

Marco Morales

Departamento de Sistemas Digitales
Instituto Tecnológico Autónomo de México
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Education

PH.D. IN COMPUTER SCIENCE. Texas A&M University, Dec. 2007
Ph.D. Dissertation: “Metrics for Sampling-Based Motion Planning”
Academic adviser: Prof. Nancy M. Amato

M.S. IN ELECTRICAL ENGINEERING. Universidad Nacional Autónoma de México (UNAM), Nov. 1998
M.S. Thesis: “Control de un Robot Móvil usando Redes Neuronales y Sistemas Expertos” (Mobile Robot Control with Neural Networks and Expert Systems)
Academic adviser: Prof. Jesús Savage Carmona

B.S. IN COMPUTER ENGINEERING. UNAM, Aug. 1996
B.S. Thesis: “Diseño, Construcción y Control de Vehículo Manipulador de Navegación Autónoma para transferencia de piezas” (Design, Construction, and Control of a Manipulator Vehicle with Autonomous Navigation for Parts Transfer)
Academic adviser: Prof. Ignacio Juárez Campos

Research Interests

Motion planning and supporting areas, especially machine learning and computational geometry, and its applications to robotics, bio-informatics, and computational science. In addition, artificial intelligence, computational neuroscience, and computer architecture.

Honors and Awards

ADMISSION AS REGULAR MEMBER México	Academia Mexicana de Computación Oct. 2017 –
CANDIDATE TO NATIONAL RESEARCHER CONACYT, México	National System of Researchers – SNI 1 Ene. 2009 – 31 Dic. 2012
FULBRIGHT-GARCIA ROBLES SCHOLARSHIP to pursue Ph.D. at TAMU	Department of State – USA, CONACYT – México Aug. 2000 – Aug. 2004
CONACYT SCHOLARSHIP to pursue Master’s at UNAM	CONACYT Sep. 1995 – Jun. 1997
SUPERCOMPUTING PROGRAM SCHOLARSHIP for training in supercomputing systems	Cray Research, UNAM Sep. 1994 – Mar. 1995
GTA FELLOW AND CERTIFICATE OF COMPLETION for the professional development in college teaching	Texas A&M Graduate Teaching Academy Sep. 2004 – May. 2005

Professional Experience

VISITING PROFESSOR Dept. of Comp. Sc.& Eng., Texas A&M University
College Station, Texas, USA Aug. 2014 – Jul. 2015

FACULTY MEMBER Instituto Tecnológico Autónomo de México (ITAM)
México, D.F., México Aug. 2007 – Present
Assistant Professor, (Profesor Titular II C), Dept. of Digital Systems (8/2011–Present)
Assistant Professor, (Profesor Titular I C), Dept. of Digital Systems (8/2009–7/2011)
Assistant Professor, (Profesor Asociado C) Dept. of Digital Systems (8/2007–7/2009)
Director, Robotics Lab (8/2008–Present)
Member, Complex Systems Lab (1/2009–Present)
Member, Center for the Modeling and Simulation of Systems (MaSaS) (9/2009–Present)

RESEARCH ASSISTANT for Prof. Nancy Amato Dept. of Computer Science, Texas A&M University
College Station, Texas, USA Sep. 2000 – Jul. 2007

FACULTY MEMBER Depto. de Ingeniería en Computación, UNAM
México, D.F., México 1996–2003
Lecturer (1/1997 – 7/2003)
Research Assistant for Jesús Savage Carmona (10/1996 – 07/2000) doing sysadmin and research at the micro computers lab and at the Intelligent Interfaces Lab.

CONSULTANT
México, D.F., México Ene. 1998 – Jul. 2000
Design, coding, testing, and installation of information systems and programming libraries. Tools and programming languages used include: C, C++, Microsoft Developer Studio (Visual C++, y Visual Basic), Matlab, Java, Oracle, MySQL, Excel, HTML, JavaScript. Projects developed:
Intracom Consultores – Internet-based store (8/1999-7/2000)
Intracom Consultores – Accounting system for the stock market (8/1999-7/2000)
Intracom Consultores – System to process and analyse results from tests with concrete (8/1999-7/2000)
Focus Consultores – Risk analysis library for the stock market (8/1998-5/1999)
Intercom – Analisis of system for management of images and documents for hospitals (1/1998–7/1999)

FACULTY MEMBER Div. de Informática, UTFV
Nicolás Romero, México, México 1996–1998
Lecturer (8/1997–12/1998)
Profesor Investigador (1–4/1996)

SYSTEM ADMINISTRATION STAFF Dept. of Supercomputing, DGSCA, UNAM
México, D.F., México Mar. 1995 – Feb. 1996
Member of the team in charge of user administration of the Cray-YMP/464 supercomputer of UNAM.

SOCIAL SERVICE STAFF Advanced Computing Lab, College of Eng., UNAM
México, D.F., México Dec. 1993 – Jun. 1994
Technical support and maintenance of software used in structure simulations.

