Curriculum Vitæ: Evan A. Sultanik

August 13th, 2015

Computer Scientist with extensive experience both in industry (as a software engineer) and academia. Active contributor to open source software. Specialization in intelligent distributed & peer-to-peer systems and automated program analysis & reverse engineering for cyber security. Experience as an expert witness, reverse engineering defendants' software to detect patent infringement.

1 Personal Information

Current Positions

Title:	Chief Scientist
Institution:	Digital Operatives, LLC
Title:	Co-Founder and CEO
Institution:	Alevio Inc.
Title:	Adjunct Faculty
Institution:	Drexel University
Departments:	Computer Science

Address

Office Address:	113 N. Bread St. Unit 5B Philadelphia, PA 19106
Telephone:	+1 215 919 7234 (Mobile)
E-Mail:	`evan@sultanik.com`
URL:	`http://www.sultanik.com/`

Education

Degree	**Date**	**GPA**	**School**	**Majors**
Ph.D.	2010, September	3.97	Drexel University	Computer Science
➥ Defense	September 8, 2010			
➥ Proposal	January 7, 2010			
➥ Candidacy Exam	November 8, 2007			
➥ Qualification Exam	Fall of 2006			
M.S.	2006, June	4.0	Drexel University	Computer Science
➥ Thesis Defense	May 25, 2006			
B.S.	2006, June	3.48	Drexel University	Mathematics Computer Science Dual Major, with Honors

Past Affiliations

Title:	Senior Research Scientist	
Institution:	The Johns Hopkins University	
Laboratories:	Applied Physics Laboratory	(APL)
	`http://www.jhuapl.edu/`	
	Research and Exploratory Development Department	(REDD)

Title:	Senior Research Scientist	
Institution:	The Johns Hopkins University	
Laboratories:	Applied Physics Laboratory	(APL)
	`http://www.jhuapl.edu/`	
	Milton S. Eisenhower Research Center	(MERC)

Title:	Doctoral Candidate	
	Research Fellow	
Institution:	Drexel University	
Departments:	Computer Science	
Laboratories:	Applied Communications and Information Networking Institute, *de facto*	(ACIN)
	`http://www.acincenter.org/`	
	Vision Cognition Laboratory	(VisCog)
	`http://viscog.cs.drexel.edu/`	
	Data Fusion Laboratory	(DFL)
	`http://dfl.ece.drexel.edu/`	
	Geometric and Intelligent Computing Laboratory	(GICL)
	`http://gicl.cs.drexel.edu/`	

Employment Background

Date	**Position**	**Institution**
2012–present	Chief Scientist	Digital Operatives, LLC
2012–present	Co-Founder and Chief Executive Officer	Alevio Inc.
2010–2012	Senior Research Scientist	The Johns Hopkins University Applied Physics Laboratory
2006–present	Adjunct Faculty	Drexel University Department of Computer Science
2001–2010	Research Fellow	Drexel University Department of Computer Science
2001–2003	Consultant and Independent Contractor	Feith Systems and Software
2001	Independent Contractor	Arch Wireless (Brokered by Feith)
2000	Consultant and Independent Contractor	Pennsylvania Association for Marriage and Family Therapy
1998–2001	Software Engineer	Feith Systems and Software

Professional Highlights

AI in the Real World **2012–Present**

`http://www.digitaloperatives.com/#news`

Proposed and executed the AERIAL DARPA Cyber Fast Track program, a prototype entity recognition system for the autonomous detection and classification of antennas. Digital Operatives' vision is that this system will be deployed in a very small form factor; work has been done to develop the algorithms as an application on a mobile phone (Sultanik developed a prototype on the Android platform), as well as a sensor payload on a small Unmanned Aerial Vehicle (UAV) that could discover a broad range of antennas in a local area. The ability to automatically detect antennas visually and automatically is an exciting capability with multiple use cases. Concurrently, Sultanik developed a custom AI planner utilizing a novel contingency planning extension to the GraphPlan algorithm for another cyber program.

