Oscar Sandoval Torres

Education

2009 – 2012   **PhD on Automatics, Robotics and Vision**, *at Polytechnic University of Catalonia*, Barcelona, Spain, with Support of the Mexican Council of Science and Technology. http://doctorat.upc.edu/estudis/programa.php?idprog=248

2006 – 2009   **Master of Engineering (Control)**, *Polytechnic University of Catalonia*, Barcelona, Spain. Mexican recognition for the Spanish Diploma of Advanced Studies (DEA) in Control, Vision and Robotics

2001 – 2005   **Computer Systems Engineer**, *Tuxtla Gutiérrez Technological Institute*, Tuxtla Gutiérrez, Chiapas, México.

Research stay

Sept.–Dec. 2010   Research stay with Manuela M. Veloso at Carnegie Mellon University (CMU), Pittsburgh, PA, USA.

In course PhD thesis

title   *Emerging cooperative behavior for distributed task allocation.*

supervisor   Dr. Josep M. Mirats Tur.

support   Mexican Council of Science and Technology (CONACyT)

Publications

Anaís Garrell, **Oscar Sandoval-Torres**, and Alberto Sanfeliu. Adaptive multi agent system for guiding groups of people in urban areas. In J. Pérez et.al., editor, *Highlights in Practical Applications of Agents and Multiagent Systems*, volume 89 of *Advances in Intelligent and Soft Computing*, pages 175–184. Springer, Salamanca, Spain, 2011. ISBN 978-3-642-19916-5. ISSN 1867-5662.

A. Corominas, E. Trulls, **O. Sandoval-Torres**, J. Perez-Ibarz, A. Vasquez, J.M. Mirats, M. Ferrer, and A. Sanfeliu. Autonomous navigation for urban service mobile robots. In *Intelligent Robots and Systems (IROS 2010), Proceedings of the 2010 IEEE/RSJ International Conference on*, pages 4141–4146. Taipei, Taiwan, October 18-22, 2010. ISBN 978-1-4244-6674-0. ISSN 2153-0858.

Anaís Garrell, **Oscar Sandoval-Torres**, Josep M. Mirats-Tur, and Alberto Sanfeliu. Guiding and regrouping people missions in urban areas using cooperative multi-robot task allocation. In *Emerging Technologies and Factory Automation (ETFA 2010), Proceedings of the 15th IEEE International Conference on*, IEEE Xplore. Bilbao, Spain, September 13-16, 2010. ISBN 978-1-4244-6848-5. ISSN 1946-0740.

A. Corominas, J. M. Mirats, **O. Sandoval**, and A. Sanfeliu. Real-time software for mobile robot simulation and experimentation in cooperative environments. In S. Carpin et al., editor, *Simulation, Modeling, and Programming for Autonomous Robots (SIMPAR 2008), Proceedings of the First International Conference on*, Lecture Notes in Computer Science, pages 135–146. Springer-Verlag, Venice, Italy, November 3-7, 2008. ISBN 978-3-540-89075-1. ISSN 0302-9743.

Special Awards

August 2013   **Youth State Award**, *Recognition by an outstanding academic trajectory*, Tuxtla Gutiérrez, Chiapas, Mexico.
Prize given by Chiapas State Governor.

Research Projects

2007 – 2010

title	*Ubiquitous Networking Robotics in Urban Settings.*
leader	PhD. Alberto Sanfeliu Cortés.
institute	Robotics Institute (IRI).
place	Barcelona, Spain.
project webpage	http://www.urus.upc.edu/

2005 – 2006

title	*Forecast of intense meteorological phenomena in Chiapas.*
leader	PhD. Martín Mundo Molina.
institute	Research Center of the Faculty of Engineering of the Chiapas State University (UNACH) in collaboration with the Mexican Institute of Water Technology (IMTA).
place	Tuxtla Gutiérrez, Chiapas, México.
project webpage	http://galileo.imta.mx/chiapas/

2005

title	*Development of a stereo video system in Linux.*
leader	PhD. Gustavo Olague Caballero.
institute	Ensenada Center for Scientific Research and Higher Education (CISESE).
place	Ensenada, Baja California, México.
supported by	Chiapas State Council of Science and Technology (COCyTECH) and the Program for the Enhancement of Research and Postgraduate Studies in the Pacific.

2004

title	*Investigation in Computer Security.*
leader	PhD. Luis Alfonso Villa Vargas.
institute	Mexican Institute of Petroleum (IMP).
place	México, D.F.
supported by	Mexican Academy of Science (ACM).