Publications in Refereed Journals and Conferences

- [1] Samuel Rodriguez, MARCO MORALES, Nancy M. Amato “Multi-Agent Push Behaviors for Large Sets of Passive Objects”, in *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016*, pp. 4437–4442, Daejeon, Korea, DOI: 10.1109/IROS.2016.7759653, Oct 2016, Acceptance rate = 48%.
- [2] Mukulika Ghosh, Shawna Thomas, MARCO MORALES, Samuel Rodriguez, Nancy Amato “Motion Planning Using Hierarchical Aggregation of Workspace Obstacles”, in *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016*, pp. 5716–5721, Daejeon, Korea, DOI: 10.1109/IROS.2016.7759841, Oct 2016, Acceptance rate = 48%.
- [3] Saurabh Mishra, Samuel Rodriguez, MARCO MORALES, Nancy Amato, “Battery Constrained Coverage” In *Proceedings of the 12th IEEE International Conference on Automation Science and Engineering (CASE) 2016*, pp. 695–700, Fort Worth, TX, USA, DOI: 10.1109/COASE.2016.7743470, Aug 2016.
- [4] Mukulika Ghosh, Daniel Tomkins, Jory Denny, Samuel Rodriguez, MARCO MORALES, Nancy M. Amato “Planning Motions for Shape-Memory Alloy Sheets”, in Koryo Miura, Toshikazu Kawasaki, Tomohiro Tachi, Ryuhel Uehara, Robert J. Lang, and Patsy Wang-Iverson (editors) *Origami 6, Part 2: Origami in Technology, Science, Art, Design, History, and Education* pp. 501–511, ISBN 978-1-4704-1876-2, Dec 2015.
- [5] Jory Denny, MARCO MORALES , Samuel Rodriguez, Nancy M. Amato, “Adapting RRT Growth for Heterogeneous Environments”, in *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2013*, pp.1772-1778, Tokyo Big Sight, Japan, DOI: 10.1109/IROS.2013.6696589, Nov 2013. Acceptance rate = 43% (903/2089).
- [6] Fernando Esponda, Matías Vera-Cruz, Jorge Tarrasó, MARCO MORALES, “The Complexity of Partition Tasks”, *Complexity* (ISSN 1099-0526, ISI Impact Factor 2009 0.948), September/October 2010, vol. 16, issue 1, pp. 56-64, doi: 10.1002/cplx.20324, submitted 12/18/2009, revised 03/26/2010, accepted 03/30/2010.
- [7] Roger Pearce, MARCO MORALES, Nancy M. Amato, “Structural Improvement Filtering Strategy for PRM”, in *Proceedings of Robotics: Science and Systems IV (RSS) 2008*, Zurich, Switzerland, Jun. 2008. Acceptance rate = 25% (42/163).
- [8] MARCO MORALES, Roger Pearce, Nancy M. Amato, “Analysis of the Evolution of C-Space Models Built through Incremental Exploration”, in *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) 2007*, pp. 1029-1034, Rome, Italy, DOI: 10.1109/ROBOT.2007.363120, Apr. 2007. Acceptance rate = 44% (787/1800).
- [9] Shawna Thomas, MARCO MORALES, Xinyu Tang, Nancy M. Amato, “Biasing Samplers to Improve Performance”, in *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) 2007*, pp. 1625-1630, Rome, Italy, DOI: 10.1109/ROBOT.2007.363556, Apr. 2007. Acceptance rate = 44% (787/1800).
- [10] Dawen Xie, MARCO MORALES, Roger Pearce, Shawna Thomas, Jyh-Ming Lien, Nancy M. Amato, “Incremental Map Generation (IMG)”, in Srinivas Akella, Nancy M. Amato, Wesley H. Huang, Bud Mishra (editors) *Algorithmic Foundations of Robotics VII, Springer Tracts in Advanced Robotics*, vol. 47/2008, pp 53-68, ISBN 978-3-540-68404-6, ISSN 1610-7438, 2008.
- [10.bis] Dawen Xie, MARCO MORALES, Roger Pearce, Shawna Thomas, Jyh-Ming Lien, Nancy M. Amato, “Incremental Map Generation (IMG)”, in *Proceedings of the International Workshop on the Algorithmic Foundations of Robotics (WAFR) 2006*, pp. 53-68, New York, New York, U.S.A., Jul. 2006. Acceptance rate = 49% (32/65).

[11] MARCO A. MORALES A., Roger Pearce, Nancy M. Amato, “Metrics for Analyzing the Evolution of C-Space Models”, in *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) 2006*, pp. 1268-1273, Orlando, Florida, U.S.A., May 2006. Acceptance rate = 39% (680/1756).

[12] MARCO A. MORALES A., Lydia Tapia, Roger Pearce, Samuel Rodriguez, Nancy M. Amato, “C-Space Subdivision and Integration in Feature-Sensitive Motion Planning”, in *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) 2005*, pp. 3114-3119, Barcelona, Spain, May 2005. Acceptance rate = 44% (750/1700).

[13] MARCO MORALES, Lydia Tapia, Roger Pearce, Samuel Rodriguez, Nancy M. Amato, “A Machine Learning Approach for Feature-Sensitive Motion Planning”, in Michael Erdmann, David Hsu, Mark Overmars, Frank van der Stappen (editors) *Algorithmic Foundations of Robotics VI, Springer Tracts in Advanced Robotics*, vol 17/2005, pp. 361-376, ISBN 978-3-540-25728-8, ISSN 1610-7438, Nov. 1st, 2005.

[13.bis] MARCO MORALES, Lydia Tapia, Roger Pearce, Samuel Rodriguez, Nancy M. Amato, “A Machine Learning Approach for Feature-Sensitive Motion Planning”, in *Proceedings of the International Workshop on the Algorithmic Foundations of Robotics (WAFR) 2004*, pp. 361-376, Utrecht/Zeist, The Netherlands, Jul. 2004. Acceptance rate unavailable.

[14] MARCO MORALES, Samuel Rodríguez, Nancy M. Amato, “Improving the Connectivity of PRM Roadmaps”, in *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) 2003*, pp. 4427-4432, Taipei, Taiwan, DOI: 10.1109/ROBOT.2003.1242286, Sep. 2003. Acceptance rate = 60% (711/1176).

[15] Jyh-Ming Lien, MARCO MORALES, Nancy M. Amato, “Neuron PRM: A Framework for Constructing Cortical Networks”, *Neurocomputing*, 52-54(28):191-197, ISSN 0925-2312, Impact Factor 1.434, Jun. 2003. doi:10.1016/S0925-2312(02)00728-2 (Poster presented at the Annual Computational Neuroscience Meeting (CNS), Chicago, U.S.A., Jul. 2002).

[16] Jesús Savage, MARCO MORALES, Roman Osorio, Andrés Pérez, Jimena Olveres, “Learning Mobile Robot Paths Using Potential Field Methods”, *Proceedings of the IFAC/IFIP/IEEE Conference on Management and Control of Production and Logistics 2000 (MCPL '00)*, , pp. 1253-1256, Grenoble, Francia, Jul. 2000. Acceptance rate unavailable.

[17] MARCO ANTONIO MORALES AGUIRRE, Jesús Savage, “Mobile Robot Control using Expert Systems and Neural Networks”, *International Symposium on Robotics and Automation '98*, Saltillo, Coahuila, México, Dec. 1998. Acceptance rate unavailable.

Editorial Activities

[18] Nancy M. Amato, Oliver Brock, MARCO MORALES, Shawna Thomas “Special issue on Robotics: Science and Systems; 2016”, *Autonomous Robot* (ISSN: 1573-7527), October 2018, vo. 42, no. 7, pp. 1299–1300 DOI: 10.1007/s10514-018-9775-9, url="https://doi.org/10.1007/s10514-018-9775-9"

[19] Greg Chirikjian, Howie Choset, MARCO MORALES, and Todd Murphey, “Editorial: Special Issue on the Eighth International Workshop on the Algorithmic Foundations of Robotics”, *The International Journal of Robotics Research* (ISSN: 0278-3649, Online ISSN: 1741-3176, 2008 Impact Factor 2.882), June 2010, vol. 29, no. 7, pp. 787–788, DOI:10.1177/0278364910363634

Books

[20] Gregory S. Chirikjian, Howie Choset, MARCO MORALES, Todd Murphey (Eds.) “Algorithmic Foundations of Robotics VIII: Selected Contributions of the Eighth International Workshop on the Algorithmic Foundations of Robotics”, (WAFR) 2008, Springer. ISBN 978-3-642-00311-0. 2010.

