Dr. Roger Mailler

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Education

Ph.D.	Computer Science, University of Massachusetts Amherst, May 2004. Dissertation: *A Mediation-Based Approach to Cooperative, Distributed Problem Solving.* Advisor: Victor Lesser
B.S.	Computer Science, *Magna Cum Laude*, Stony Brook University, 1999.

Honors and Awards

- National Science Foundation Early Development Career Award, 2014.
- Best Paper Award IEEE/WIC/ACM International Conference on Intelligent Agent Technology, 2012.
- Best Paper Award International Conference on Principles and Practices of Multi-agent Systems, 2010.
- Best Paper Award International Conference on Computational and Systems Biology, 2010.
- Nominated for the ACM Doctoral Dissertation award by University of Massachusetts, 2004.
- Honorable Mention, FIPA Software Prototypes Track Demonstration Competition, Fifth International Conference on Autonomous Agent, Montreal, Quebec, 2001.
- Computer Science Achievement Award, Stony Brook University, 1999.
- Provost Award for Academic Excellence, Stony Brook University, 1999.
- Paine Weber Technology and Engineering Career Scholarship, 1998.
- Air Force Commendation Medal, 1994 and 1996.

Research Interests

- Computational neuroscience
- Machine learning
- Distributed problem solving

Employment

• **Associate Professor, University of Tulsa, 2014-present.**
Director of the Computational Neuroscience and Adaptive Systems (CNAS) lab. This lab focuses on the investigation of biological and artificial systems that adapt in order to survive in an environment or to solve problems. The lab leverages tools from both computer science and neuroscience to perform its studies.

• **Assistant Professor, University of Tulsa, 2008-2014.**

• **Senior Computer Scientist, SRI International, 2005-2008.**
Lead scientist for the coordination component of SRI's solution to the DARPA Coordinators program. Designed, built, and tested a protocol for solving a generic class of dynamic coordination problems.

Lead author on the winning $27M SRI proposal for the DARPA Bootstrapped Learning program. PI of the project for the first phase of the program where I coordinated the research and technical directions of 12 separate university and industry partners to build and test a domain independent electronic student that can learn from a human teacher. The SRI solution exceeded all performance requirements at the end of its phase 1 evaluation.

• **Postdoctoral Associate, Cornell University, 2004–2005.**
Worked to expand the usefulness of mediation-based techniques for solving distributed problems. Acted as the Intelligent Information Systems Institute (IISI) liaison to the Air Force Research Lab (AFRL) in Rome, NY. Duties include mentoring and collaborating with AFRL researchers to improve the quantity and quality of in-house research being conducted at the Rome lab site.

Authored the Cornell portion of a winning proposal for the DARPA Coordinators program as a member of a team with SRI, CMU, Harvard, Vassar, and Bar Ilan University.

• **Research Assistant, University of Massachusetts at Amherst, 1999–2004.**
Designed, built, and tested the tracking, resource coordination, and organizational role management components of a real-time distributed sensor network for the University of Massachusetts as part of the DARPA ANTS program. Ultimately, UMass was selected as one of two teams to participate in a final, fourth year technology demonstration.

I designed and tested two mediation-based protocols for solving distributed constraint satisfaction and optimization problems. The Asynchronous Partial Overlay (APO) and Optimal APO (OptAPO) algorithms have application to scheduling, resource allocation, and function optimization.

Advisor: Prof. Victor Lesser.

Funding Experience

• **Air Force Office of Sponsored Research, $725K, 3 Years. 2018-2021**. Building on our prior success in understanding the neural circuits involved in locomotion, this project

seeks to develop computational models of the decision making circuitry used by the organism *C. elegans*. The goal is to develop a computational model of the neuron used to represent locomotion intention and to use that model to drive a realistic, simulated worm. *Under review*.

• **Air Force Research Labs, $519K, 2 Years. 2016-2018**. Developed new algorithms for coordinated multi-asset mission planning in hostile environments. Working with Dr. Rose Gamble, we developed new coordination methods and dynamic path planning algorithms that utilize machine learning to predict and adapt to the behavior of hostile forces.

