

Curriculum Vitae of Ester Martínez Martín

Personal information

Name: Ester Martínez Martín

Address: Barrio Carbonaire, travesía – 2, nº 73, 12600 La Vall d’Uixó, Castellón, Spain

Birthdate: February 10, 1981

Nationality: Spanish

Professional Address

Department of Computer Science and Engineering
Escuela Superior de Tecnología y Ciencias Experimentales
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Education

June 2011: PhD in Advanced Computer Science Systems.

Supervisor: Ángel P. del Pobil

Reviewed by: Cecilia Laschi, Giorgio Cannata, Philippe Martinet, Jorge Dias, and Markus Vincze

Thesis committee: Philippe Martinet, M^a Ángeles López Malo, Jorge Dias, Alberto Sanfeliu Cortés, Cristina Urdiales García

Title: Computer Vision Methods for Robot Tasks: Motion Detection, Depth Estimation and Tracking

Subject: (i) Motion Detection (ii) Tracking (iii) Depth Estimation (iv) Robotics

March 2011: Postgraduate Course “Wiris avanzado y páginas web para matemáticas de la ESO y bachilleratos (a distancia)”, Universitat Jaume I, Castellón

March 2010: Postgraduate Course “Diseño i efectos fotorealistas con 3D Studio Max (a distancia)”, Universitat Jaume I, Castellón

February 2010: Postgraduate Course “Diseño, animación y publicación con Flash (a distancia)”, Universitat Jaume I, Castellón

January 2010: Postgraduate Course “Wiris, GeoGebra y hoja de cálculo para matemáticas de la ESO y bachillerato (a distancia)”, Universitat Jaume I, Castellón

July 2009: Certificate “Capacitación para la Docencia Universitaria”, Universitat Jaume I, Castellón, Spain

July 2008: Postgraduate Course “Jocs de Lògica i Estratègia”, Universitat Jaume I, Castellón, Spain

September 2007: M. Sc. in Advanced Computer Science Systems with High Distinction.
Department of Computer Science and Engineering, Universitat Jaume I, Castellón, Spain

Master thesis title:

2004 – 2007: Doctoral Courses in Advanced Computer Systems programme, Department of Computer Science and Engineering, Universitat Jaume I, Castellón, Spain

Articles in scientific journals

- M. Prats, E. Martínez, P.J. Sanz & A.P. del Pobil, *The UJI Librarian Robot*, Journal of Intelligent Service Robotics, (Springer), Vol. 1, Issue 4, pp. 321–335, 2008. ISSN: 1861–2276 (print), 1861–2784 (online)
- M. Prats, P.J. Sanz, E. Martínez, R. Marín & A.P. del Pobil, *Manipulación Autónoma Multipropósito en el Robot de Servicios Jaume-2*, Revista Iberoamericana de Automática e Informática Industrial, Vol. 5, No. 2, pp. 25–37, April 2008. ISSN: 1697–7912
- M. Prats, P.J. Sanz, A.P. del Pobil, E. Martínez & R. Marín, *Towards multipurpose autonomous manipulation with the UJI service robot*, Robotica, vol. 25, No. 2, pp. 245–256, 2007

