

De la Puente, Paloma

PERSONAL INFORMATION

Address: UPM-DISAM. Escuela Técnica Superior de Ingenieros Industriales. José Gutiérrez Abascal, 2 E-28006 Madrid, Spain
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Phone Number: 913363061
Date and place of birth: March 20th, 1984 - Valencia, Spain

EDUCATION

2009-2010 Visiting researcher at California Institute of Technology (September -March).
2009 FPU grant received from the Spanish Ministry of Science and Innovation (not accepted due to incompatibility issues).
2009- now Research assistant at Universidad Politécnica de Madrid. Contract with Comunidad de Madrid.
2009 Universidad Politécnica de Madrid grant (February and March).
2008- now PhD. candidate in Robotics. Escuela Técnica Superior de Ingenieros Industriales (ETSII), Universidad Politécnica de Madrid (UPM).
2007-2008 Master in Automatics and Robotics, Universidad Politécnica de Madrid (UPM).
2002-2007 Engineer Degree (5 years)
Escuela Técnica Superior de Ingenieros Industriales, Universidad Politécnica de Madrid (UPM).
Major: Automatics and Electronics.
Graduation with honors on Master thesis entitled “Sistema de navegación de un robot móvil” (“A mobile robot’s navigation system”).
2002-2003 Excellence Grant, Comunidad de Madrid.

LANGUAGES

English: High level
TOEFL: 107/120 score on the Internet Based Test (IBT) (March 2008)
Reading: 29/30 – Listening: 28/30 – Speaking: 22/30 – Writing: 28/30
5th Grade (maximum), National Official School of Languages (June 2002).
Grade 12 (maximum) of Spoken English for Speakers of Other Languages, Trinity College London (July 2001).
French: Intermediate level
Swedish: Elementary level

PARTICIPATION IN RESEARCH PROJECTS

2010-2013 Arabot National project: Autonomous Rational Robots
DPI 2010-21247-C02-01
2007-2009 Robonauta National project: Integration of Knowledge Models for the Autonomous Setup of an Interactive Robot at Museums and Trade Fairs.
DPI2007-66846-C02-01.
2006-2007 RobInt National project: Integration of Intelligent Behaviors in Tour-Guide Robots. DPI-2004-07907-C02-01.

PUBLICATIONS

International Journals

Alberto Valero-Gomez, Paloma de la Puente, Miguel Hernando. **Impact of two Adjustable Autonomy Models on the Scalability of Single-Human-Multiple-Robot Teams for Exploration Missions**. 2011. Human Factors: The Journal of the Human Factors and Ergonomics Society. In Press.

Diego Rodriguez-Losada, Pablo San Segundo, Miguel Hernando, Paloma de la Puente, Alberto Valero. **GPU-Mapping: Robotic Map Building with Graphical Multiprocessors**. 2011. *IEEE Robotics and Automation Magazine (RAM)*. In Press

International Conferences

Alberto Valero, Paloma de la Puente. **Usability Evaluation of a PDA Interface for Exploration Mobile Robots**. 18th IFAC World Congress. Milan, Italy September 2011. (Accepted for publication).

Alberto Valero, Paloma de la Puente, Diego Rodriguez-Losada. Exploratory Analysis of Operator:Robot ratio in Search and Rescue Missions. 2nd IFAC Symposium on Telematics Applications 2010 - TA 2010. Timisoara, Rumania, October 2010.

Diego Rodriguez-Losada, Paloma de la Puente, Alberto Valero, Pablo San Segundo, Miguel Hernando. **Computation of the Optimal Relative Pose Between Overlapping Gridmaps through a Discrepancy Minimization**. IFAC Intelligent Autonomous Vehicles Conference 2010, IAV 2010. Lecce, Italy, September 2010.

Diego Rodriguez-Losada, Alberto Valero, Pablo San Segundo, Paloma de la Puente, Miguel Hernando. **Fast Processing of Grid Maps Using Graphical Multiprocessors**. IFAC Intelligent Autonomous Vehicles Conference 2010, IAV 2010. Lecce, Italy, September 2010.

Alberto Valero, Paloma de la Puente, Diego Rodriguez-Losada, Fernando Matia. **Evaluating a human-robot interface for Exploration Missions**. IFAC Intelligent Autonomous Vehicles Conference 2010, IAV 2010. Lecce, Italy, September 2010.

Alberto Valero, Chiara Sacini, Paloma de la Puente, Diego Rodriguez-Losada, Fernando Matía. **Exploratory Analysis of Operator:Robot ratio in Search and Rescue Missions**. *Proc. of the 2nd Symposium New Frontiers in Human-Robot Interaction -24th Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour 2010 - AISB'10*. Leicester, UK.

