

# Curriculum Vitae

## David J. Stracuzzi

- CONTACT INFORMATION *Address:* School of Computing, Informatics, and Decision Systems Engineering  
Arizona State University  
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- EDUCATION University of Massachusetts at Amherst, Ph.D., 2006, Computer Science  
University of Massachusetts at Amherst, M.S., 2002, Computer Science  
Clarkson University, B.S., 1998, Computer Science
- APPOINTMENTS Assistant Research Professor November 2006 – present  
School of Computing and Informatics  
Arizona State University  
Postdoctoral Research Scientist October 2005 – October 2006  
Computational Learning Laboratory  
Center for the Study of Language and Information  
Stanford University  
Research Assistant August 2003 – August 2005  
Eyetrack Laboratory  
Department of Psychology  
University of Massachusetts at Amherst  
Research Assistant July 1998 – August 2003  
Machine Learning Laboratory  
Department of Computer Science  
University of Massachusetts at Amherst
- GRANTS AWARDED Unified Computational Theory of Language and Cognition, Office of Naval Research (MURI), [\$638,490], August 2009 – July 2012. (sub-contract through Rensselaer Polytechnic Institute, co-PI with Pat Langley.)  
Mental Simulation and Learning in ICARUS, Office of Naval Research [\$497,432], January 2009 – December 2011 (co-PI with Pat Langley).  
Software Integration for Computational Cognitive Models in Virtual Environments, Air Force SBIR/STTR [\$228,705], July 2009 – June 2011 (sub-contract through SET Corporation, co-PI with Pat Langley).  
Transfer Learning in Integrated Cognitive Systems, Defense Advanced Research Projects Agency [\$479,013], November 2006 – August 2009 (sub-contract through the Institute for the Study of Learning and Expertise).

- Mental Simulation and Learning in ICARUS, Office of Naval Research [\$140,165], January 2008 – December 2008 (co-PI with Pat Langley).
- GIFTS RECEIVED Acquiring Structured Representations for Temporal Domains, Lockheed Martin Advanced Technology Laboratories [\$50,000]
- PROPOSALS UNDER REVIEW Asynchronous Construction of Sparse, Many-Layered Representations from Simple Features, Defense Advanced Research Projects Agency [\$4,088,108], January 2010 – December 2013 (co-PI with Pat Langley).
- An Asynchronous Approach to Constructing Sparse, Many-Layered Representations from Simple Features, National Science Foundation [\$1,199,458], January 2010 – December 2013 (Tim Oates and Eric Eaton co-PIs).
- TEACHING EXPERIENCE Teaching Assistant (Stanford) Fall 2005  
CS 379B: Reasoning and Learning in Cognitive Systems
- Instructor (UMass) Winter 2003  
CMPSCI 197C: C++ for Java Programmers
- Teaching Assistant (UMass) Spring 2003  
CMPSCI 630: Programming Languages
- Teaching Assistant (UMass) Spring 2001  
CMPSCI 383, Artificial Intelligence
- HONORS AND AWARDS Best student paper, International and Interdisciplinary, Conference on Knowledge Representation and Reasoning, 2005
- Hamlin/Darraugh Outstanding Senior Award, Mathematics and Computer Science Department, Clarkson University, 1998
- Gerald Bradshaw Outstanding Junior Award, Mathematics and Computer Science Department, Clarkson University, 1997
- Phi Kappa Phi honor society
- SERVICE Program Committee, *International Conference on Machine Learning*, 2009
- Program Committee, *European Conference on Machine Learning and European Conference on Principles and Practice of Knowledge Discovery*, 2007
- Reviewer, *Annual Meeting of the Cognitive Science Society*, 2009
- Reviewer, *Computational Statistics and Data Analysis*, 2008, 2009
- Reviewer, *Knowledge Engineering Review*, 2008
- Reviewer, *Annals of Information Systems*, 2008