"Big Data" Analytics **2010–2012**

`http://www.jhuapl.edu/newscenter/stories/st120612.asp`

Extensive experience working with and creating distributed algorithms for handling "Big Data." This work spanned multiple domains, including social media analytics (e.g., real-time detection anomalous topics of conversation in streaming Twitter traffic), distributed radar coordination, and probabilistic databases.

Agent Systems Reference Model **2006–2009**

`http://gicl.cs.drexel.edu/people/regli/reference_model-v1a.pdf`

Sultanik is an author of the Agent Systems Reference Model, developed under the Applied Communications and Information Networking program, DoD Contract #DAAB07-01-9-L504 to the US Army Communications and Electronics Command Research Development and Engineering Center in support of the Intelligent Agents Sub-Integrated Product Team. The reference model has been adopted by the Foundation for Intelligent Physical Agents (FIPA) and is on the road to standardization. The reference model allows existing and future agent frameworks to be compared and contrasted, as well as providing a basis for identifying areas requiring standardization within the agents community. See paper **J3**.

HEAT: Heterogenous Agent Teams **2007–2008**

Acted as the *de facto* principal investigator (*de jure*: William Regli) for the HEAT project ($100k over 8 months). Sultanik authored the statement of work for the project and managed its progress. The project has included collaboration with Soartech's cognitive agent architecture to investigate human-robot teaming: using autonomous robots controlled by a multiagent system to reduce dependence on remote control. Due to the success of the HEAT project, Sultanik and Regli contributed to a proposal with Soartech that was awarded a Small Business Innovation Research program. See demonstration **D15** below.

Secure Wireless Agent Testbed (SWAT) **2001–2006**

A project initially created to study information assurance techniques for handheld devices on wireless networks. Sultanik created the initial hardware specification and pioneered design of the multiagent system. The testbed has been key in several follow-on programs (including the DARPA ATO/SAPIENT and IXO/SPEYES programs) and was/is part of several major demonstration programs for the United States Army, NATO and the United States Department of Justice. Sultanik contributed to an experiment called "SINCE," conducted by US Army CERDEC, using the SWAT. The SINCE experiment received the "Best Network-Centric Warfare Program from a Coalition Partner Award" from the Network-Centric Warfare Conference, and also the "International Collaboration Award" from the 25$^{\text{th}}$ Army Science Conference. See demonstration **D10** below. A company, Drakontas LLP, is successfully transitioning the SWAT technologies in areas of homeland defense, port security and situation awareness for public protectors.

Software Engineer at Feith Systems **1998–2003**
Sultanik contributed to the Feith Document Database product line and consulted for Feith's $1M+ document imaging solutions. Sultanik created custom software for such corporations as Kellogg's, Sherwin Williams, The Institute of Electrical and Electronics Engineers, the U.S. Bureau of the Census, and others. Sultanik designed and implemented the the Feith Quick Integrator (links legacy terminal applications to Feith's flagship FDD product), Barcode Maker (produces barcodes on-the-fly for document indexing), VIP Analyzer (audits the productivity of Feith users), Easyjuke Cleaner (scans large optical jukebox servers for orphan files, cross-referencing with the central database), FDD Notify (which notifies the user when he/she gets new work in the Feith Workflow iQ system).