Book Chapters

[21] Rodrigo Rill-Garcia, Jose Martinez-Carranza, MARCO MORALES, Edgar Granados, “Path Planning and Following for an Autonomous Model Car Using an Eye in the Sky” in Anis Koubaa (Editor) “Robot Operating System (ROS) The Complete Reference (Volume 4)”, to appear in 2019.

[22] Luis Alberto Pineda Cortés, Jesús Savage Carmona, MARCO ANTONIO MORALES AGUIRRE, Caleb Rascón Estebané, David A. Rosenblueth, Marco Negrete, Alejandro Aceves López, Héctor Manuel Becerra Fermín, Gibrán Fuentes Pineda, Hernando Ortega Carrillo, Arturo Rodríguez García “A. Investigación en Robótica en México”, “B. Torneos de Robótica” in Luis Enrique Sucar Succar, Yasmín Hernández Pérez (Editors) “Robótica de Servicio” Academia Mexicana de Computación. 2018

[23] Luis Alberto Pineda Cortés, Luis Enrique Sucar Succar, Jesús Savage Carmona, Alejandro Aceves López, Héctor Manuel Becerra Fermín, Gibrán Fuentes Pineda, MARCO ANTONIO MORALES AGUIRRE, Hernando Ortega Carrillo, Caleb Rascón, Arturo Rodríguez García chapter 4 “Robótica de Servicio” in Luis Alberto Pineda Cortés (Editor) “La Computación en México, por Especialidades Académicas” pp. 127–166, Academia Mexicana de Computación. ISBN 978-607-97357-1-5. 2017

Unrefereed Publications, Technical Reports and Posters

[24] Alberto Petrilli, MARCO MORALES, Jean-Bernard Hayet, Claudia Esteves, Humberto Sossa, José Martínez Carranza, “Aztlán: RoboCup SPL 2019 Team Description”, Team Description Paper for the SPL RoboCup 2019, Feb 2019.

[25] Alberto Petrilli, MARCO MORALES, Jean-Bernard Hayet, Claudia Esteves, Humberto Sossa, José Guadalupe Romero, José Martínez Carranza, Roberto Ramírez Márquez, “Aztlán: RoboCup SPL 2018 Team Description”, Team Description Paper for the SPL RoboCup 2018, Nov 2017.

[26] MARCO MORALES, Samuel Rodríguez, Shawna Thomas, Nancy M. Amato, “Sampling-Based Planning and Local Reactive Strategies for Environment Manipulation”, Poster presented in Workshop on *Revisiting Contact - Turning a Problem into a Solution* at Robotics: Science and Systems XIII (RSS) 2017, Cambridge, Massachusetts, USA, Jul. 2017.

[27] Jorge A. Delgado, Edgar Granados, Eduardo D. Martínez, Karen L. Poblete, MARCO MORALES, “Integrated Task and Motion Planning for Instances of Autonomous Driving”, Poster presented in Workshop on *Integrated Task and Motion Planning* at Robotics: Science and Systems XIII (RSS) 2017, Cambridge, Massachusetts, USA, Jul. 2017.

[28] Jorge Alfredo Delgado Meraz, Edgar Granados Osegueda, MARCO MORALES, “An Application of POMDPs for Autonomous Driving”, Poster presented in Workshop on *Integrated Task and Motion Planning* at Robotics: Science and Systems XIII (RSS) 2017, Cambridge, Massachusetts, USA, Jul. 2017.

[29] Edgar Granados, Diego Pozo, Mariana Hernández, Erick Zetina, Ruiciro Rivera, MARCO MORALES “Eagle Knights 2017: Small Size League”, Team Description Paper for the SSL RoboCup 2017, Feb. 2017

[30] Alberto Petrilli, MARCO MORALES, Jean-Bernard Hayet, Claudia Esteves, Humberto Sossa, Héctor Becerra, “Aztlán: RoboCup 2017 Standard Platform League”, Team Description Paper for the SPL RoboCup 2017, Nov. 2016.

[31] Edgar Granados, MARCO MORALES, Jose G. Romero Velázquez, “Diseño y Desarrollo de un Robot Omnidireccional para Aplicaciones Colaborativas”, In *Memorias del XVIII Congreso Mexicano de Robótica (COMROB) 2016*, Nov 2016, pp. 120-125. Mazatlán, Sinaloa, México.