Professional experience

Feb.2014-	**Research Chief Officer**, *Tecnológico de Estudios Superiores de Jocotitlán (TESJo)*, Jocotitlán, Mexico State, México. The objective in this role was to restructure the research department, the main actions taken were: Update of the department's procedure manual. Establishment of rules for researchers performance measuring, a procedure for resource allocation, project inscription and evaluation formats and procedure, and others.
2012-2014	**Teacher**, *Various universities*, Mexico. For two and a half years, I taught in a wide range of universities and levels, from private to public universities, face, blended and distance learning systems, for bachelor and graduate students and in many places of Mexico.

Feb.-Sept.2006 **Network and Servers Manager**, *Chiapas State Ministry of Education (SEF)*, Tuxtla Gutiérrez, Chiapas, México.
The main achievements in those months were, restructuration and documentation of the entire SEF computer network (thousands of equipments), and instalation, configuraton and management of OpenBSD servers to ensure network security.

Languages

Spanish	**Native**	
English	**Fluid**	*Professional working proficiency*
Catalan	**Limited**	*Limited working proficiency+*

Courses

2013 **Training course on VoIP technology**, *Universidad Tecnológica Emiliano Zapata del Estado de Morelos (UTEZ)*, Emiliano Zapata, Morelos, Mexico, 24 to October 26, 2013.

2011 **SSIR'11 Summer School on Image and Robotics**, *Institut National de Recherche en Informatique et en Automatique (INRIA)*, Grenoble, France, 4 to July 13, 2011.
With full scholarship from the summer school organization

2009 **SSIR'09 Summer School on Image and Robotics**, *Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE)*, Puebla, México, 7 to December 18, 2009.
With full scholarship from the summer school organization

EASSS'09 European Agent Systems Summer School, *Università degli Studi di Torino*, Turin, Italy, August 31 to September 4, 2009.

III e-health and telemedicine meeting: Hospitals as new technology innovation center, *Universidad Internacional Menéndez Pelayo (UIMP)*, Santander, Spain, 17 to July 19, 2009.
With full scholarship from the UIMP.

2007 **EAIA'07 Summer School on Collective Robotics**, *Faculdade de Ciências de Lisboa*, Lisbon, Portugal, 27 to August 31, 2007.

2001–2004 **Mastery and understanding of the English language**, *Instuto Tecnológico de Tuxtla Gutiérrez*, Tuxtla Gutiérrez, Chiapas, México.

1999 **Business English Basic Course**, *Global English*.

Congresses

Presentation

2013 **2013 Academic Seminars of the Colegio de Estudios Cientificos y Tecnologicos del Estado de Chiapas (CECyTECH)**, *Informatics in the educational and technological development of México*, Tuxtla Gutiérrez, Chiapas, México.

Third high school forum, *Robotics for laboratories with limited resources*, San Cristóbal de Las Casas, Chiapas, México.

2012 **IX International Symposium in Computer Systems**, *Autonomous Navigation for Mobile Robotics in Urban Zones.*, Tuxtla Gutiérrez, Chiapas, México.

2011 **9th International Conference on Practical Applications of Agents and Multi-Agent Systems**, *Adaptive Multi Agent System for Guiding Groups of People in Urban Areas*, Salamanca, Spain.

2005 **I Congress of summer research stays**, *Development of a stereo video system in Linux*, Tuxtla Gutiérrez, Chiapas, México.

Congress of the X Summer of Scientific Investigation, *Development of a stereo video system in Linux*, Nuevo Vallarta, Nayarit, México.

Assistance

2013 **cisco Live! 2013**, Moon palace & resort, Cancún, Quintana Roo, Mexico.

2011 **9th International Conference on Practical Applications of Agents and Multi-Agent Systems**, Salamanca, Spain.

2010 **Robotics: Science and Systems 2010**, Saragossa, Spain.

2006 **OpenCON 2006**, OpenBSD Congress, Venice, Italy.

2005 **VI Congress of Engineering in Computer Systems and Informatics**, Tuxtla Gutiérrez, Chiapas, México.

Congress of the X Summer of Scientific Investigation, Nuevo Vallarta, Nayarit, México.

2004 **V Congress of Engineering in Computer Systems and Informatics**, Tuxtla Gutiérrez, Chiapas, México.

2003 **IV Congress of Engineering in Computer Systems and Informatics**, Tuxtla Gutiérrez, Chiapas, México.

2002 **III Congress of Engineering in Computer Systems and Informatics**, Tuxtla Gutiérrez, Chiapas, México.

2001 **II Congress of Engineering in Computer Systems**, Tuxtla Gutiérrez, Chiapas, México.