Articles in conference proceedings

- E. Martínez-Martín & M.T. Escrig, *A General Qualitative Spatio-Temporal Model Based on Intervals*, The 25th International Workshop on Qualitative Reasoning (QR), pp. 100–107, Barcelona, Spain, 2011
- E. Martínez, A.P. del Pobil, M. Chessa, F. Solari & S.P. Sabatini, *An Integrated Virtual Environment for Visual-based Reaching*, The Fifth ACM International Conference on Ubiquitous Information Management and Communication (ICUIMC), Seoul, (South) Korea, 2011. ISBN: 978–1–4503–0571–6
- E. Martínez & A.P. del Pobil, *Towards Safe Interactions with a Sturdy Humanoid Robot*, The Seventh IARP Workshop on Technical Challenges for Dependable Robots in Human Environments (DRHE2010), pp. 159–163, Toulouse, France, 2010
- E. Martínez & A.P. del Pobil, *A Panoramic Vision System for Human-Robot Interaction*, 5th ACM/IEEE International Conference on Human-Robot Interaction (HRI2010), Osaka, Japan, 2010. ISBN: 978–1–4244–4893–7
- E. Martínez & A.P. del Pobil, *Safety for human-robot interaction in dynamic environments*, IEEE International Symposium on Assembly and Manufacturing, pp. 327–332, Suwon, South Korea, 2009. ISBN:
- E. Martínez & A.P. del Pobil, *A vision system enabling all-embracing 360-degree awareness for activity recognition*, First Workshop on Context Awareness in Smart Environments: Background, Achievements and Challenges in 18th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2009), Toyama, Japan, 2009
- E. Martínez & A.P. del Pobil, *A dioptic stereo system for robust real-time people tracking*, Workshop on People Detection and Tracking in IEEE International Conference on Robotics and Automation (ICRA 2009), Kobe, Japan, 2009
- E. Martínez & A.P. del Pobil, *A dioptic stereo system for robust real-time tracking in dynamic unknown environments*, Workshop on Omnidirectional Robot Vision in International Conference on Simulation, Modeling and Programming for Autonomous Robots, pp.331- 342, Venice, Italy, 2008. ISBN: 978-88-95872-01-8
- E. Cervera, N. Garcia-Arancil, E. Martínez, L. Nomdedeu & A.P. del Pobil, *Safety for a robot arm moving amidst humans by using panoramic vision*, 2008 IEEE International Conference on Robotics and Automation (ICRA 2008), pp. 2183-2188, Pasadena, CA, 2008. ISSN: 978-1-4244-1646-2 (print), 1050-4729 (online)
- E. Cervera, E. Martínez, L. Nomdedeu & A.P. del Pobil, *Fisheye visual control for dependable mobile manipulators*, The Fifth IARP-IEEE/RAS-EURON Joint Workshop on Technical challenges for Dependable Robots in Human Environments, Rome, Italy, 2007
- E. Martínez & M.T. Escrig, *A general approach for qualitative reasoning models based on intervals*, VIII Jornadas ARCA. Razonamiento Cualitativo y Aplicaciones. Robótica,

Economía, Diagnósis y Clasificación, pp. 1–7, Peñíscola, Spain, 2006. ISBN: 84–611–1401–9

- P.J. Sanz, M. Prats, E. Martínez, A.P. del Pobil, R. Marín, J. Speth & C. Achard, *Jaume: The UJI Service Robot*, Workshop on Mobile Manipulators: Basic Techniques, New Trends and Applications in IEEE/RSJ International Conference on Intelligent Robots and Systems, Edmonton, Alberta, Canada, 2005

Edited books

- *Swarm Robotics*, Ed. In-Tech, Vukovar, Croatia, 2010. ISBN: 978–953–307–075–9

Courses and seminars attended

Research

- Twenty-Second International Joint Conference on Artificial Intelligence (IJCAI), Barcelona, España, 2011
- 25th International Workshop on Qualitative Reasoning (QR), Barcelona, España, 2011
- Robotics: Science and Systems (RSS 2010), Zaragoza, Spain, 2010
- The Tenth Workshop on Omnidirectional Vision, Camera Networks and Non-classical Cameras, Zaragoza, Spain, 2010
- The Seventh IARP Workshop on Technical Challenges for Dependable Robots in Human Environments, Toulouse, France, 2010
- AERFAI Summer School on Pattern Recognition and Machine Learning in Multimedia Systems, Benicàssim, Spain, 2010
- IEEE International Symposium on Assembly and Manufacturing (ISAM 2009), Suwon, Corea, 2009
- 18th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2009), Toyama, Japón, 2009
- International Conference on Simulation, Modeling and Programming for Autonomous Robots (SIMPAN 2008), Venice, Italy, 2008
- Workshop (Teaching with Robotics) in International Conference on Simulation, Modeling and Programming for Autonomous Robots (SIMPAN 2008), Venice, Italy, 2008
- Workshop (Omnidirectional Robot Vision) in International Conference on Simulation, Modeling and Programming for Autonomous Robots (SIMPAN 2008), Venice, Italy, 2008
- Summer School on Image and Robotics 2008 (SSIR'08), Clermont-Ferrand, France, 2008
- ESF-JSPS Frontier Science Conference Series for Young Researchers on Robotics: Experimental Cognitive Robotics, Shonan Village Center, Kanagawa, Japan, 2008
- COGNIRON Winter School on Human Robot Interaction (CWSHRI'08), Lausanne, Switzerland, 2008
- 7th International UJI Robotics School on Assistive Robots (IURS), Benicasim, Spain, 2007
- 2007 IEEE International Conference on Robotics and Automation (ICRA'07), Rome, Italy, 2007
- Winter school on computational and neurophysiological vision, Les Houches, France, 2007
- 6th International UJI Robotics School on Humanoid Robots (IURS), Benicasim, Spain, 2006
- VIII Symposium ARCA Sistemas Cualitativos y Aplicaciones, Castellón de la Plana, Spain, 2006