- [32] Edgar Granados, Maria Fernanda Borge, Alan Córdova, MARCO MORALES “Eagle Knights 2016: Small Size League”, Team Description paper for the SSL RoboCup 2016, Feb. 2016
- [33] Alberto Petrilli, MARCO MORALES, Jean-Bernard Hayet, Claudia Esteves, Humberto Sossa, Héctor Becerra, “Aztlan: RoboCup 2016 Standard Platform League”, Team Description Paper for the SPL RoboCup 2016, Nov. 2015.
- [34] Nancy M. Amato, Jyh-Ming Lien, MARCO MORALES, Samuel Rodriguez, Lydia Tapia, and Shawna Thomas “Motion Planning” Position Statement In “NSF/NRI-sponsored Workshop Report: Robot Planning in the Real World: Research Challenges and Opportunities,” pp. 14–15 January 2014. <http://robotics.cs.unc.edu/PlanningWorkshop2013/NSF-Planning-Workshop-Report.pdf>
- [35] MARCO MORALES, Alberto Candela, Alejandro Escalante, Javier Sagastuy, Luis Eduardo Pérez, Andre Possani “Eagle Knights 2014: Small Size League”, Team Description Paper for the SSL RoboCup 2014, Feb. 2014
- [36] MARCO MORALES, Andre Possani, Alberto Candela Garza, Alan Córdova Posadas, Alejandro Escalante Arrieta, Juan Carlos González Sosa, Luis Eduardo Pérez Estrada, Jorge Pérez Rentería, Karen L. Poblete Rodríguez, Hipólito Ruíz Galeana, Javier Sagastuy Breña, Fabiola Terán, Jorge C. Urteaga Reyesvera, Miguel Angel Valenzuela Sánchez, Héctor Vidrio, “Eagle Knights 2013: Small Size League”, Team Description Paper for the SSL RoboCup 2013, Feb. 2013
- [37] MARCO MORALES, José Alonso Solís Lemus, Carlos Jesús Alegría Ramírez, Andrés Akle Carranza, Alan Córdova Posadas, Jorge Alberto González Martínez, Jorge Luis Pérez Rentería “Eagle Knights 2012: Small Size League”, Team Description Paper for the SSL RoboCup 2012, Feb. 2012
- [38] MARCO MORALES, Jean-Bernard Hayet, Claudia Esteves, Rubén Anaya, “Cuauhpipiltin 2012: Standard Platform League”, Team Description Paper for the SPL RoboCup 2012, Jan. 2012
- [39] Carlos Alegría, Paolo Aguilar, Alan Córdova, Hipólito Ruiz, Alonso Solís, and MARCO MORALES, “Eagle Knights 2011: Small Size League”, Team Description Paper for the SSL RoboCup 2011, Feb. 2011
- [40] Jesús Savage, Francisco Dorantes, Alejandra Sánchez, Rubén Anaya, Norma Chávez, Rodrigo Savage, Boris Escalante, MARCO MORALES, “Laboratory Assignments to Teach the Basics of Programmable Logic Applied to Mobile Robots”, 1st Mexican Workshop on Reconfigurable Computing and its Applications to Education and Engineering (ReConFig), Dec. 2010
- [41] Ernesto Torres, Paolo Aguilar, Alan Córdova, Hipólito Ruiz, Julio Sánchez, Miriam Martínez, MARCO MORALES, Matthew Holland, Wayne Blackshear, Chris Hewell, Alfredo Weitzenfeld, “Eagle Knights - Robobulls 2010: Small Size League”, Team Description Paper for the SSL RoboCup 2010, Feb. 2010
- [42] Ernesto Torres, Jesús Rodríguez, Paolo Aguilar, Carlos Alegría, Leonardo Ramos, Allistair Moses, Jeremy Blackburn, MARCO MORALES, Alfredo Weitzenfeld, “Eagle Knights-RoboBulls 2009: Small Size League”, Team Description Paper for the SSL RoboCup 2009, Feb. 2009
- [43] Emir Herrera, Miguel Candia, Gibrán Ríos, MARCO MORALES, “Eagle Knights 2008, Standard Platform League”, Team Description Paper for the SPL RoboCup 2009, Feb. 2009
- [44] Carlos Ramos, Carlos Rivera, Gibrán Ríos, Emir Herrera, MARCO MORALES, Alfredo Weitzenfeld, “Eagle Knights 2008, Two-Legged Standard Platform League”, Team Description Paper for the SPL RoboCup 2008, Nov. 2007

[45] MARCO ANTONIO MORALES AGUIRRE “Metrics for Sampling-Based Motion Planning”, Texas A&M University, Dec. 2007 (Ph.D. Dissertation).

[46] Aimée Vargas, Jyh-Ming Lien, MARCO A. MORALES A., Samuel Rodriguez, Nancy M. Amato, “User-Guided Path Planning”, *Technical Report, TR05-011, Parasol Laboratory, Department of Computer Science, Texas A&M University*, Sep 2005.

[47] Jesús Savage, MARCO A. MORALES A., Edna Márquez, Fernando Lepe-Casillas, “The Use of Hidden Markov Models and Vector Quantization for Mobile Robot Localization”. *Robotics and Applications (RA)* 2005, IASTED, Boston, U.S.A. 2005.

[48] MARCO ANTONIO MORALES AGUIRRE “Control de Robot Móvil Usando Redes Neuronales y Sistemas Expertos”, Facultad de Ingeniería, Universidad Nacional Autónoma de México (UNAM), Nov. 1998 (M.S. Thesis).

[49] MARCO ANTONIO MORALES AGUIRRE “Diseño, Construcción y Control de un Vehículo Manipulador de Navegación Autónoma para Transferencia de Piezas”, Facultad de Ingeniería, Universidad Nacional Autónoma de México (UNAM), Aug. 1996 (B.S. Thesis).

Professional Service and Activities

CONFERENCE ORGANIZING AND PROGRAM COMMITTEES

Competition Co-Chair. Torneo Mexicano de Robótica (TMR) 2019

Workshop Co-Chair. Escuela de Invierno de Robótica (EIR) 2018-2019

Conference Co-Chair. International Workshop on the Algorithmic Foundations of Robotics (WAFR), 2018. Universidad Politécnica de Yucatán, Mérida, Yucatán, México. Dec. 9–11 2018

Short Talks Co-Chair. Robotics: Science and Systems 2016, Ann Arbor, Michigan, 2016.

Competition Local Chair. RoboCup 2012 Small Size League.

Competition Chair. Torneo Mexicano de Robótica (TMR) 2011 and 3rd RoboCup Mexican Open, ITAM, Ciudad de México, México, May 4-6 2011)

Conference Co-Chair. International Workshop on the Algorithmic Foundations of Robotics (WAFR), 2008.

Workshop Co-Organizer. Third Workshop of the Humanoids Research Group 2009 CINVESTAV-ITESM-UNAM-ULSA-ITAM.

Workshop Co-Organizer. Workshop on Machine Learning for Planning and Control of Robot Motion, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Hamburg, October 2nd, 2015.

Workshop Co-Organizer. Workshop on Machine Learning for Planning and Control of Robot Motion, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, September 14, 2014.

Organizing Committee Member

- Torneo Mexicano de Robótica 2018 – AutoModel Car League
ITESM, Monterrey, Nuevo León, México, Mar. 22–24 2018
- Escuela de Invierno de Robótica 2017-2018
Casino Jalapeño, Xalapa, Veracruz, México, 9–13 Jan. 2018
- Torneo Mexicano de Robótica 2017 – Humanoids League
Colegio Cristobal Colón, Lomas Verdes, Estado de México, México, Mar. 30 – Apr. 1st, 2017
- Escuela de Invierno de Robótica 2016-2017
UPAEP, Puebla, México, 9–13 Jan. 2017
- Torneo Mexicano de Robótica 2014 – Standard Platform League Exhibition
UNACAR, Ciudad del Carmen, Campeche, México, Apr. 10–12 2014
- Escuela de Invierno de Robótica 2013
INAOE, Tonantzintla, Puebla, México, 9–13 Dic. 2013

- RoboCup 2012
WTC, Ciudad de México, México, 18–24 Jun. 2012
- FIRST LEGO League National Tournament
ITAM, Ciudad de México, México, Jan. 12 2008
- Mobile Robots Competition
UNIVERSUM, UNAM, Ciudad de México, México, Jan. 1999