• **Air Force Office of Sponsored Research (DURIP), $232K, 1 Years. 2015-2016**. Supported the purchased a new high-performance light microscope to support the opto-genetic study of the locomotion neurons in the organism *C. elegans*. This new equipment will be used to uncover the basic mechanisms used to move in various environments.

• **Air Force Office of Sponsored Research, $582K, 3 Years. 2015-2018**. This project aims to develop computational models of the locomotion circuitry used by the organism *C. elegans*. The goal is to develop an understanding of how so few neurons produce behavior that is robust to loss and adaptable to the environment.

• **NSF Early Faculty Development (CAREER) Program, $451K, 5 Years. 2014-2018**. This project increases the practical applicability of distributed problem solving techniques by developing a theoretical model of these problems based on *thermodynamic theory*. Using this model, a protocol's performance can, for the first time ever, be predicted under previously untested conditions. This theoretical model is validated through extensive empirical evaluation and develops a novel protocol that alters its problem solving strategy to maximize the trade-off between deliberate and reactive decision making based on environmental dynamics. This protocol is applied to address a pressing practical problem: allocating telescopes for tracking objects in Low Earth Orbit (LEO).

• **Air Force Research Labs, $433K, 2 Years. 2013-2015**. Developed new methods and algorithms for policy-aware distributed problem solving. Working with Dr. Rose Gamble, we used DCOP technologies that are guided by organizational policies to conduct research allocation of US Intelligence, Surveillance, and Reconnaissance (ISR) assets.

• **Air Force Research Labs, $121K, 2 Years. 2010-2012**. Investigated the use of distributed constraint optimization protocols (DCOP) for allocating telescope for tracking low-earth orbit satellites. We have developed a new satellite simulator and have implemented several distributed solvers that were evaluated on this difficult real-world problem.

• **NIH INBRE Award, $10K, 1 Year. 2010**. Worked with Dr. Dennis Frisby of Cameron University to develop mutant strains of *C. elegans* for the purpose of developing new protocols for laser induced gene expression. The goal was to develop

new methods for determining the role that individual neurons perform in generating the distinct activation pattern seen in the muscle cells during locomotion.

• **DARPA Bootstrapped Learning Program Subcontract, $294K, 3 Years. 2008-2010.**
Subcontractor on the SRI Bootstrapped Learning team. The University of Tulsa was responsible for developing the Concept Interpretation Monitor, which is a module that selects concepts within the system for learning. It also provides concept ordering strategies to ensure that alternative hypothesis get properly evaluated and scored.

• **DARPA Bootstrapped Learning Program, $27M, 3 Years. 2007-2010.**
Lead author of the winning SRI proposal for the Bootstrapped Learning program. While at SRI, I was the PI and technical lead.

• **DARPA COORDINATORs Program, $684K, 4 Years. 2005-2008.**
I authored the Cornell sections of the winning SRI Coordinators proposal.

Publications

Journal Articles

1. Jacob Manjarrez and Roger Mailler "Time and Stress Constraints of *Caenorhabditis elegans* Immobilization Techniques." *PLoS ONE*. Under review.

2. Michael W. Keller, Roger Mailler, Kevin Adams. "Adhesion Energy of C. elegans" *Experimental Mechanics*, 2017. Revise and Resubmit.

3. Long-Gang Niu , Ping Liu, Yuan Shui , Roger Mailler, Zhao-Wen Wang. "BKIP-1, an auxiliary subunit critical to SLO-1 function, inhibits SLO-2 potassium channel *in vivo*" *Scientific Reports*, 2017. Accepted.

4. Ping Liu, Bojun Chen, Roger Mailler, Zhao-Wen Wang. "Antidromic-rectifying gap junctions amplify chemical transmission at functionally mixed electrical-chemical synapses" *Nature Communications*, March 2017.

5. Roger Mailler, Huimin Zheng, and Anton Ridgway. "Dynamic, distributed constraint solving and thermodynamic theory" *Autonomous Agents and Multi-Agent Systems*, 2017: 1-30.

6. Roger Mailler. "Improving the Privacy of the Asynchronous Partial Overlay Protocol." *International Journal of Multiagent and Grid Systems*. Vol 8, no 2. 2012.