- 5th International UJI Robotics School (IURS). First European Summer School on NeuroRobotics, Benicasim, Spain, 2005
- IASTED International Conference on Artificial Intelligence and Soft Computing, Benidorm, Spain, 2005
- XI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'05), Santiago de Compostela, Spain, 2005
- 2005 IEEE International Conference on Robotics and Automation (ICRA 07), Barcelona, Spain, 2005
- Tutorial (TF02 Visual Tracking: 2D/3D Method and Cue Integration) at the 2005 IEEE International Conference on Robotics and Automation (ICRA 05), Barcelona, Spain
- Tutorial (T-M01 Humans in the Loop: Method for Studying Human Robot Integration) at the 2005 IEEE International Conference on Robotics and Automation (ICRA 05), Barcelona, Spain
- 16th European Conference on Artificial Intelligence (ECAI 2004), Valencia, Spain, 2004
- Tutorial (DataMining: From Rule Learning to Relational Subgroup Discovery) at the European Conference on Artificial Intelligence (ECAI 2004), Valencia, Spain, 2004
- Workshop (Hybrid Metaheuristics (HM 2004)) at the European Conference on Artificial Intelligence (ECAI 2004), Valencia, Spain, 2004
- Workshop (Knowledge Management and Organizational Memories) at the European Conference on Artificial Intelligence (ECAI 2004), Valencia, Spain, 2004
- V Workshop de Agentes Físicos (WAF'04), Girona, Spain, 2004

Teaching

- Course “Nociones básicas para la introducción del inglés como lengua de instrucción en el aula (GV)”, Universitat Jaume I, Castellón, 2011
- Course “Planificación y diseño de la docencia universitaria: las guías docentes ECTS (GV)”, Universitat Jaume I, Castellón, 2011
- Seminar “Eficacia Docente”, Universitat Jaume I, Castellón, 2011
- IX Jornada de Mejora Educativa de la UJI y XI Jornada Nacional sobre aprendizaje cooperativo (y IV Jornada sobre innovación en la docencia), Universitat Jaume I, Castellón, 2011
- Course “Diseño de cuestionarios en el aula virtual” , Universitat Jaume I, Castellón, 2010
- X Jornada sobre la Qualitat a la Universitat Jaume I: Avaluació de l'activitat docent del professorat, Escuela Superior de Tecnología y Ciencias Experimentales, Universitat Jaume I, Castellón, 2010
- Seminar “L'acreditació del professorat univèritari”, Universitat Jaume I, Castellón, 2010
- “Metodologies centrades en el estudiant en el EEES”. VIII Jornada de mejora educativa y VII de armonización europea, Universitat Jaume I, Castellón, 2009
- Course “La evaluación del aprendizaje en asignaturas que introducen la docencia en inglés (GV)”, Universitat Jaume I, Castellón, 2009
- Course “Enseñanza-aprendizaje de competencias transversales mediante el teatro”, Universitat Jaume I, Castellón, 2009
- Course “Planificación de la docencia universitaria (9ª edición)”, Universitat Jaume I, Castellón, 2009
- Seminar “Tutorización del Programa Erasmus de Prácticas”, , Universitat Jaume I, Castellón, 2009
- Course “Pedagogía de la tutoría (Nivel 2)” , Universitat Jaume I, Castellón, 2009
- Course “Metodología didáctica para la enseñanza universitaria” , Universitat Jaume I, Castellón, 2009

- Course “Iniciación al aula virtual de la UJI (6ª edición) at Universitat Jaume I, Castellón, Spain, 2008
- Course “Web 2.0” at Universitat Jaume I, Castellón, Spain, 2008
- Course “La evaluación como instrumento de la calidad educativa” at Universitat Jaume I, Castellón, Spain, 2008
- Workshop “Desarrollo de habilidades del profesorado para potenciar la tutoría” at Universitat Jaume I, Castellón, Spain, 2008
- Workshop “Claus d’una docència de major qualitat: El canvi metodològic i la col.laboració entre professors” at Universitat Jaume I, Castellón, Spain, 2007