Associate Editor

- IEEE International Conference on Robotics and Automation (ICRA), 2011, 2012, 2013, 2014, 2015
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2008, 2009, 2010, 2011, 2012, 2013

Program Committee Member

- International Workshop on the Algorithmic Foundations of Robotics (WAFR), 2008, 2010, 2014, 2016, 2018.
- Robotics: Robotics Science and Systems (RSS), 2008, 2016, 2017, 2018.
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2008, 2009, 2014, 2015, 2016, 2017.
- IEEE International Conference on Robotics and Automation (ICRA), 2017, 2018.
- International Symposium on Robotics Research (ISRR), 2015, 2017.
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2017.
- International Conference on Advanced Robotics (ICAR), 2013.
- Mexican International Conference on Artificial Intelligence (MICAI), 2013, 2017.
- Workshop on Machine Learning in Planning and Control of Robot Motion (MLPC) in ICRA 2018.
- International Conference on Automated Planning and Scheduling (ICAPS), Robotics Track, 2018, 2019.
- IEEE International Parallel & Distributed Processing Symposium (IPDPS)
- Latin American Robotics Symposium (LARS) 2008
- Motion in Games (MIG)

Volunteer: Interface 2006, Oct. 2006. International Workshop on Robotics and Automation (WAFR) Jul. 2006. IEEE International Conference on Robotics and Automation (ICRA) Sep. 2003. International Workshop on Languages and Compilers for Parallel Computing (LCPC) Oct. 2003.

JOURNALS

Associate Editor for

- IEEE RAS Robotics and Automation Letters (RA-L), June 2015 – 2019.
- International Journal of Robotics Research (IJRR) Special Issue on the “Thirteenth International Workshop on the Algorithmic Foundations of Robotics” 2018
- IEEE Transactions on Automation Science and Engineering (T-ASE) Special Issue on the “Thirteenth International Workshop on the Algorithmic Foundations of Robotics” 2018
- Autonomous Robots (AURO) Special Issue on “Robotics Science and Systems” 2016
- International Journal of Robotics Research (IJRR) Special Issue on the “Eight International Workshop on the Algorithmic Foundations of Robotics” 2008

Reviewer for IEEE RAS Robotics and Automation Letters (RA-L), IEEE Transactions on Robotics and Automation (T-RA), IEEE Transactions on Robotics (T-RO) 2017, IEEE Transactions on Automation Science and Engineering (T-ASE). International Journal of Robotics Research (IJRR), International Journal of Advanced Robotic Systems (IJARS), Journal of Applied Research and Technology (JART), Journal of Intelligent and Robotic Systems (JINT), Journal of Computing and Information Science in Engineering (JCISE), and Neural Computing and Applications Journal (NCAA) 2017

PROFESSIONAL ASSOCIATIONS

- Federación Mexicana de Robótica (FMR)
Founder Member (2010), Vocal (2010–Spring 2016), Treasurer (Spring 2016 – Spring 2017), Vice-President (Spring 2017 – Spring 2018), President (Spring 2018 – Spring 2019)
- Academia Mexicana de Computación (AmexComp) Regular Member No. 85 (2017–)
- Institute of Electrical and Electronics Engineers (IEEE) Member (1997–)
- IEEE RAS
Member (1998–)
Mexican Council Chair (Oct. 2013 –)
Young Reviewers Program Technical Advisory Board (2015 –)
Access to Talent Program Committee Member (2018 –)
IEEE RAS Technical Committee on Algorithms for Planning and Control of Robot Motion: Member (2008 – date), Newsletter Chair (2009–2010)
- Association for Computing Machinery (ACM)
Student Member (2001–2007)
Professional Member (2008–)
- Sociedad de Exalumnos de la Facultad de Ingeniería de la UNAM Member (1995–)
- Asociación de Ingenieros Universitarios Mecánicos y Electricistas (AIUME) Member (1995–)
- Red Mexicana de Investigación y Desarrollo en Cómputo (REMIDEC)

Significant University Service and Community Outreach Activities

MASTER IN COMPUTER SCIENCE Admissions Committee Definition of profile and curriculum development.	2012–
MECHATRONICS ENGINEERING PROGRAM Committee for the evaluation and improvement of the program	2016, 2017,2018
COMITTEE SO B ABET Coordinator Definición de actividades de promoción y evaluación de Student Outcome B en el proceso de mejora continua para ABET.	Fall 2012, Spring 2013, Fall 2013, Spring 2014
MASTER IN COMPUTER SCIENCE Committee for the creation of the new program Definition of profile and curriculum development.	Fall 2011
MECHATRONICS ENGINEERING PROGRAM Committee for the creation of the new program Definition of profile and curriculum development.	Fall 2009

TELECOMMUNICATIONS ENGINEERING PROGRAM Fall 2009
 Committee for the creation of the new program
 Reviews and recommendations to the proposed program.

CERTIFIED EVALUATOR 2009 – 2012
 Member of the Registro CONACYT de Evaluadores Acreditados (RCEA) belonging to the Sistema Nacional de Evaluación Científica y Tecnológica (SINECYT)

JUDGE FIRST Lego League National Competition México, D.F., México, Jan. 2009
 Williams College

JUDGE ExITAM Research Award México, D.F., México, Jan. 2009, Jan. 2010
 ITAM

JUDGE Reading “Science for Everyone” Fondo de Cultura Económica
 X Mexican y II Iberoamerican contest San Juan del Río, Querétaro, México, Abr. 2008
 XII Contest Huejotzingo, Puebla, México, Abr. 2010

PARASOL SEMINAR COORDINATOR College Station, Texas, USA, Mar. 2003–Aug. 2005
 Parasol Laboratory, Texas A&M University May-Jul. 2006, May – Jul. 2007

PRESIDENT, Texas A&M Fulbright Association College Station, Texas, USA, Jan. – Dec. 2005
 Presided and organized all the activities of the Association in collaboration with vice-presidents, program coordinators, and members. Represented the Association in events and activities in Texas A&M University. Significant projects included:

- Coordinated with the Brazos Valley Chapter of the Fulbright Association to organize activities to enhance the experience of visitor Fulbrighters in Texas A&M including trips to the area surrounding College Station.
- Coordinated a mentor program for newly admitted Fulbrighters with support of the Sponsored Students Program office of Texas A&M.
- Coordinated a hospitality program for incoming Fulbrighters where members of the association helped in their arrival to find housing, roommates, and settle in College Station.
- Social and sports activities for Fulbrighters and their families.
- Collaborated with officials of Texas A&M in prioritizing key concerns of international students, these concerns were addressed through University policy changes.