7. Roger Mailler, Jacob Grave, Nathan Willy, and Trevor Sarratt. "A Biologically Accurate Simulation of the Locomotion of Caenorhabditis elegans". In *International Journal on Advances in Life Sciences*, Vol 2, no 3&4. 2011.

8. Roger Mailler and Victor Lesser. "Asynchronous Partial Overlay: A New Algorithm for Solving Distributed Constraint Satisfaction Problems" *Journal of*

Artificial Intelligence Research (JAIR), Volume 25, AI Access Foundation, pp. 529-576. April 2006.

9. Roger Mailler and Victor Lesser. "A Cooperative Mediation-Based Protocol for Dynamic, Distributed Resource Allocation" *IEEE Transaction on Systems, Man, and Cybernetics, Part C, Special Issue on Game-theoretic Analysis and Stochastic Simulation of Negotiation Agents*. Feb 2006.

Highly Refereed Conference Publications

1. Saeid Samadidana and Roger Mailler. "Using Temporal Awareness to Improve Distributed Problem Solving." *Proceedings of the 38th IEEE International Conference on Distributed Computing Systems (ICDCS 2018)*, 2018. Under review.

2. Saeid Samadidana and Roger Mailler. "Analyzing the Effect of Information Stagnancy on the Distributed Stochastic Algorithm." *Proceedings of the Seventeenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018)*, 2018. Under review.

3. Sarra Alqahtani, Ian Riley, Samuel Taylor, Rose Gamble, and Roger Mailler. "MTL Robustness for Path Planning with A*." *Proceedings of the Seventeenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018)*, 2018. Under review.

4. Saeid Samadidana and Roger Mailler. "Solving DCSP problems in highly degraded communication environments." *Proceedings of the International Conference on Web Intelligence*. ACM, 2017.

5. Callen Johnson and Roger Mailler. "Modelling Action Potentials of the Body Wall Muscles in C. elegans: A Biologically Founded Computational Approach." *Proceedings of the 7th International Conference on Bioinformatics and Computational Biology*. 2015.

6. Allen Marshall, Sarra Alqahtani, Anton Ridgway, Charles Walter, Rose Gamble, and Roger Mailler. "Combining coordination with usage policies to improve mission scheduling resilience." In *Resilience Week (RWS), 2015*, pp. 1-6. IEEE, 2015.

7. Anton Ridgway and Roger Mailler. "Dynamic Theoretical Analysis of the Distributed Stochastic and Distributed Breakout Algorithms." *Proceedings of the Fourtheenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2015).*

8. Anton Ridgway and Roger Mailler. "On Predictions for Dynamic, Self-Adaptive Techniques in DynDCSP's." In *Proceedings of Intelligent Agents Technology (IAT)*. 2015.

9. Roger Mailler and Huimin Zheng. "A New Analysis Method for Dynamic, Distributed Constraint Satisfaction." Proceeding of the Thirteenth *International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2014).* 2014.

10. Feyza Hafizoglu and Roger Mailler. "Decentralized Telescope Management for Satellite Tracking." Proceeding of the *2013 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT 2013).* 2013

11. Roger Mailler and Huimin Zheng. "Distributed Problem Solving in Geometrically-Structured Constraint Networks." Proceeding of the Twelfth *International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2013).* 2013. (Extended Abstract)

12. Feyza Hafizoglu and Roger Mailler. "Telescope Management for Satellite Tracking: A Decentralized Approach." Proceeding of the Twelfth *International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2013).* 2013. (Extended Abstract)

13. Roger Mailler. "Improving Asynchronous Partial Overlay." In the 2012 IEEE/WIC/ACM International Conference on Intelligent Agent Technology, 2012. (Best Paper)

14. Kevin Adams, Roger Mailler, Michael Keller. "Adhesion of *C. elegans* to Agar Surfaces." ASME International Conference and Exposition. Houston TX, 2012.

15. Melanie Smith and Roger Mailler. "The Effect of Congestion on Coordinated Routing." In the *14th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA-2011).* 2011.

16. Jacob Graves and Roger Mailler. "Quantifying the Accuracy of *C. elegans* Image Analysis." *The Third International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies (BIOTECHNO 2011).* May 2011.