Languages

Language		Ability
English		Native
Русский	(Russian)	Conversational
Latina	(Latin)	Technical
Esperanto		Intermediate
עִבְרִית	(Hebrew)	Basic
Français	(French)	Basic

Professional Societies

Membership		Society
2003–Present		Association for the Advancement of Artificial Intelligence
2004–Present		Association for Computing Machinery
2005–Present		Institute of Electrical and Electronics Engineers
2008–Present		American Association for the Advancement of Science
2008–Present		The eGullet Society for Culinary Arts & Letters
2009–Present		IEEE Communications Society

2 Research, Scholarly, and Creative Activities

2.1 Theses

T2. *Automatic Construction, Maintenance, and Optimization of Dynamic Agent Organizations.*
Ph.D. Dissertation: September 8th, 2010.
Committee: *advisor* William C. Regli (Defense Advanced Research Projects Agency (DARPA)), *advisor* Ali Shokoufandeh (Drexel Universiy Department of Computer Science), *chair* Rachel Greenstadt (Drexel Universiy Department of Computer Science), Jeremy Johnson (Drexel Universiy Department of Computer Science), Sven Koenig (University of Southern California Department of Computer Science), and Joseph P. Macker (U.S. Naval Research Laboratory Networks and Communication Systems Branch)

T1. *Enabling Multi-Agent Coordination in Stochastic Peer-to-Peer Environments.*
Master's Thesis: May 25th, 2006.
Committee: *advisor* William C. Regli (Defense Advanced Research Projects Agency (DARPA)), *advisor* Moshe Kam (New Jersey Institute of Technology), and *advisor* Pragnesh Jay Modi (Drexel Universiy Department of Computer Science)

2.2 Edited Proceedings

E1. Evan A. Sultanik and Robert N. Lass, editors. Proceedings of the Twelfth International Workshop on Distributed Constraint Reasoning (DCR '10). May, 2010.

2.3 Chapters in Books

B3. *Metrics for Multiagent Systems*. Robert N. Lass, Evan A. Sultanik, and William C. Regli. Raj Madhavan, Edward Tunstel, and Elena Messina, editors. In Performance Evaluation and Benchmarking of Intelligent Systems. Springer-Verlag, New York. 2009.

B2. *Agent Transport Simulation for Dynamic Peer-to-Peer Networks*. Evan A. Sultanik, Maxim D. Peysakhov, and William C. Regli. In Multi-Agent-Based Simulation. Lecture Notes in Artificial Intelligence **3891**:162–173, Springer-Verlag, Berlin. July, 2006.

B1. *Service Discovery on Dynamic Peer-to-Peer Networks Using Mobile Agents*. Evan Sultanik and William Regli. In Agents and Peer-to-Peer Computing. Lecture Notes in Computer Science **3601**:132–143, Springer-Verlag, Berlin. July, 2005.

2.4 Journal Publications

J7. *Creation, Maintenance, and Optimization of Dynamic Agent Organizations.* Evan A. Sultanik, Robert N. Lass, and William C. Regli. Submitted to Artificial Intelligence Journal. (Under Review).

J6. *A Stochastic Multiagent Approach to Network-Centric Service Discovery.* Evan A. Sultanik and William C. Regli. Submitted to ACM Transactions on Autonomous and Adaptive Systems. Special Issue on Adaptive Service Discovery and Composition Systems for Ubiquitous and Pervasive Computing. (Under Review).

J5. *A Bound on the Expected Optimality of Random Feasible Solutions to Combinatorial Optimization Problems.* Evan A. Sultanik. Submitted to Theoretical Computer Science. Special Issue on Combinatorial Optimization. (Under Review).

J4. *Lenticrypt: a Provably Plausibly Deniable Cryptosystem; or, This Picture of Cats is Also a Picture of Dogs*. Evan A. Sultanik. Reverend Doctor Pastor Manul Laphroaig, editors. In the International Journal of PoC——GTFO. the Tract Association of PoC——GTFO and Friends. June 27$^{\text{th}}$, 2014.

J3. *Development and Specification of a Reference Model for Agent-Based Systems*. William C. Regli, Israel Mayk, Christopher J. Dugan, Joseph B. Kopena, Robert N. Lass, Pragnesh Jay Modi, William M. Mongan, Jeff K. Salvage, and Evan A. Sultanik. In IEEE Transactions on Systems, Man and Cybernetics—Part C, **39**(5):572–596. September, 2009.