HOSPITALITY PROGRAM COORDINATOR, College Station, Texas, USA, Jan. – Sep. 2004
 Texas A&M Fulbright Association
 Program for incoming Fulbrighters where members of the association helped in their arrival to find housing, roommates, and settle in College Station.

AI AND ROBOTICS SEMINAR COORDINATOR College Station, Texas, USA, Jan. 2001 - Feb. 2003
 Department of Computer Science, Texas A&M University

QUESTION AUTHOR, EGEL INFO-COMP TEST México, D.F., México, Jul. 1999
 CENEVAL (National Center for Evaluations)
 Contributions to the “general test for graduates of B.S. on Informatics and Computing”

JUDGE The Week of Engineering 1998 México, D.F., México, May 1998
 College of Engineering, UNAM

MEMBER OF UNAM TEAM Querétaro, Querétaro, México, May 1998
 Third National Minirobotics Competition

COACH OF UNAM TEAM
Regional ACM Programming Competition

Querétaro, Querétaro, México, Oct. 1997

Courses Taught

GRADUATE
COM-34703 : Compilers

Division of Engineering, ITAM
Spring 2013, 2014, 2016, 2017, 2018, 2019

UNDERGRADUATE

Division of Engineering, ITAM

COM-11102: Data Structures

Fall 2019

COM-23702: Compilers

Spring 2013, 2016, 2019

SDI-11120: Elements of Physics

Spring 2008 (lab)

SDI-11121: Elements of Electronics

Fall 2007, 2008, 2009, 2010 (lab); Spring 2009 (lab), 2010, Fall 2011 (lab)

SDI-11322: Logic Circuits Fall 2007 (lab), 2012, 2013, 2015, 2016, 2017, 2018; Spring 2012, 2013 (lab)

SDI-11441: Processor Design

Fall 2009, 2010, 2011; Spring 2010, 2011, 2012, 2014

SDI-11561: Elements of Mechatronics Fall 2011, 2012; Spring 2012, 2013, 2014, 2016, 2017, 2018, 2019

SDI-11841: Electronic Design for Telematics

Spring 2008, 2009

SDI-12515: Signals and Systems

Fall 2008 (lab)

SDI-12626: Communication Systems

Spring 2011 (lab)

SDI-15888: Research Seminar

Fall 2011, Spring 2012

SDI-11911: Robotics

Fall 2013, 2015, 2016, 2017

GRADUATE

Division of Continuous Education

Mobile Robot Design

School of Engineering, UNAM

May 1999, May 1998

UNDERGRADUATE

Division of Electrical Engineering

School of Engineering, UNAM

1206: Computers and Programming

Fall 1997, 1998, 1999; Springs 1997, 1998, 1999, 2000

2138: Expert Systems

Fall 1997, 1998, 1999; Springs 1998, 1999, 2000

UNDERGRADUATE: JUNIOR COLLEGE

Division of Informatics, UTFV

Programming Logic

Spring 1996

Advanced Programming

Fall 1997, 1998

Analysis and Design of Information Systems

Spring 1998

Professional and Invited Presentations (in addition to regular conference talks)

PANEL DE EXPERTOS: OPORTUNIDADES EN ROBÓTICA (Humberto Sossa, Wen Yu, Adolfo Guzmán Arenas, Marco Morales - Moderador) Escuela de Invierno de Robótica 2018-2019 Centro de Investigación en Computación, Instituto Politécnico Nacional, Ciudad de México, México, Jan. 9, 2019

ROBOTICS 101 (Marco Morales, Jason O’Kane) Robot Guru 3, International Workshop on the Algorithmic Foundations of Robotics Mérida, Yucatán, México, Dec. 8th, 2018

MESA DE DIÁLOGO “INTELIGENCIA ARTIFICIAL” Instituto Tecnológico Autónomo de México (ITAM), Ciudad de México, México, Nov. 14 2018

LOS OBSERVADORES TV Interview

Canal ADN 40 TV Azteca, Mexican TV, Feb. 11, 2018

EXHIBICIÓN DE AUTOS AUTÓNOMOS Escuela de Invierno de Robótica Casino Jalapeño, Xalapa, Veracruz, Jan. 13 2018

ALGUNOS RETOS DE LOS ROBOTS AUTÓNOMOS Escuela de Invierno de Robótica Casino Jalapeño, Xalapa, Veracruz, Jan. 13 2018

EL TORNÉO MEXICANO DE ROBÓTICA 2017 Press conference Universidad LaSalle, Ciudad de México, México, Mar. 8 2017

LA EXPERIENCIA CON COCHES AUTÓNOMOS EN EL LABORATORIO DE ROBÓTICA DEL ITAM
Division of Engineering Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Estado de México, Atizapán, Naucalpan, México, México, May. 5 2017

ROS WORKSHOP Escuela de Invierno de Robótica INAOE, Tonantzintla, Puebla, México, Dec. 09 2013

THE SMALL SIZE LEAGUE IN ROBOCUP Service Robots Workshop FI, UNAM, Ciudad de México, México, Aug. 29, 2013
Red de Robótica y Mecatrónica del CONACYT

ALGORITHMS FOR ROBOTS DAI Research Seminar ITAM, Ciudad de México, México, May. 3, 2013

MOTION PLANNING FOR ROBOTS Service Robots Workshop FI, UNAM, Ciudad de México, México, Jan. 18, 2013
Red de Robótica y Mecatrónica del CONACYT

MOTION PLANNING AND CONTROL IN DYNAMIC ENVIRONMENTS Computing Seminar, CIMAT Guanajuato, Guanajuato, México, Mar. 23, 2011

ITAM ROBOTICS LAB TV Interview Canal 11, Mexican TV, Nov. 16, 2011

ROBOCUP 2012 MÉXICO Press conference Palacio de Minería, UNAM, Ciudad de México, México, Dec. 8, 2011
Radio Interview, “Alcanzando el Conocimiento” MVS Radio 102.5 FM, Dec. 15, 2011

LA CORPORALIDAD EN LOS SISTEMAS INTELIGENTES Workshop “La filosofía del cuerpo”, FES Acatlán, UNAM, México, México, Sep. 7, 2011

MEXICAN ROBOTICS TOURNAMENT AND MEXICAN TEAMS IN ROBOCUP 2011 Radio Interview, “Ingeniería en Marcha”, Radio UNAM 860 AM México, Jun. 7, 2011

THE COMPLEXITY OF PARTITION TASKS Parasol Seminar, Texas A&M University College Station, Texas, U.S.A, Jul. 23, 2010

