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TOMAS LOZANO-PEREZ

Position: Professor
Office: 32-G492
Phone: +1 (617) 253-7889
Email: tlp@csail.mit.edu
Areas of Study: Robotics & Learning Personal Website
Last Update: May 8, 2014
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BIOGRAPHY

Tomas Lozano-Perez is the School of Engineering Professor of Teaching Excellence at MIT, where he is a member of the Computer Science and Artificial Intelligence Laboratory. Professor Lozano-Perez has all his degrees (SB '73, SM '76, PhD '80) from MIT in Computer Science. He has been Associate Director of the Artificial Intelligence Laboratory and Associate Head for Computer Science of MIT's Department of Electrical Engineering and Computer Science. Professor Lozano-Perez's research has been in robotics (configuration-space approach to motion planning), computer vision (interpretation-tree approach to object recognition), machine learning (multiple-instance learning), medical imaging (computer-assisted surgery) and computational chemistry (drug activity prediction and protein structure determination from NMR & X-ray data).

PUBLICATIONS

Jennifer Barry, Leslie Pack Kaelbling, Tomas Lozano-Perez, DetH*: Approximate Hierarchical Solution of Large Markov Decision Processes, International Joint Conference on Artificial Intelligence (IJCAI), July 2011

Leslie Pack Kaelbling and Tomas Lozano-Perez, Hierarchical Planning in the Now (Finalist, Best Manipulation Paper Award), IEEE Conference on Robotics and Automation (ICRA), May 2011

Han-Pang Chiu, Huan Liu, Leslie Kaelbling, Tomas Lozano-Perez Class-Specific Grasping of 3D Objects from a Single 2D Image, in IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), October 2010.

Emma Brunskill, Leslie Pack Kaelbling, Tomas Lozano-Perez, and Nicholas Roy, Planning in partially observable switching-mode continuous domains, Annals of Mathematics and Artificial Intelligence, July, 2010.

Kaijen Hsiao, Leslie Pack Kaelbling and Tomas Lozano-Perez, Task-Driven Tactile Exploration, in Robotics, Science and Systems (RSS), June 2010.

Robert Platt, Russell Tedrake, Tomas Lozano-Perez, and Leslie Pack Kaelbling, Belief space planning assuming maximum likelihood observations, in Robotics Science and Systems (RSS), June 2010.

Han-Pang Chiu, Leslie Pack Kaelbling, Tomas Lozano-Perez, Learning to generate novel views of objects for class recognition, Computer Vision and Image Understanding 113 (2009) 1183--1197

E.J. Hong, S.M. Lippow, B. Tidor, T. Lozano-Perez. Rotamer optimization for protein design through MAP estimation and problem-size reduction. J. Comput. Chem., 2009 30 (12):1923-45.

Kaijen Hsiao, Tomas Lozano-Perez, and Leslie Pack Kaelbling, Robust Belief-Based Execution of Manipulation Programs, in Eighth International Workshop on the Algorithmic Foundations of Robotics (WAFR), 2008.

Finney, S., Kaelbling, L., Lozano-Perez, T. Predicting Partial Paths from Planning Problem Parameters, Robotics, Science and Systems (RSS), 2007.

Hsiao, K., Kaelbling, L., Lozano-Perez, T.

Grasping POMDPs, IEEE Conference on Robotics and Automation (ICRA), 2007.

Chiu, H-P., Kaelbling, L., Lozano-Perez, T. Virtual Training for Multi-View Object Class Regnition, IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2007.

Hong, E., Lozano-Perez, T. Protein Side-Chain Placement Through MAP Estimation and Problem-Size Reduction, 6th Workshop on Algorithms in Bioinformatics (WABI) 2006, pp. 219-230.

Hsiao, K., Lozano-Perez, T. Imitation Learning of Whole-Body Grasps, IEEE/RSJ Intl. Conf. on Intelligent Robots and Systems (IROS), 2006.

Chiu, H-P, Lozano-Perez, T. Matching Interest Points Using Affine Invariant Concentric Circles, Intl. Conference on Pattern Recognition (ICPR), 2006. pp 167-170.

C. M. Rienstra, L. Tucker-Kellogg, C. P. Jaroniec, M. Hohwy, B. Reif, M. T. McMahon, B. Tidor, T. Lozano-Perez, R. G. Griffin, De Novo Determination of Peptide Structure with Solid-State MAS NMR Spectroscopy, Proc. Nat'l. Acad Sci. 99, 10260-10265 (2002).

AWARDS

MIT: MacVicar Faculty Fellow (2014)

Institute of Electrical and Electronics Engineers: Fellow (2012)

Institute of Electrical and Electronics Engineers: Robotics Pioneer Award (2011)

Association for the Advancement of Artificial Intelligence : Fellow (1990)

National Science Foundation: Presidential Young Investigator Award (1985)

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