# Stephen M. Majercik

William K. Richard and Stephen M. Majercik. Swarm-based path creation in dynamic environments for search and rescue. In Proceedings of the Fourteenth International Conference on Genetic and Evolutionary Computation, pp. 1401-1402, ACM, 2012.

Stephen M. Majercik and Byron Boots. DC-SSAT: A divide-and-conquer approach to

#### **Other Publications**

Stephen M. Majercik. APROPOS<sup>2</sup>: Approximate probabilistic planning out of stochastic satisfiability. In Papers from the AAAI Workshop on Probabilistic Approaches in Search (held at the Eighteenth National Conference on Artificial Intelligence), pages 29-34, AAAI Press, 2002.

Stephen M. Majercik. Planning under uncertainty via stochastic satisfiability. In Proceedings of the AAAI Fall Symposium on Using Uncertainty Withi6.992 cm BT 38 0 0 7806.24 0 0 g6 1367 233T7nt-I-j 69

- Planning Under Uncertainty via Stochastic Satisfiability, Honeywell Technology Center, Minneapolis, Minnesota, 1999.
- Probabilistic Planning as Probabilistic Satisfiability, NASA Ames Research Center, Moffett Field, California, 1999.

## Teaching Experience

- Bowdoin College, 2000-Present.
  - Courses taught:
    - Introduction to Computer Science
    - Data Structures
    - Algorithms
    - Theory of Computation
    - Artificial Intelligence
    - Nature Inspired Computation
    - Optimization and Uncertainty in Artificial Intelligence
    - · Artificial Intelligence and Computer Games
    - Robotics
    - Cryptography and Network Security
    - Capstone Experience: Cryptography and Network Security
    - Independent Studies and Honors Projects:

• ! 7-' &() . +' +@(7&%' \*+C) 2(7") #-) &+8"7+N') . %' . -+N-' 7) () . , Collaborative Independent Study (with ), Spring 2017.

.

- Ahn Hoang, Lattice-Based Dynamic Neighborhood Topologies for Particle Swarm Optimization, Independent Study, Fall 2014.
- Gabrielle Grandin, Using Probability Matrices for Neighborhood Creation in Particle Swarm Optimization, Independent Study, Fall 2014.
- Julia Hogan, Mobile Computing, Independent Study, Fall 2014.
- Anh Hoang, Developing Dynamic Neighborhoods for Particle Swarm Optimization, Independent Study, 2014.
- Kuangji Chen, Ren Ding, Ruben Martinez, David Phipps, and Judy Yang, Physical Computing, Independent Studies, 2012-13.
- William Richard, Using Swarm Intelligence for Search and Rescue, Honors Project, 2010-11.
- John Burlinson, *Using Pheromones in a Swarm-Based Music Improvisation System*, Honors Project, 2009-10.
- Oliver Radwan, BD-SSAT: Combining Systematic and Local Search to Solve Stochastic Boolean Satisfiability Problems, Honors Project, 2007-08.
- Christopher Antoun and Matthew Antoun, Using Genetic Algorithms to Evolve a Neural Network Controller for Robocode,

## Funding and Fellowships

- Bowdoin College Faculty Leave Award, 2017-18.
- HP Technology for Teaching Grant, "Round Table: Problem-Based Learning with Tablets to Engage Heterogeneous Learners in CS 101," 2007.
- Bowdoin College Faculty Research Grant, 2003-06.
- Bowdoin College Faculty Leave Supplement, 2003-04.
- NASA Graduate Student Research Program Fellowship, NASA Ames Research Center, 1998-2000.
- Computer Science Department Fellowship, Duke University, 1994-95.