LA PLATAFORMA ESTÁNDAR DE ROBOCUP: HUMANOIDE NAO Third Workshop of the Humanoids Research Group 2009 CINVESTAV-ITESM-UNAM-ULSA-ITAM, ITAM, México, Nov. 27, 2009

COGNITIVE ROBOTICS: A MULTILEVEL APPROACH (Alfredo Weitzenfeld, Alejandra Barrera, Marco Morales)
Workshop on Service Robots, Mexican International Conference on Artificial Intelligence, Aguascalientes, México, Nov. 6, 2007

MOTION PLANNING TECHNIQUES AND APPLICATIONS IN ROBOTICS, GROUP BEHAVIOR MODELING, MOLECULE MODELING, AND NEUROSCIENCE

Expo-Robótica, México, 13 Nov. 2009
Computer Science Department Seminar, CINVESTAV, México, 9 Nov. 2009
Master of Science on Information Science and Technology Seminar, UAM-Iztapalapa, México, 12 Mar. 2009
AI and Robotics School, Instituto de Biotecnología, UNAM Cuernavaca, Morelos, México, 27 Feb. 2009
Robotics Week, Instituto Tecnológico Autónomo de México México, D.F., México, Mar. 2007

VIZMO++: A VISUALIZATION, AUTHORING, AND EDUCATIONAL TOOL FOR MOTION PLANNING (Aimée Vargas, Jyh-Ming Lien, Marco Morales, and Nancy M. Amato)
Workshop on Research in Robots for Education, Robotics: Science and Systems (RSS), Atlanta, Georgia, USA, Jun. 30, 2007

METRICS FOR SAMPLING-BASED MOTION PLANNING
2nd Workshop on Robotics and Motion Planning, CIMAT Guanajuato, México, Feb. 15 2008
Physical and Biological Computing Group Seminar, Rice University Houston, TX, USA, May 2007
Research Seminar, Instituto Tecnológico Autónomo de México México, D.F., México, Mar. 2007
Parasol Seminar, Texas A&M University College Station, TX, USA, Feb. 23, 2007

METRICS FOR ANALYZING THE EVOLUTION OF C-SPACE MODELS Parasol Seminar, Texas A&M University
College Station, TX, USA, May 12, 2006

EVALUATING THE QUALITY OF MOTION PLANNING ROADMAPS Parasol Seminar, Texas A&M University
College Station, TX, USA, Dec. 2, 2005

IMPROVING THE CONNECTIVITY OF PRM ROADMAPS Parasol Seminar, Texas A&M University
College Station, TX, USA, Sep. 5, 2003

ROBOTICS 5th National Week on Science and Technology, UTFV Nicolás Romero, México, México,
Oct. 1998

PATH PLANNING FOR MOBILE ROBOTS
Week of Engineering, College of Engineering, UNAM., México, D.F., México, May 1998
Microsoft Academic Day, México, D.F., México, Apr. 1998
Academic Week, Universidad del Valle de México Tlalpan, D.F., México, Oct. 1997

CLIPS-BASED VISUALIZATION TOOL FOR ROBOT SIMULATIONS Colloquium “Research at the College of
Engineering”, UNAM México, D.F., México, Feb. 1997

THE INTERNET Celebration week of the first anniversary of the UTFV Nicolás Romero, México,
México, Jan 1996

Students

MASTER THESIS ADVISOR Division of Engineering, ITAM
Advisor for the following student on the development of his thesis to get the following Degrees:

- *Master of Science in Computer Science*
 - Eduardo David Martínez Neri. Thesis “Conducción Autónoma en Carreteras sin Señales de Tráfico”. Defended in June 2018. Special Mention
 - Karen Lorena Poblete Rodríguez. Thesis “Lógica Lineal Temporal para Planificación Multicapa de Tareas y Movimientos para Robots”. Defended in June 2017.
 - Alfonso David Kim Quezada. Thesis “Implementación del Algoritmo ColumnSort en STAPL”. Defended in May 2016.

- Salvador Bedredin Medina Maza. Thesis “Visual Classifier of Mexican Peso Coins”. Defended in August 2015.
- *Master of Science in Information Technologies and Administration*
 - Guillermo Canchola Rico. Thesis: “Análisis del uso de tecnologías de seguridad electrónica en redes de telecomunicación”. Defended in January 2011.
- *Master of Science in Information Technologies and Administration and “Mastère Spécialisé en Réseaux et Systèmes D’Information Pur Les Entreprises”*
 - Jorge Luquín Rivera. Thesis: “Modelo predictivo del tipo de manejo de automóviles mediante árboles de decisiones”. Defended in March 2010. Special Mention
 - Raúl Homero Mendoza Terrazas. Thesis: “Modelo predictivo del tipo de manejo de automóviles mediante árboles de decisiones”. Defended in March 2010. Special Mention
 - Carlos Manuel Acosta Briseño. Thesis: “Análisis de tecnologías para la implementación de sistemas domóticos y propuesta de aplicación residencial”. Defended in March 2009

UNDERGRADUATE THESIS ADVISOR

Division of Engineering, ITAM

Advisor for the following students on the development of their theses to get the following degrees:

- *B.S.in Mechatronics Engineering*
 - Jorge Alfredo Delgado Meraz. Thesis: “Diseño de Procesos de Decisión de Markov Parcialmente Observables para Conducción Autónoma”. Defended in April 2018.
 - Rodrigo Salazar Zugasti. Thesis: “Diseño y Desarrollo de Plataforma Eléctrica de Tipo Ackerman para Silla de Ruedas”. Defended in May 2018.
- *B.S.in Industrial Engineering*
 - Edgar Alejandro Granados Osegueda. Thesis: “Diseño de la Arquitectura Modular de un Sistema Robótico Sujeto a las Reglas F180”. Defended in June 2018.
- *B.S.in Telematics Engineering*
 - Horacio Flores Reynoso. Thesis: “Caza en grupo para múltiples robots utilizando modelos neuronales” (Group hunting behaviors for multiple robots using neural models). Defended in December 2013.
 - Mauricio Sánchez Castellanos Prado. Minor Thesis: “Alternativas tecnológicas para comunicar comunidades marginadas” (Technological options for communication in marginalized communities). Defended in May 2010.
- *B.S. in Computer Engineering*
 - Edgar Alejandro Granados Osegueda. Thesis: “Diseño e Implementación de un Robot Móvil Omnidireccional para Aplicaciones Colaborativas”. Defended in July 2017.
 - Karen Lorena Poblete Rodríguez. Minor Thesis: “Estrategias cooperativas en sistemas multi-agente aplicadas en fútbol robótico” (Cooperative strategies in multi-agent systems applied to robotic soccer). Defended in October 2014.
 - Horacio Flores Reynoso. Thesis: “Caza en grupo para múltiples robots utilizando modelos neuronales” (Group hunting behaviors for multiple robots using neural models). Defended in June 2014.