Paloma de la Puente, Diego Rodriguez-Losada, Alberto Valero, Fernando Matia. **3D Feature Based Mapping Towards Mobile Robots' Enhanced Performance in Rescue Missions**. *Proc. of the 2009 IEEE/RSJ International Conference on Intelligent Robots and Systems - IROS'09*. St. Louis, Missouri, USA, October 2009.

Paloma de la Puente, Diego Rodriguez-Losada, Alberto Valero. **3D Mapping: testing algorithms and discovering new ideas with USARSim**. Robots, Games, and Research: Success stories in USARSim Workshop.2009 IEEE/RSJ International Conference on Intelligent Robots and Systems - IROS'09 St. Louis, Missouri, USA, October 2009.

Paloma de la Puente, Diego Rodriguez-Losada, Raul Lopez, Fernando Matia. **Extraction of Geometrical Features in 3D Environments for Service Robotics Applications**. *Proc. 3rd. International Workshop on HYBRID ARTIFICIAL INTELLIGENT SYSTEMS -*

H AIS'08 Burgos, Spain, September 2008. In: Corchado, E., Abraham, A., Pedrycz, W. (Eds.) *Hybrid Artificial Intelligence Systems*. LNCS, vol. 5271, pp. 441--450. Springer-Verlag (2008).

Paloma de la Puente, Diego Rodríguez-Losada, Luis Pedraza, Fernando Matía. **Robot Goes Back Home Despite All the People**. *Proc. 5th. Conference on Informatics in Control, Automation and Robotics - ICINCO 2008*. Funchal, Portugal, May 2008.

OTHER ACTIVITIES

- ICRA 2009, 2010 and 2011 reviewer, IROS 2009 and 2010 reviewer, BICS 2010 reviewer
- 2010 Tutorship of Master Thesis entitled "Development of a simulator and a 3D world editor for mobile robotics applications", by Cosimo Palazzo, visiting student from Università degli studi "Roma Tre" Facoltà di Ingegneria (written in Italian).
- 2010 European Summer School on Life and Cognition, organized jointly by IAS-Research, (Grupo de Filosofía de la Biología), Universidad del País Vasco / and the Centre de Recherche en Epistémologie Appliquée (CREA), Ecole Polytechnique/CNRS, Paris.
- 2010 BICS 2010. Organizing committee, local arrangements.
- 2010 Attendance at RSS 2010, Zaragoza (Spain).
- 2009 Participation and 5th place in the RoboCup 2009 Rescue Simulation League (Virtual Robots Competition), celebrated in Graz (Austria).
- 2009 Participation and oral presentation (3D Mapping) in the OpenRDK Workshop held at La Sapienza Università di Roma (Italy).
- 2008 Summer School on Image and Robotics, organized by the Université Blaise Pascal and the Institut Français de Mécanique Avancée, in Clermont-Ferrand (France). Participation scholarship received from the Organizing Committee.
- 2007-2008 Research activities within the Intelligent Control Group-UPM.
- 2006-2007 Collaboration grant received from the Spanish Ministry of Science and Education to work on mobile robots' navigation within the Intelligent Control Group-UPM.
- 2006 Participation in the *Cybertech 2006* contest. Group project involving building and programming a robot able to follow a line, pass other vehicles by and avoid obstacles, recognizing its due path even in the presence of properly marked junctions.
- 2006 Training in programming and algorithms within the Intelligent Control Group-UPM.
- 2006 Supercomputers programming initiation course, ETSII-UPM. Participation scholarship got on the grounds of academic results.

SKILLS

Computer applications: MS Office 2003 and 2007 (Word, PowerPoint, Excel), Internet, E-mail, LaTeX.

OS: Windows XP and Vista, Linux (Ubuntu), Mac OS X.

Programming experience: C, C++, Visual C++, Java, Matlab, assembly language.

Engineering applications: Solidedge, Statgraphics, Matlab, Microsoft Project, Simplorer.

SOCIETIES MEMBERSHIP

2009 IEEE student member

2009 Student member of the EUCog II network.

- 2008 Student member of euCognition (The European Network for the Advancement of Artificial Cognitive Systems).
- 2008 Member of the students' branch of CEA-IFAC (Comité Español de Automática).
- 2007 Member of the students' branch of ISA (Instrument Society of America).

AWARDS

- 2008 Master Thesis award - Fundación para el Fomento de la Innovación Industrial
- 2006 Cybertech 2006 Best Technological Design Award
- 2001 5th Spring Contest of Mathematics award - Universidad Complutense de Madrid