Reviewer, *Third International Conference on Body Area Networks*, 2008

Reviewer, *Journal of Artificial Intelligence Research*, 2007

Reviewer, *Data Mining and Knowledge Discovery*, 2007, 2008

Reviewer, *Journal of Discrete Algorithms*, 2005

## Publications

- JOURNAL ARTICLES
- Stracuzzi, D.J. and Utgoff, P.E. (2004), Randomized variable elimination. *Journal of Machine Learning Research*, 5. 1331 – 1362.
- Utgoff, P.E. and Stracuzzi, D.J. (2002), Many-layered learning. *Neural Computation*, 14 (10). 2497 – 2529.
- CONFERENCE PAPERS
- Li, N., Stracuzzi, D.J., Cleveland, G., Konik, T., Shapiro, D., Molineaux, M., and Aha, D.W. (2009). Constructing game agents from video of human behavior. *Proceedings of the Fifth AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*. Stanford, CA: AAAI Press.
- Stracuzzi, D.J., Li, N., Cleveland, G. and Langley, P. (2009). Representing and reasoning over time in a unified cognitive architecture. *Proceedings of the 31st Annual Meeting of the Cognitive Science Society*. Amsterdam, Netherlands: Cognitive Science Society, Inc.
- Li, N., Stracuzzi, D.J., Langley, P. and Nejati, N. (2009). Learning hierarchical skills from problem solutions using means-ends analysis. *Proceedings of the 31st Annual Meeting of the Cognitive Science Society*. Amsterdam, Netherlands: Cognitive Science Society, Inc.
- Stracuzzi, D.J. and Könik, T. (2008), A statistical approach to incremental induction of first-order hierarchical knowledge bases. *Proceedings of the Eighteenth International Conference on Inductive Logic Programming* (pp. 279–296). Prague, Czech Republic: Springer.
- Li, N., Stracuzzi, D.J. and Langley, P. (2008), Learning Conceptual Predicates for Teleoreactive Logic Programs. *Proceedings of the Late-Breaking Papers Track at the Eighteenth International Conference on Inductive Logic Programming*.
- Asgharbeygi, N., Stracuzzi, D.J. and Langley, P. (2006), Relational Temporal Difference Learning. *Proceedings of the Twenty-third International Conference on Machine Learning*. (pp. 49–56). Pittsburgh, PA: ACM Press.
- Stracuzzi, D.J. (2005) Scalable knowledge acquisition through memory organization. *International and Interdisciplinary Conference on Knowledge Representation and Reasoning* (pp. 57–64). Espoo, Finland: Helsinki University of Technology.
- Stracuzzi, D.J. and Utgoff, P.E. (2002) Randomized variable elimination. *Proceedings of the Nineteenth International Conference on Machine Learning* (pp. 594–601). Sydney, Australia: Morgan Kaufmann.
- Utgoff, P.E. and Stracuzzi, D.J. (2002) Many-layered learning. *Second International Conference on Development and Learning* (pp. 141–146). Cambridge, MA: IEEE Press.
- Utgoff, P.E. and Stracuzzi, D.J. (1999) Approximation via value unification. *Proceedings of the Sixteenth International Conference on Machine Learning* (pp. 425–432). Bled, Slovenia: Morgan Kaufmann.

- WORKSHOP PAPERS
- Li, N., Stracuzzi, D.J., Cleveland, G., Konik, T., Shapiro, D., Ali, K., Moliniaux, M., Aha, D.W. (2009). Learning Hierarchical Skills for Game Agents from Video of Human Behavior. *Proceedings of the IJCAI 2009 Workshop on Learning Structural Knowledge From Observations*. Pasadena, CA.
- Stracuzzi, D.J. (2006) Memory organization and knowledge transfer. *Proceedings of the ICML-2006 Workshop on Structural Knowledge Transfer for Machine Learning*. Pittsburgh, PA.
- Stracuzzi, D.J. and Asgharbeygi, N. (2006) Transfer of knowledge structures with relational temporal difference learning. *Proceedings of the ICML-2006 Workshop on Structural Knowledge Transfer for Machine Learning*. Pittsburgh, PA.
- POSTERS AND PRESENTATIONS<sup>1</sup>
- Bidaye, D., Dzifcak, J., Stracuzzi, D.J., Chimera, R., Verdicchio, M., Furber, J., Kim, S., and Langley, P. (2009). An interactive environment for visualizing, interpreting, and revising biological process models. *The 13th Annual International Conference on Research in Computational Molecular Biology*. Tuscon, AZ.
- Bidaye, D., Dzifcak, J., Stracuzzi, D.J., Chimera, R., Verdicchio, M., Furber, J., Kim, S., and Langley, P. (2009). An interactive environment for visualizing, developing, and evaluating biological process models of aging. *The 38th Annual Meeting of the American Aging Association*. Scottsdale, AZ.
- BOOK CHAPTERS
- Stracuzzi, D.J. (2007) Randomized Feature Selection. In Liu and Motoda, editors, *Computational Methods of Feature Selection*. CRC Press.
- TECHNICAL REPORTS
- Stracuzzi, D.J. (2005) *Scalable learning in many layers*. Amherst, MA: University of Massachusetts Computer Science Department. TR-05-02.
- Stracuzzi, D.J. and Utgoff, P.E. (2000) *Feature compilation*. Amherst, MA: University of Massachusetts Computer Science Department. TR-00-18.
- DOCTORAL DISSERTATION
- Stracuzzi, D.J. (2006), *Scalable knowledge acquisition through cumulative learning and memory organization*. Ph.D. Thesis. Department of Computer Science, University of Massachusetts, Amherst, MA.

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<sup>1</sup>Abstracts, extended abstracts, and other acceptance procedures with limited review.