JEREMY F. GOTTLIEB, PH.D.

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EDUCATION

University of California, Santa Cruz *December 2014*
Ph.D. in Computer Science, specializing in robotic navigation and controls.
Advisor: Gabriel Hugh Elkaim
Dissertation: "A Computationally Tractable Information Foraging Algorithm that Satisfies Time-to-go Constraints"

Carnegie Mellon University *December 2003*
Ph.D. in Psychology, specializing in computational modeling and long-term memory.
Advisors: Herbert A. Simon and Kenneth Kotovsky
Dissertation: "Semantic Memory Structure: How What We Know About the World is Organized in the Mind"

Carnegie Mellon University *May 2000*
M.S. in Psychology.

Carleton College *June 1997*
B.A. in Computer Science and Psychology with a concentration in Cognitive Studies.

PROFESSIONAL EXPERIENCE

Smart Information Flow Technology August 2014 - Present
Research Scientist *Minneapolis, MN*

- Performed research into improving target recognition and tracking capabilities of unmanned aerial system sensor operators.
- Help develop interfaces to allow sensor operators to update targets of interest in real-time.
- Helped develop a system to allow Department of Defense Test & Evaluation personnel to assess likely performance of human-robot teams.
- Worked on project (CAMO) geared towards allowing autonomous systems to passively infer information about users and adjust behavior accordingly.
- Wrote or co-wrote funding proposals geared towards autonomous, mixed-initiative systems as well as Phase II of CAMO.

University of California, Santa Cruz September 2010 - June 2014
Graduate Student Researcher *Santa Cruz, CA*

- Conducted dissertation research into path planning for robotic vehicles.
- Collaborated in the writing of successful UARC grant funded by NASA.
- Collaborated in winning entry in 2012 PartnerBot competition from Clearpath Robotics
- Was teaching assistant for multiple courses, including Artificial Intelligence and Programming Languages.
- Collaborated in the writing of multiple NSF grants.

California State University, Monterey Bay January 2013 - December 2013
Lecturer *Seaside, CA*

· Taught Introduction to Computer Science and Cognitive Psychology

Monterey Bay Aquarium Research Institute (MBARI) August 2011 - October 2013
Collaborator *Moss Landing, CA*

· Continuing research on event detection for AUVs.
· Collaborated with researchers from MBARI, UC Berkeley, USC, and Carnegie Mellon on NSF proposal.

NASA Ames Research Center September 2011 - January 2013
Volunteer Associate *Mountain View, CA*

· Collaborated with NASA researchers on developing algorithms to allow rovers to navigate environments where traversability is represented stochastically instead of deterministically.

Monterey Bay Aquarium Research Institute (MBARI) June 2011 -August 2011
Summer Intern *Moss Landing, CA*

· Developed early version of MBFD algorithm to allow AUVs to autonomously detect the presence of ocean fronts.

IRIS Mobile Robot Project August 2008 - August 2011
Project Manager *The Mind Project*

· Worked with the Mind Project on the IRIS project.
· IRIS is a mobile robotics platform designed to be cheap and easy to implement for high schools and small colleges.

Carthage College August 2002 - August 2009
Assistant Professor of Psychology and Computer Science *Kenosha, WI*

· Taught a wide variety of undergraduate computer science and psychology courses, with a focus on cognitive science and artificial intelligence courses in a liberal arts environment.
· Served on numerous faculty committees (listed below).
· Integrated undergraduate students into research projects.
· Awarded tenure and promoted to Associate Professor in March 2009, effective that fall.

GRANTS, HONORS, AND AWARDS

Winner, PartnerBot Competition, Clearpath Robotics, 2012.

Graduate Student Travel Grant, International Conference on Robotics and Automation, 2012.

Consultant, National Institutes of Health Science Education Partnership Award; a five year grant supporting"The Mind Project's Cutting Edge Health Science Initiative" 2006-2011.

Quality of Life grant to create robotics course and set up new lab, Carthage College, 2006.

National Defense Science and Engineering Fellow, 1998-2001.