17. Roger Mailler and Jacob Graves. "Solving Distributed CSPs using Dynamic, Partial Centralization without Explicit Constraint Passing." In *The 13th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA-2010).* November, 2010. (Best Paper)

18. Melanie Smith, Sandip Sen, and Roger Mailler. "Adaptive and Non-Adaptive Distribution Functions for DSA." In *The 13th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA-2010).* November, 2010.

19. Melanie Smith and Roger Mailler. "Getting What You Pay For: Is Exploration in Distributed Hill Climbing Really Worth It?" In Proceedings of *Intelligent Agent Technology (IAT).* August, 2010.

20. Melanie Smith and Roger Mailler. "Improving the efficiency of the distributed stochastic algorithm." In *Proceedings of the Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2010)*, pp. 393-400. May, 2010. (Extended Abstract)

21. Roger Mailler, Jason Avery, Jacob Graves, and Nathan Willy. "A Biologically Accurate Model of the Locomotion of *Caenorhabditis elegans.*" In *Proceedings of the First International Conference on Computational and Systems Biology and Microbiology (BIOSYSCOM 2010).* March, 2010. (Best Paper)

22. Roger Mailler, Daniel Bryce, Jaiying Shen, and Ciaran O'Reilly. "MABLE: A Framework for Learning from Natural Instruction." In *Proceedings of the Eighth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009)*, pp. 393-400. May, 2009.

23. Adrian Petcu, Boi Faltings, and Roger Mailler. "PC-DPOP: A New Partial Centralization Algorithm for Distributed Constraint Optimization." *Proceedings of the Twentieth International Joint Conference on Artificial Intelligence*. January 2007.

24. Roger Mailler. "Using Prior Knowledge to Improve Distributed Hill Climbing" *Proceedings of the 2006 International Conference on Intelligent Agent Technology (IAT 2006)*, December 2006.

25. Roger Mailler. "Comparing Two Approaches to Dynamic, Distributed Constraint Satisfaction." *Proceedings of the Fourth International Joint Conference on Autonomous Agents and MultiAgent Systems (AAMAS 2005)*. pp. 1049-1056. July, 2005.

26. Bryan Horling, Roger Mailler, and Victor Lesser. "A Case Study of Organizational Effects in a Distributed Sensor Network." *Proceedings of the International Conference on Intelligent Agent Technology* (IAT 2004). September 2004.

27. Roger Mailler and Victor Lesser. "Solving Distributed Constraint Optimization Problems Using Cooperative Mediation." *Proceedings of Third International Joint Conference on Autonomous Agents and MultiAgent Systems (AAMAS 2004)*, pp. 438-445. July, 2004.

28. Roger Mailler and Victor Lesser. "Using Cooperative Mediation to Solve Distributed Constraint Satisfaction Problems." *Proceedings of Third International Joint Conference on Autonomous Agents and MultiAgent Systems (AAMAS 2004)*, pp. 446-453. July, 2004.

29. Roger Mailler, Victor Lesser, and Bryan Horling. "Cooperative Negotiation for Soft Real-Time Distributed Resource Allocation." *Proceedings of Second International Joint Conference on Autonomous Agents and MultiAgent Systems (AAMAS 2003)*, pp. 576-583. July, 2003.

30. Bryan Horling, Regis Vincent, Roger Mailler, Jiaying Shen, Raphen Becker, Kyle Rawlins, and Victor Lesser. "Distributed Sensor Network for Real Time Tracking." *Proceedings of the 5th International Conference on Autonomous Agents*, pp. 417-424. June, 2001.

Edited Books

1. Coordination of Large-Scale Multiagent Systems. Paul Scerri, Regis Vincent, and Roger Mailler ed., Springer, New York. 2005.

Book Chapters

1. Paul Scerri, Regis Vincent, and Roger Mailler. "Comparing Three Approaches to Large Scale Coordination." *Coordination of Large-Scale Multiagent Systems*. Springer. 2005.

2. Roger Mailler and Victor Lesser. "A Mediation-Based Protocol for Distributed Constraint Satisfaction." *Distributed Constraint Problem Solving and Reasoning in Multi-agent Systems*. Frontiers in Artificial Intelligence and Applications, vol. 112. IOS Press. 2005.