J2. *Distributed Coordination of First Responders*. Joseph B. Kopena, Evan A. Sultanik, Robert N. Lass, Duc N. Nguyen, Christopher J. Dugan, Pragnesh J. Modi, and William C. Regli. In IEEE Internet Computing, **12**(1):45–47. Special Issue on "Crisis Management". January–February, 2008.

J1. *Service-Based Computing on Manets: Enabling Dynamic Interoperability of First Responders*. Joe Kopena, Evan Sultanik, Gaurav Naik, Iris Howley, Maxim Peysakhov, Vincent A. Cicirello, Moshe Kam, and William Regli. In IEEE Intelligent Systems, **20**(5):17–25. Special Issue on "Artificial Intelligence in Homeland Security". September–October, 2005.

2.5 Refereed Conference Papers

P25. *Rapid Geotagging and Disambiguation of Social Media Text via an Indexed Gazetteer.* Evan A. Sultanik and Clayton Fink. In Proceedings of the International Conference on Information Systems for Crisis Response and Management. April 22nd, 2012, Vancouver, Canada (To Appear).

P24. *GAIA—A Systems Approach to Manage Climate Disruption Risks in Public Health and Security*. Glen Fountain, Larry Paxton, Michele Weiss, Steven M. Babin, Nathan D. Bos, Maegen G. Nix, Cindy L. Parker, Christina K. Pikas, Giuseppe Romeo, Robert K. Schaefer, Scott D. Simpkins, Shadrian B. Strong, Evan A. Sultanik, and Bill H. Swartz. In Proceedings of the American Geophysical Union Fall Meeting. Poster Paper. September 9th, 2011, San Francisco, California.

P23. *Dominating Sets of Agents in Visibility Graphs: Distributed Algorithms for Art Gallery Problems.* Evan A. Sultanik, Ali Shokoufandeh, and William C. Regli. In Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS '10). May 13th, 2010, Toronto, Canada. (23.8% acceptance rate.)

P22. *Distributed Scheduling Using Constraint Optimization and Multiagent Path Planning.* Christopher Cannon, Robert Lass, Evan Sultanik, William Regli, David Šišlák, and Michal Pěchouček. In Proceedings of the Twelfth International Workshop on Distributed Constraint Reasoning (DCR '10). May 10th, 2010, Toronto, Canada.

P21. *Dynamic Configuration of Agent Organizations*. Evan A. Sultanik, Robert N. Lass, and William C. Regli. In Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI '09). July 17th, 2009, Pasadena, California, USA. (25.7% acceptance rate.)

P20. *Robust Distributed Constraint Reasoning.* Robert N. Lass, Evan A. Sultanik, Rachel Greenstadt, and William C. Regli. In Proceedings of the Eleventh International Workshop on Distributed Constraint Reasoning (DCR '09). July 13th, 2009, Pasadena, California, USA.

P19. *Constant Cost of the Computation-Unit in Efficiency Graphs for DCOPs.* Marius Silaghi, Robert N. Lass, Evan A. Sultanik, William C. Regli, Toshihiro Matsui, and Makoto Yokoo. In Proceedings of the International Conference on Intelligent Agent Technology (IAT '08). Short Paper. December, 2008, Sydney, Australia. (18% acceptance rate for full papers. 28% acceptance rate for short papers.)

P18. *Measurement Techniques for Multiagent Systems.* Robert N. Lass, Evan A. Sultanik, and William C. Regli. In Proceedings of the Performance Metrics for Intelligent Systems Workshop (PerMIS '08). August, 2008, Gaithersburg, Maryland.

P17. *Dynamic Distributed Constraint Reasoning*. Robert N. Lass, Evan A. Sultanik, and William C. Regli. In Proceedings of the AAAI Conference on Artificial Intelligence (AAAI '08). Poster Paper. July, 2008, Chicago, Illinois. (26% acceptance rate.)

