

David Little

Contact Information

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Education

- 09/06 - now Ph.D. Candidate: Cognitive Systems Division, EECS Department
Research Interests: Machine Learning, Psychoacoustics and Signal Processing: psychophysically and physiologically inspired machine learning methods for perception of audio.
Advisor: Bryan Pardo
Cognitive Science Specialist
Northwestern University
- 08/02 - 08/06 B.A., Majors: Computer Science and Cognitive Science
Vassar College, Poughkeepsie, NY

Fellowships

- 09/06 - 06/07 Incoming Cognitive Science Fellowship, Northwestern University.
09/09 - 06/10 Advanced Cognitive Science Fellowship, Northwestern University.

Research Experience

- 06/09 - now Research Assistant
Advisor: Bryan Pardo
EECS Department, Northwestern University, Evanston, IL
- 06/05 - 08/05 Vassar College Undergraduate Summer Research: Robot Models of Human Category Learning
Advisor: Ken Livingston
Vassar College, Poughkeepsie, NY
- 06/04 - 08/04 Vassar College Undergraduate Summer Research: Algorithms for Hexagonal Metamorphic Robots
Advisor: Jennifer Walter
Texas, A&M University, College Station, TX.

Teaching Experience

- Spring, 2005 Lab Assistant - Software Design and Implementation

Fall, 2006 Lab Assistant - Cognitive Science, Perception & Action
Spring, 2006 Lab Assistant - Research Methods in Cognitive Science
Spring, 2007 Teaching Assistant - Introduction to Artificial Intelligence

Service

2007 Conference Reviewer - IEEE International Conference on Acoustics, Speech and Signal Processing, 2008
2007 Conference Reviewer - IEEE International Symposium on Circuits and Systems, 2008.
2009 Journal Reviewer - Computer Music Journal
2009 Conference Reviewer - International Conference on Music Information Retrieval (ISMIR), 2009.

Publications

Refereed Conferences Proceedings

D. Little and B. Pardo. Learning musical instruments from mixtures of audio with weak labels. In *ISMIR, 9th International Conference on Music Information Retrieval*, 2008.
D. Little, D. Raffensperger, and B. Pardo. A query by humming system that learns from experience. In *8th International Conference on Music Information Retrieval (ISMIR)*, Vienna, Austria., September 2007.
D. Little and J. Walter. Using hexagonal metamorphic robots to form temporary bridges. In *in Proc. of the IEEE International Conference on Intelligent Robotic Systems*, pages 2652–2657, Edmonton, Alberta, Canada, August 2005.
J. Walter, M. Brooks, D. Little, and N. Amato. Enveloping multi-pocket obstacles with hexagonal metamorphic robots. In *in Proc. of the IEEE Intl. Conf. on Robotics and Automation*, pages 2204–2209, New Orleans, LA, April 2004.
J. Walter and D. Little. Bridging gaps in traversal surfaces with hexagonal metamorphic robots. In *in Proc. of the American Nuclear Society 10th International Conference on Robotics and Remote Systems for Hazardous Environments*, pages 28–31, Gainesville, FL, March 2004.

Poster Presentations and Demos

D. Little, D. Raffensperger, and B. Pardo. User-specific training for a music search engine. In *4th Joint Workshop on Multimodal Interaction and Related Machine Learning Algorithms*, pages 28–30, Brno, Czech Republic., June 2007.
B. Pardo, D. Little, R. Jiang, H. Livni, and J. Han. The vocalsearch music search engine. In *Proceedings of the 8th ACM/IEEE-CS joint conference on Digital libraries*, pages 430–430. ACM New York, NY, USA, 2008.

Submitted Journal Publications

David Little and Bryan Pardo. Sound source labeling: Learning from weakly labeled mixtures. Submitted to Special Issue on Signal Models and Representations of Musical and Environmental Sounds for IEEE Transactions on Audio, Speech and Language Processing, 2009.