3. Bryan Horling, Roger Mailler, and Victor Lesser. "Farm: A Scalable Environment for Multi-Agent Development and Evaluation." *Advances in Software Engineering for Multi-Agent Systems*, pp. 220-237. February, 2004.

4. Bryan Horling, Roger Mailler, Jiaying Shen, Regis Vincent, and Victor Lesser. "Using Autonomy, Organizational Design and Negotiation in a Distributed Sensor Network." *Distributed Sensor Networks: A multiagent perspective*, pp. 139-183. 2003.

5. Guandong Wang, Weixiong Zhang, Roger Mailler, and Victor Lesser. "Analysis of Negotiation Protocols by Distributed Search." *Distributed Sensor Networks: A multiagent perspective*, pp. 339-361. 2003.

Workshop Papers

1. Brian Gerkey, Roger Mailler, and Benoit Morisset. "Commbots: Distributed control of mobile communication relays" *Proceedings of the AAAI Workshop on Auction Mechanisms for Robot Coordination (AuctionBots)*, Boston, Massachusetts, pp. 51-57, Jul 2006.

2. Nathaniel Gemelli, Robert Wright, Roger Mailler. "Asynchronous Chess" *Proceedings of the 2005 AAAI Fall Symposium on Coevolutionary and Coadaptive Systems*. November 2005.

3. Roger Mailler. “Solving Distributed DCSPs using Dynamic, Partial Centralization without Explicit Constraint Passing” *Proceedings of the Second Workshop on the Challenges in the Coordination of Large Scale Multi-agent Systems (LSMAS 2005)*. July, 2005.

4. Bryan Horling, Roger Mailler, and Victor Lesser. “A Case Study of Organizational Effects in a Distributed Sensor Network” *Proceeding of the AAAI-04 Workshop on Agent Organizations: Theory and Practice.* July, 2004.

5. Paul Scerri, Regis Vincent, and Roger Mailler. “Comparing Three Approaches to Large Scale Coordination” *Proceedings of the First Workshop on the Challenges in the Coordination of Large Scale Multi-agent Systems*. July, 2004.

6. Roger Mailler and Victor Lesser. “A Mediation-Based Protocol for Distributed Constraint Satisfaction” *The Fourth International Workshop on Distributed Constraint Reasoning*, pp. 49-58. August, 2003.

7. Bryan Horling, Roger Mailler, Mark Sims, and Victor Lesser. “Using and Maintaining Organization in a Large-Scale Distributed Sensor Network” *Proceedings of the Workshop on Autonomy, Delegation, and Control (AAMAS03)*. July, 2003.

8. Bryan Horling, Roger Mailler, and Victor Lesser. “Farm: A Scalable Environment for Multi-Agent Development and Evaluation” *Proceedings of the 2nd International Workshop on Software Engineering for Large-Scale Multi-Agent Systems (SELMAS 2003)*, pp. 171-177. May, 2003.

9. Roger Mailler; Regis Vincent, Victor Lesser, Tim Middlekoop, and Jiaying Shen. “Soft-Real Time, Cooperative Negotiation for Distributed Resource Allocation.” *AAAI Fall Symposium on Negotiation Methods for Autonomous Cooperative Systems*. November, 2001.

Teaching Experience

- CS 2003 “Fundamentals of Algorithm and Computer Applications” *F08, F09, F10, F11, F12, F13, F14, F15, F16, F17*
- CS/BIO 4863/6863 “Computational Neuroscience” *F09, F11, F13, S16*
- CS/BIO 5863/7863 “Advanced Computational Neuroscience” *SP12, SP14*
- CS 3023 “Introduction to Game Programming” *S09, S10, S11, S12, S13, S14, S15, S16, F16, F17*
- CS 4033 “Game Engine Design” *F12, F15, S17*
- CS 7423 “Image Processing” *S11, S13, S15*
- CS 3861 “Collegiate Cyber Defense Competition Training” *F13, F14, F15*
- CS 3863 “Computer Gaming in Early Education” *S17, F17*