Paper reviews

2012 *51st IEEE Conference on Decision and Control*

2011 *IEEE Transactions on Robotics*

2010 *2010 IEEE/RSJ International Conference on Intelligent Robots and Systems*

Academic contests

2013 **Best Entrepreneurs State Contest 2013**, Coach and technical assessment of the team "Traffic Watcher" of the Universidad Politécnica de Atlacomulco, *Participation*.

2013 **The 2013 ACM/ICPC Latin America Regional Contest**, Coach of the Universidad Politécnica de Atlacomulco programming team, *Participation*.

2003 **XVII Creativity National Contest, local phase**, project: Telemetric network of weather parameters, *Second place*.

2002 **The 2002 Central America Programming Contest of the ACM, local phase**, *Participation*.

2002 **IX Entrepreneur National Contest, local phase**, company name: Tapetes Calefactores del Sureste, S.A. de C.V., *First place*.

2000 **X State Bachelor Math Olympiad**, *Mathematics excellence award*.

2000 **National Essay Contest CIDE 2000 "Public education in Mexico: Review and Prospects"**, essay: "México, país de los sabios pobres", *Participation*.

1999 **Regional Contest of elaboration of didactic models and experimental prototypes**, prototype: "DERRICK 1", crane operated by computer, *Second Place*.

1999 **IX State Bachelor Math Olympiad**, *Honorable Mention*.

Teaching experience

May.-Aug. 2014   **Data structure, Computer architecture**, *For the Strategic Information Systems Engineering course*, Universidad Politécnica de Atlacomulco, Atlacomulco de Fabela, Mexico State, Mexico.

Jan.-Apr. 2014   **Structured programming**, *For the Robotics engineering and Strategic Information Systems Engineering courses*, Universidad Politécnica de Atlacomulco, Atlacomulco de Fabela, Mexico State, Mexico.

Jan.-Apr. 2014   **Introduction to Internet applications development, Artificial intelligence**, *For the Computer systems engineering course*, Universidad de Atlacomulco (IUEM Atlacomulco), Atlacomulco de Fabela, Mexico State, Mexico.

Jan.-Mar. 2014   **Web Programming, Data structure**, *For the Computer systems engineering course*, Universidad Vasco de Quiroga(Atlacomulco), Atlacomulco de Fabela, Mexico State, Mexico.

Sept.-Dec. 2013   **Probability and statistics, Introduction to Robotics Engineering, Programming fundamentals**, *For the Robotics engineering and Strategic Information Systems Engineering courses*, Universidad Politécnica de Atlacomulco, Atlacomulco de Fabela, Mexico State, México.

Feb.-Jul. 2013   **Parallel and distributed programming, Image treatment, Robotics Fundamentals**, *For the Computer Engineering Course.*, Universidad de Ixtlahuaca, CUI, Ixtlahuaca de Rayón, Mexico State, Mexico.

Feb.-Mar. 2013   **I.T. Governance**, *For I.T. Administration Master's Course*, Universidad de Ixtlahuaca, CUI, Ixtlahuaca de Rayón, Mexico State, Mexico.

Sept.-Dec. 2012   **Object oriented programming, Telecommunication foundations**, *for Computer Systems Engineering Course.*, Educación a Distancia del Instituto Tecnológico de Tuxtla Gutiérrez, Tuxtla Gutiérrez, Chiapas, México.

Oct.-Nov. 2012   **Database Interoperability**, *for Database Master's course*, Universidad Mesoamericana, San Cristóbal de Las Casas, Chiapas, Mexico.

Sept.-Oct. 2012   **Object oriented databases**, *for Database Master's Course*, Universidad Mesoamericana, San Cristóbal de Las Casas, Chiapas, Mexico.

Sept. 2012   **Database query language**, *for Database Master's Course*, Universidad de los Altos de Chiapas, San Cristóbal de Las Casas, Chiapas, Mexico.

April 2012   **Organizational Structure and Competitive Analysis**, *for e-Business Master's Course*, Universidad Tecnológica del Sur, Tuxtla Gutiérrez, Chiapas, Mexico.

March 2012   **Telephone Systems**, *for Telecommunications Master's Course.*, Universidad Tecnológica del Sur, Tuxtla Gutiérrez, Chiapas, Mexico.

Feb. - May 2012   **Advanced Topics in Programming**, *for Computer Systems Engineering Course.*, Educación a Distancia del Instituto Tecnológico de Tuxtla Gutiérrez, Tuxtla Gutiérrez, Chiapas, Mexico.

2005   **Regularization course on math calculus**, Universidad Valle del Grijalva, Tuxtla Gutiérrez, Chiapas, Mexico.

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