Organized events

- Organizer of the 7th International UJI Robotics School on Assistive Robots (IURS), Benicasim, Spain, 2007
- Organizer of the 6th International UJI Robotics School on Humanoid Robots (IURS), Benicasim, Spain, 2006
- Organizer of the 5th International UJI Robotics School (IURS). First European Summer School on NeuroRobotics, Benicasim, Spain, 2005
- Member of the Organization committee of the 16th European Conference on Artificial Intelligence (ECAI 2004), Valencia, Spain, 2004

Scholarships and grants

April 2011 – August 2011: Assistant researcher in the research Project *Interacción física complaciente para tareas robóticas de manipulación* (Code: 08I488), *Supervisor:* Ángel Pascual del Pobil Ferré

January 2011 – February 2011: Assistant researcher in the European research Project *Heterogeneous 3-D perception across visual fragments – Eyeshots* (Code: 08I043), *Supervisor:* Ángel Pascual del Pobil Ferré

December 2009 – November 2010: Scholarship for research activity continuity, *Supervisor:* Ángel Pascual del Pobil Ferré

September 2005 – August 2009: Predoctoral Scholarship (Beca FPI) under the Research Project “*Sistema Completo de Manipulación Autónoma basado en Fusión de Información Sensorial y Técnicas de Aprendizaje Orientado a la Robótica de Servicios*” (BES–2005–8860 / DPI2004–01920), funded by el Ministerio de Educación y Ciencia and whose Research Leader is Pedro José Sanz Valero.

July – August 2005: University Collaboration Scholarship for Graduate Studies. *Supervisor:* Ángel Pascual del Pobil Ferré

March – June 2005: Fellowship under the Research Project “*Tareas de servicios para un robot manipulador móvil*”, funded by el Ministerio de Educación y Ciencia and whose Research Leader was Ángel Pascual del Pobil Ferré.

October – December 2004: Fellowship under the Research Project “*Tareas de servicios para un robot manipulador móvil*”, funded by el Ministerio de Educación y Ciencia and whose Research Leader was Ángel Pascual del Pobil Ferré.

October 2003 – June 2004: Collaboration Scholarship “*Sistema para búsqueda de libros mediante un robot en la biblioteca*”, funded by el Ministerio de Educación y Ciencia. *Supervisor:* Ángel Pascual del Pobil Ferré.

Participation in research projects

- “Interacción física complaciente para tareas robóticas de manipulación”
Financing Entity: Ministry of Science and Innovation. DPI2008-06636
Period of the Project: January, 2009 – December, 2011
Scientist in charge: Ángel Pascual del Pobil i Ferré
- “Manipulación bimanual por un robot humanoide”
Financing Entity: Generalitat Valenciana – Program for Research Groups of Excellence (PROMETEO/2009/052)
Period of the Project: January, 2009 – December, 2013
Scientist in charge: Ángel Pascual del Pobil i Ferré
- “Emergence of cognitive grasping through emulation, introspection and surprise - GRASP”
Financing Entity: CEE
Period of the Project: March, 2008 – February, 2012
Scientist in charge: Antonio Morales Escrig
- “Arquitectura distribuida confiable para el control por visión en equipos de robots cooperativos”
Financing Entity: CICYT. DPI2005–08203–C02–01
Period of the Project: December, 2005 –December, 2008
Scientist in charge: Enric Cervera Mateu
- “Sistema de manipulación con percepción táctil y visual inspirado en modelos neurológicos”
Financing Entity: Universitat Jaume I (UJI). P1–1A2006–111
Period of the Project: December, 2006 – December 2009
Scientist in charge: Antonio Morales Escrig
- “Equipo de robots para vigilancia y supervisión de instalaciones industriales y de servicios”
Financing Entity: IMPIVA. IMCOIC/2006/48
Period of the Project: January, 2006 – December, 2006
Scientist in charge: Enric Cervera Mateu
- “SARA: Sistema de manipulación con percepción avanzada”
Financing Entity: Generalitat Valenciana. GV05/137
Period of the Project: September, 2005 – December, 2006
Scientist in charge: Gabriel Recatalá Ballester