Service

Research Community

- Publications Chair -- 13th International Conference on Autonomous Agents and Multiagent Systems, 2014.
- Sponsorship Co-chair -- 9th International Conference on Autonomous Agents and Multiagent Systems, 2010.
- Co-Chair – 5th Americas Agents Schools, Harvard University, 2006.
- Program Committee – International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies *(BIOTECHNO)*, 2010 - 2011.
- Program Committee –International Joint Conference on Artificial Intelligence (IJCAI), 2005 and 2007-2012.
- Senior Program Committee –International Joint Conference on Artificial Intelligence (IJCAI), 2013.
- Program Committee – International Joint Conference on Autonomous Agents and MultiAgent Systems (AAMAS), 2005 - 2015, 2017-2018.
- Senior Program Committee – International Joint Conference on Autonomous Agents and MultiAgent Systems (AAMAS), 2014.
- Co-Chair – 1st – 3rd Workshops on the Challenges in the Coordination of Large Scale Multi-agent Systems, 2004 and 2005.
- Reviewer – *IEEE Transactions on Systems, Man, and Cybernetics, Part A*: *Systems and Humans*
- Reviewer – *Journal of Autonomous Agents and Multi-Agent Systems* (JAAMAS).
- Reviewer - *International Journal of Foundations of Computer Science*.
- Reviewer - *Journal of Artificial Intelligence Research* (JAIR).
- Reviewer – *Artificial Intelligence Journal* (AIJ).
- Reviewer - *Web Intelligence and Agent Systems* (WIAS): *An International Journal*.

University

- ENS Promotion and Tenure Committee, 2017-2019.
- University Faculty Appeals Board, 2016-2017.
- Chair, CSG Hiring Committee, 2017.
- CS Hiring Committee, 2014.
- Event Chair, Heartland Gaming Expo, 2013-2017.
- Faculty Advisor for the TU SIGGRAPH Chapter, 2015-2017.
- Faculty Advisor for the TU eSports Teams, 2016-2017.
- Organizer, University of Tulsa Gaming Showcase, 2012.
- Curator, Tandy Collection, 2013.
- Department Faculty Review Committee, 2008, 2010, 2015.
- Department Graduate Program Committee, 2010.
- Faculty Senate Academic Computing Committee, 2011-2014.
- Faculty Sponsor for the Collegiate Cyber Defense Competition (CCDC), 2011-2013.
- Computer Science Department Web Master, 2011-2014.

Community

- OK State CS curriculum development committee, 2017-2018.
- Assistant Scout Master, Troop 99 Owasso, 2016-
- Member, Tulsa Simulation Society, 2017-

Graduate Advisor

- Melanie Smith, "Modeling and Analysis of the Coordinated Vehicle Routing Problem." (PhD, 2011)
- Jacob Graves, "Novel Analysis and Validation Techniques for Characterizing the Locomotion of C. elegans." (MS, 2011)
- Steven Reed, (MS, 2015)
- Anton Ridgway, "Theory-Driven Self-Adaptive Agents for Dynamic, Distributed Constraint Satisfaction." (MS, 2015)
- Callen Johnson, (MS, 2016)
- Saeid Samadidana, (PhD, expected 2019)

Thesis Committees

- Charles Walter, "The Personal Fog: An Architecture for Limiting Wearable Security Vulnerabilities." (PhD, expected 2018)
- Feyza Hafizoglu, "A Study of Trust Development in Virtual Human-Agent Teamwork without Explicit Coordination." (PhD, 2015)
- Sarra Alqahtani, "A Forensics Framework for Service Clouds." (PhD, 2015)
- Matthew Hale, "A Holistic Approach to Cloud Security Certification." (PhD, 2014)
- Jason Avery, "Functional organization of the insula." (PhD, 2013)
- Noah Jorgenson, "Visualizing Collaboration." (MS, 2011)
- Anthony Barber, "Sharing the Roads Using Route Information Sharing" (MS, 2011)
- Stephen Tyree, "The Tagged Stochastic Pi-Calculus: A Process Calculus with Compartment Support for Biological Specifications and Simulations" (MS, 2009)
- Anil Gursel, "Producing Timely Recommendations from Social Networks through Targeted Search." (MS, 2008)