UNDERGRADUATE THESIS ADVISOR

Division of Electrical Engineering, UNAM

Advisor for the following students on the development of their theses to get the B.S. in Computer Engineering:

- Mr. José Salvador Rentería Ibarra. “Propuesta de metodología para la creación de ambientes virtuales” (Proposal for a methodology to build virtual environments). Defended in Dec. 2001.
- Ms. Lizbeth Alejandra Mohzo Sánchez. “Propuesta de metodología para la creación de ambientes virtuales” (Proposal for a methodology to build virtual environments). Defended in Dec. 2001.
- Mr. Saúl Cristobal Figueroa Cálix. “Control a distancia de un robot móvil utilizando principios de teleoperación” (Mobile robot control based on tele-operation). Defended in Jul. 2000.

JUNIOR COLLEGE STUDENT ADVISOR

Division of Informatics, UTFV (Junior College)

Supervised the industry internship and final project of two students to get the associate degree on Informatics.

ROBOTICS LABORATORY

Division of Engineering, ITAM

Academic adviser to a group of students to participate in robotics competitions and get started on research. This group has participated under Morales’ leadership in the following events:

- 2nd place Standard Platform League. Torneo Mexicano de Robótica 2017/19. ITESM, Guadalajara, Jalisco, México. Mar. 21 – 23, 2019.
- RoboCup 2018. Standard Platform League, Team Aztlán. Montreal, Canadá, Jun 17–22, 2018
- Torneo Mexicano de Robótica, Standard Platform League, 2018. ITESM, Monterrey, Nuevo León, México. Mar. 22–24, 2018
- Torneo Mexicano de Robótica, AutoModel Car League, 2018. ITESM, Monterrey, Nuevo León, México. Mar. 22–24, 2018
- Escuela de Invierno de Robótica 2017/2018. Xalapa, Veracruz, México. Jan. 8–12, 2018
- RoboCup 2017. Standard Platform League, Team Aztlán. Nagoya, Japan, Jul. 27–30, 2017
- Demo of SPL team during Autonomous Cars competition within the dual year México-Alemania Centro Cultural Juan de Dios Bátiz del Instituto Politécnico Nacional, Ciudad de México, México, Apr. 2 2017
- Autonomous Cars competition within the dual year México-Alemania Centro Cultural Juan de Dios Bátiz del Instituto Politécnico Nacional, Ciudad de México, México. April 1–2, 2017
- 2nd place Standard Platform League. Torneo Mexicano de Robótica 2017. Mar. 20 – Apr. 1, 2017 Lomas Verdes, México, México
- Escuela de Invierno de Robótica 2016/2017. UPAEP, Puebla, México. Jan 8–12, 2017.
- Workshop on the AutoNOMOS model car 2016. Nov. 18 – 20. Centro Cultural Juan de Dios Bátiz, IPN, Ciudad de México, México
- 1st place NAO SPL. Torneo Mexicano de Robótica 2015. Apr. 23 – 25. Acatlán, México, México
- Torneo Mexicano de Robótica 2015. Limpiadores de playa. Apr. 23 – 25. Acatlán, México, México.
- 1st place Penalty Shootouts. Primer concurso de robótica e Inteligencia Artificial NAO 2014. Nov. 13 – 14. Aguascalientes, Aguascalientes, México
- RoboCup 2012. Small Size League, Standard Platform League. Jun. 18–24. Ciudad de México, México.
- RoboCup 2011. Small Size League. Jul. 5–11. Istanbul, Turkey.
- 1st place Seguidor de Laberintos. Torneo Mexicano de Robótica 2011. May. 4 – 6. ITAM. Ciudad de México, México
- RoboCup 2010. Small Size League. Jun. 19–25. Singapur.

- RoboCup 2009. Small Size League, Standard Platform League. Jun. 29 – Jul. 5. Graz, Austria.
- Campus Party 2009. Nov. 15. Ciudad de México, México
- Expo Robótica 2009. Nov. 12 – 16. Ciudad de México, México.
- Torneo Mexicano de Robótica 2009. Sep. 10 – 12. Zapopan, Jalisco, México.
- 4th place Standard Educational Kit. Latin American Robotics Competition (LARC) 2008. Oct. 26 – 29. Bahia, Salvador, Brasil.
- 1st place Standard Educational Kit. Torneo Mexicano de Robótica 2008. Sep. 4–6. Ciudad de México, México.

STUDENT RESEARCH MENTORING

Division of Engineering, ITAM

Research advisor to the following students:

- Alfonso Kim Quezada. Summer Research Intern at Texas A&M University. Summer 2015.
- Alejandro Escalante Arrieta. Research Experiences for Undergraduates (REU) at Texas A&M University. Summer 2013.
- Karen Lorena Poblete Rodríguez. Research Experiences for Undergraduates (REU) at Texas A&M University. Summer 2013
- Sofía Gómez de Silva from McMaster University, Canada. Summer Research Intern at ITAM, Summer 2010.
- Maria Elena Rocha Alonso. Visitor on the XVIII Scientific Research Summer 2008.

STUDENT RESEARCH MENTORING

Parasol Lab, Texas A&M University

As a PhD student, Morales mentored the following students:

- Mr. Saurabh Mishra, Mr. Chih-Peng Wu, Ms. Hsin Yi Yeh, Ms. Mukulika Ghosh. Collaborating in several research projects during sabbatical stay at Texas A&M in the 2014-2015 academic year.
- Ms. Terra Horton. Major in Computer Science and Mathematics and Minor in Accounting at Langston University (Langston, OK). Participant of the CRA-W Distributed Mentoring Project (DMP). Summer 2005.
- Ms. Terra Horton, Mr. Luke Hunter, Ms. Perpetual Amoah, Mr. John Maffei. Participants of a Motion Planning crash course for undergrads in the USRG, and DMP. Summer 2005.
- Mr. Luke Hunter, Mr. Varrian Hall, Mr. Dan Corlette, Mr. Sudharsan Gunanathan, Mr. John Maffei. Participants of a Motion Planning reading group for undergrads and grad students. Fall 2005.
- Mr. David Little. Participant of the USRG. Summer 2004.
- Mr. Samuel Rodríguez, Ph.D. student in Computer Science at Texas A&M University, Summer - Fall 2003

Languages

Spanish: native speaker; *English*: fluent; *Nahuatl*: beginner; *German*: beginner.

March, 2019