CV

Michael Schuresko
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Desire

To secure a position as a postdoc, professor, an industrial or academic researcher or at an innovative startup.

Education

PhD in Applied Math and Statistics, University of California, Santa Cruz, June 2009
MS in Computer Science, University of California, Santa Cruz, June 2008
BS in Computer Science, Carnegie Mellon University, May 2000

Capabilities and interests

- Distributed algorithms
- Applied mathematics / Algorithm development
- Mobile networks
- Control theory / Robotics
- Robotics / Computer Graphics
- Bayesian statistics / machine learning
- Engineering emergent behaviors

Experience

Researcher	University of California, Santa Cruz
2005 - 2009	Performed a systematic study of distributed algorithms to maintain wireless network connectivity in swarms of mobile robots. See [3, 6, 7] See also [4, 5] and [2]. Simulation platform available at [1].
Teaching Assistant	University of California, Santa Cruz
Sep 2007 - Jun 2008	Taught integration and differentiation. Led recitations.
Programmer	CommonPoint Inc (`http://www.commonpointinc.com`)
Sep 2001 - June 2005	Worked on view management, tesselation and collision detection systems.
Programmer	Sense8
Sep 2000 - June 2001	Maintained and improved a mature 3d visualization and simulation package.
Intern	Terrasim (`http://www.terrasim.com`)
Summer 1999	Helped integrate 3d building models into geospatially accurate tesselated 3d scenes.
Intern	Naval Center for Applied Research in Artificial Intelligence
Summers 1997, 1998	Wrote support code for research in robotics and genetic algorithms.

References

[1] M. D. Schuresko. CCLsim. a simulation environment for robotic networks, 2008. Electronically available at http://www.soe.ucsc.edu/~mds/cclsim.

[2] M. D. Schuresko and J. Cortés. Correctness analysis and optimality bounds of multi-spacecraft formation initialization algorithms. In *IEEE Conf. on Decision and Control*, pages 5974–5979, San Diego, CA, December 2006.

[3] M. D. Schuresko and J. Cortés. Safe graph rearrangements for distributed connectivity of robotic networks. In *IEEE Conf. on Decision and Control*, pages 4602–4607, New Orleans, LA, 2007.

[4] M. D. Schuresko and J. Cortés. Distributed motion constraints for algebraic connectivity of robotic networks. In *IEEE Conf. on Decision and Control*, pages 5482–5487, Cancun, Mexico, December 2008.

[5] M. D. Schuresko and J. Cortés. Distributed motion constraints for algebraic connectivity of robotic networks. In *Journal of Intelligent and Robotic Systems*, 2009. To appear.

[6] M. D. Schuresko and J. Cortés. Distributed tree rearrangements for reachability and robust connectivity. In R. Majumdar and P. Tabuada, editors, *International Conference on Hybrid Systems: Computation and Control*, volume 5469 of *Lecture Notes in Computer Science*, pages ***–***, New York, 2009. Springer.

[7] M. D. Schuresko and J. Cortés. Distributed tree rearrangements for reachability and robust connectivity. *SIAM Journal on Control and Optimization*, 2009. Submitted.