TEACHING EXPERIENCE AND INTEREST

Artificial Intelligence	Robotics, Planning, Mechatronics, Machine Learning
Computer Science	Introductory CS, Data Structures, Networks, Theory
Cognitive Science	Cognitive Psychology, Cognitive Neuroscience, Computational Modeling

PUBLICATIONS

[1] Anderson, D. L., Gottlieb, J. F., Thill, E. J., and Lockwood, K. Iris: A student-driven mobile robotics project. In *AAAI Spring Symposium: Using Electronic Tangibles to Promote Learning: Design and Evaluation* (Stanford, CA, 2010).

[2] Gottlieb, J., Curry, R., and Elkaim, G. A computationally tractable information foraging algorithm. (submitted). ICRA, 2015.

[3] Gottlieb, J., Graham, R., Maughan, T., Py, F., Elkaim, G., and Rajan, K. An Experimental Momentum-based Front Detection Method for Autonomous Underwater Vehicles. In *Proceedings of the IEEE International Conference on Robotics and Automation* (St. Paul, MN, 2012).

[4] Gottlieb, J. F. Domain effects in human problem solving. In *Annual meeting of the American Psychological Society* (Washington, DC, 1997).

[5] Gottlieb, J. F. *Semantic memory structure: How what we know about the world is organized in the mind*. PhD thesis, Carnegie Mellon University, 2003.

[6] Gottlieb, J. F. The modality-specific organization of semantic memory. In *Annual meeting of the Association for Psychological Science* (Chicago, IL, 2004).

[7] Gottlieb, J. F. The structure of semantic memory: Category-based vs. modality-based. In *Annual meeting of the Cognitive Science Society* (Stressa, Italy, 2005).

[8] Gottlieb, J. F. *A Computationally Tractable Information Foraging Algorithm that Satisfies Time-to-go Constraints*. PhD thesis, University of California - Santa Cruz, December 2014.

[9] Gottlieb, J. F., and Kaufman, S. B. How information is organized in semantic memory. In *Annual meeting of the American Psychological Society* (Toronto, Ontario, 2001).

[10] Gottlieb, J. F., and Kennedy, K. Evidence for the modality specificity of semantic memory. In *Annual meeting of the Association for Psychological Science* (Chicago, IL, 2008).

[11] Komatsu, L. K., Kerner, R. S., Lee, K. P., Thompson, J. R., and Gottlieb, J. F. Creators' intentions do not play a major role in artifact categorization. In *Annual meeting of the American Psychological Society* (Washington, DC, 1997).

[12] Kotovsky, K., Fujimori, Y., de Osuna, J. G., and Gottlieb, J. F. The strategic unconscious: Some problem-solving evidence. In *Annual meeting of the American Psychological Society* (Washington, DC, 1998).

SERVICE

Professional

- Chair, Undergraduate Research Committee, Consortium on Cognitive Science Instruction, 2008-2011
- Member, Consortium on Cognitive Science Instruction, 2007-2012
- Reviewer, *TopICS in Cognitive Science*, 2010-2012
- Reviewer, Cognitive Science Society annual conference, 2006-2009

Administrative

Carthage College

- Chair, Social Science Summer Undergraduate Research Program, 2005-2009
- Member, Institutional Review Board, 2008-2009
- Member, Heritage Oversight Committee, 2006-2009
- Member, Student Judicial Advisory Board, 2003-2009
- Member, Social Science Distribution Credit Standardization committee, 2005-2006
- Secretary, Social Science Division, 2002-2005
- Faculty Advisor, Carthage Ultimate Frisbee Club, 2008-2009
- Referee, Research and Creativity Award, 2005, 2008
- Interviewer, Lincoln Scholarship Competition, 2003-2009
- Interviewer, Transfer Scholarship, 2003-2005

Community

- Mentor, Carmel High School FIRST Robotics Team, 2010-2012
- Head Coach, Carnegie Mellon/Pitt Women's Ultimate Frisbee team, 2001-2002