#### Student Summer Research Fellowships:

- Bowdoin Faculty Scholarship, Sophia Ardell, 2017.
- SURDNA Summer Research Fellowship, Christopher MacDonald, 2015.
- Kibbe Science Fellowship, John , 2015.
- Bowdoin Summer Research Fellowship, Grace Handler, 2015.
- Clare Boothe Luce Fellowship, Gabrielle Grandin, 2014.
- Gibbons Summer Research Internship, Ruben Martinez, 2013.
- Maine Space Grant Consortium Fellowship, William Richard, 2010.
- Maine Space Grant Consortium Fellowship, John Burlinson, 2009.
- Gibbons Summer Research Internship, Octavian Neamtu, 2009.
- SURDNA Summer Research Fellowship, Oliver Radwan, 2007.
- James Stacy Coles Undergraduate Research Fellowship, Mark McGranaghan, 2006.
- SURDNA Summer Research Fellowship, Oliver Radwan, 2005.
- SURDNA Summer Research Fellowship, Melissa Perrin, 2004.
- SURDNA Summer Research Fellowship, Byron Boots, 2002.
- James Stacy Coles Undergraduate Research Fellowship, Andrew Rusczek, 2001.

### **Professional Activities**

• Referee:

Journals: Artificial Intelligence Journal, Information Journal, Journal of Cellular Automata, Journal of Computational Intelligence, Journal of Neural Computing and Applications, Journal of Educational Resources in Computing.

Conferences and Workshops: International Joint Conference on Computational Intelligence (2017),

Advances in Artificial Intelligence (2010, 2011), Joint Conference on the Science and Technology of Intelligent Systems (ISIC/CIRA/ISAS) (1998).

Grants: National Science Foundation (2015), Civilian Research and Development Foundation (2005), Maine Space Grant Consortium Seed Grant Program (2001, 2006).

• Program Committees: International Joint Conference on Computational Intelligence (2017),

AAAI

Workshop on Probabilistic Approaches in Search (2002), Second International Workshop on Quantified Boolean Formulae (2002), Educational Advances in Artificial Intelligence, at the International FLAIRS Conference (2005, 2006, 2007, 2010, 2011).

- Planning Committee for the First ICAPS Probabilistic Planning Competition.
- Workshop on Bridging the Gender Gap for Girls and Women in Computing, University of Southern Maine, 2004.
- Council on Undergraduate Research, Member, 2000-04.
- Workshop on Gender Issues in the Sciences, Colby College, 2003.
- Triangle Area Neural Network Society, Membership Chair, 1998-2000.

## Bowdoin College Service

- Committees:
  - o Student Fellowships Committee, 2014-17; Chair, 2016-17.
  - o Committee on Appointments, Promotions, and Tenure, 2012-2014.
  - Steering Committee for the Bowdoin Computational Studies Initiative, 2012
  - Board of Trustees Information Technology Advisory Committee, 2008-09, 2010-11
  - Faculty Resources Committee and Faculty Development Committee, 2007-2009.
  - Student Information Systems Core Group, 2007-2008.
  - o Recording Committee, 2001-03, 2004-07.
- Search Committees:
  - o Assistant Dean of Students for Com4 12 589.Qn

- o Faculty Panel for Judicial Board Training.
- Hewlett Discussion Group on Time.
- Advising:
  - o BASE (Bowdoin Advising Program in Support of Academic Excellence) Advisor, 2015-2017.
  - o Faculty Advisor for Reed House, 2008-2011.
  - o Peer Advising Pilot Program, 2008-09.
  - Faculty Advisor for Goldwater Scholarships and Churchill Scholarships,
     2003-03. William Klemm won a Goldwater Scholarship and Monica Skoge,
     Bowdoin's first-ever nominee for a Churchill Scholarship, was a finalist in that competition.
  - o Mellon Mays Undergraduate Fellowship Program Mentor, 2003.
- Computer Science Lab Leader, Bowdoin Science Experience: 2006, 2009, 2010, 2013.
- Computer Science Department Retreats: 2002, 2005, 2007, 2015.
- Speaker:
- Association of Bowdoin Friends Community Lecture Series, Computers and Music: Using Virtual Swarms to Program a Computer to Play Music with a Human, March, 2011.
- o Faculty Seminar Series, Achieving Goals with Chancy Logic: Planning Under Uncertainty Using Stochastic Satisfiability, October, 2007.
- o Presenter at the "Connecting Research and Student Learning" session at the Beneath the Pines program, 2006.