Participation in outreach activities

- “II Encuentro Inter-Estudiantes TICnología”, held on 2nd February 2011 in the Municipal Sports Foundation *La Petxina* (Valencia, Spain)

Teaching Experience

Academic year 2010/2011, Universitat Jaume I, Castellón:

<u>Subject</u>	<u>Degree</u>	<u>Credits</u>
Estancia en Prácticas (II30)	Ingeniería Informática (Plan de 2001)	0,67
Informática I (SE28)	Graduado en Seguridad y Ciencias Policiales	1,5

Academic year 2008/2009, Universitat Jaume I, Castellón:

<u>Subject</u>	<u>Degree</u>	<u>Credits</u>
Estancia en Prácticas (II30)	Ingeniería Informática (Plan de 2001)	1,5
Informática II (123)	Licenciatura en Traducción e Interpretación	3

↳ Letter of Congratulation from the vice-chancellorship of Academic and Faculty Organization by the teaching activity carried out in *Informática II (123)*

Academic year 2007/2008, Universitat Jaume I, Castellón:

<u>Subject</u>	<u>Degree</u>	<u>Credits</u>
Estancia en Prácticas (IS30)	Ingeniería Técnica en Informática de Sistemas	0,5
Estructuras de Datos y de la Información (II13)	Ingeniería Informática (Plan de 2001)	2,3
Proyectos Informáticos de Sistemas (IS31)	Ingeniería Técnica en Informática de Sistemas	1

Teaching Publications

Articles in conference proceedings

- E. Martínez Martín & A.P. del Pobil, *Desarrollo de una Herramienta Informática para la Gestión de Material Didáctico Interactivo Digital*, IX Jornada de Mejora Educativa de la UJI y XI Jornada Nacional sobre aprendizaje cooperativo (y IV Jornada sobre innovación en la docencia), Universitat Jaume I, Castellón, Spain, 2011

Participation in teaching projects

- “Desarrollo de una herramienta informática para la gestión de material didáctico interactivo”
Financing Entity: Unidad de Soporte Educativo (Universitat Jaume I) – Proyectos de Mejora e Innovación Educativa
Period of the Project: Academic year 2008–2009
Director of the Project: Ester Martínez Martín

Work experience

February, 2003 – March, 2003: Internship at Town Council, La Vall d’Uixò, Castellón, Spain.

October, 2002 – January, 2003: Internship at Town Council, La Vall d’Uixò, Castellón, Spain.

Languages

- **Spanish.** Mother tongue
- **Catalonian.** Fluent
 - Certificate of “Grau Mitjà”. Junta Qualificadora de Coneixements de València
 - Certificate of Grau Superior de Coneixements de València. Language and Terminology Office at Universitat Jaume I (2007)
 - Certificate of Capacitació. Conselleria d’Educació, Generalitat Valenciana
- **English.** Intermediate
 - First Certificate of English – University of Cambridge ESOL Examinations (2008)
 - Certificate of Ciclo Elemental de Inglés. Oficial Language School (2007)

- Certificate of Capacitación in Foreign Languages: English, Conselleria d'Educación, Generalitat Valenciana

↳ *Language Courses attended*

- Academic English Course. Language and Terminology Office at Universitat Jaume I. Castellón, Spain. 30 horas. (15th February 2006 – 26th April 2006)

- **Italian:** Lower-intermediate

- Certificate of Lower-intermediate linguistic level (B1 in Common European Framework for Languages (MERC)), Universitat Jaume I, Castellón, Spain (2011)

↳ *Language Courses attended*

- Course of Pre-intermediate linguistic level (A2 in Common European Framework for Languages), Genoa, Italy. (15th September 2008 – 10th November 2008)

Other

- **Bachelor of Music** (B.Mus) in Violin from Elemental Conservatoire of Music at La Vall d' Uixò (Castellón, Spain). (1999)
- **Course:** “Especialista en Diseño Asistido por Ordenador”. Confederación de Empresarios de Castellón. La Vall d'Uixò (Castellón, Spain) 200 horas. (31 de agosto de 1998 – 20 de octubre de 1998)
- **Course** of violin taught by Barbara Zienkiewicz. Elemental Conservatoire of Music at La Vall de Uixò (Castellón, Spain) (1994)