
  Institution: GT-SHPE (Society of Hispanic Professionals Engineers)
  Course: Tutoring for middle and high school kids in Atlanta
- *Teaching Assistant* Spring 2011
  Institution: Georgia Institute of Technology
  Course: CS 3630 -Intro to Perception and Robotics (Undergraduate)

PUBLICATIONS

Deterministic Motion Planning for Redundant Robots along End-Effector Paths
Ana Huamán Quispe and Mike Stilman
2012 IEEE-RAS International Conference on Humanoid Robots

TECHNICAL REPORT

Diverse Workspace Path Planning for Robot Manipulators
Ana Huamán Quispe and Mike Stilman
URL: http://smartech.gatech.edu/xmlui/handle/1853/44264
July 2012

COMPUTER SKILLS

- *Operating Systems: Unix (preferred) and Windows.*
- *Computer Languages: C++ and C. Exposure to Lisp, Java and Python.*
- *Robot Programming: ROS and Gazebo for dynamic simulation.*
- *Libraries: OpenCV, Point Cloud Library (PCL), Eigen*
- *SCM: git and svn*
- *Scientific Applications: MATLAB/Simulink, Octave, Maple.*
- *Microcontrollers Programming: MPLAB and PICC.*
- *Electronic Design: Proteus (ISIS and ARES), OrCAD, Circuit Maker.*
- *Technical Drawing: AutoCAD, SolidWorks.*
- *Internet Development: HTML.*

RELEVANT COURSEWORK

- *Computability and Algorithms* — *GaTech Spring 2013*
- *Humanoid Robotics* — *GaTech Spring 2013*
- *3D Reconstruction and Mapping* — *GaTech Fall 2012*
- *Implementation and Control of Robotic Systems* — *GaTech Fall 2012*
- *Linear Control* — *GaTech Fall 2011*
- *Computer Vision* — *GaTech Fall 2011*
- *Artificial Intelligence* — *GaTech Spring 2011*
- *Robot Intelligence: Planning in Action* — *GaTech Fall 2010*

LANGUAGE SKILLS

- *Spanish: Native*
- *English: Fluent*
- *German: Basic*