P16. *The Operation Point Units of Distributed Constraint Solvers*. Marius Silaghi, Robert N. Lass, Evan A. Sultanik, William C. Regli, Toshihiro Matsui, and Makoto Yokoo. In Proceedings of the Distributed Constraint Reasoning Workshop (DCR '08). May 13th, 2008, Estoril, Portugal.

P15. *Constant Cost of the Computation-Unit in Efficiency Graphs*. Marius Silaghi, Robert N. Lass, Evan A. Sultanik, William C. Regli, Toshihiro Matsui, and Makoto Yokoo. In Proceedings of the Optimization in Multi-Agent Systems Workshop (OptMas '08). May 12th, 2008, Estoril, Portugal.

P14. *Coordination of First Responders Under Communication and Resource Constraints.* Robert N. Lass, Joseph B. Kopena, Evan A. Sultanik, Duc N. Nguyen, Christopher J. Dugan, and William C. Regli. In Proceedings of the Seventh International Conference on Autonomous Agents and Multiagent Systems (AAMAS '08). May, 2008, Estoril, Portugal.

P13. *Evaluation of CBR on Live Networks.* Robert N. Lass, Evan A. Sultanik, Pragnesh Jay Modi, and William C. Regli. In Proceedings of the Ninth International Workshop on Distributed Constraint Reasoning (DCR '07). September 23rd, 2007, Providence, Rhode Island, USA.

P12. *DCOPolis: A Framework for Simulating and Deploying Distributed Constraint Optimization Algorithms.* Evan A. Sultanik, Robert N. Lass, and William C. Regli. In Proceedings of the Ninth International Workshop on Distributed Constraint Reasoning (DCR '07). September 23rd, 2007, Providence, Rhode Island, USA.

P11. *Analyzing the Performance of Distributed Algorithms.* Robert N. Lass, Evan A. Sultanik, and William C. Regli. In Proceedings of the Performance Metrics for Intelligent Systems Workshop (PerMIS '07). August 30th, 2007, Gaithersburg, Maryland, USA.

P10. *On Modeling Multi-Agent Task Scheduling as a Distributed Constraint Optimization Problem.* Evan A. Sultanik, Pragnesh Jay Modi, and William C. Regli. In Proceedings of the Twentieth International Joint Conference on Artificial Intelligence (IJCAI '07). January 6th, 2007, Hyderabad, India. (15.7% acceptance rate for full papers.)

P9. *Constraint Propagation for Domain Bounding in* C_TÆMS *Task Scheduling.* Evan A. Sultanik, Pragnesh Jay Modi, and William C. Regli. In Proceedings of the Twelfth International Conference on Principles and Practice of Constraint Programming (CP '06). Poster Paper. September 24th, 2006, Nantes, France.

P8. *Service-Based Computing for Agents on Disruption and Delay Prone Networks.* Joseph B. Kopena, Gaurav Naik, Maxim Peysakhov, Evan Sultanik, and William C. Regli. In Proceedings of the International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS '05). Poster Paper. August, 2005, Utrecht, The Netherlands. (24% acceptance rate for full papers. 23% acceptance rate for poster papers.)

P7. *Stable Service Placement on Dynamic Peer-to-Peer Networks: A Heuristic for the Distributed k-Center Problem.* Evan A. Sultanik and William C. Regli. In Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI '05). AAAI Press. Poster Paper. July 9th–13th, 2005, Pittsburgh, Pennsylvania, USA. (223 papers and 75 posters accepted out of 803 submissions. 37% acceptance rate for poster papers.)

P6. *Heuristics for Agent Routing and Itinerary Optimization on Dynamic Networks.* Evan A. Sultanik. In Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI '05). Student Abstract. July, 2005.

P5. *Network Awareness and the Philadelphia Area Urban Wireless Network Testbed.* Joseph B. Kopena, Vincent A. Cicirello, Maxim Peysakhov, Kris Malfettone, Andrew Mroczkowski, Gaurav Naik, Evan Sultanik, Moshe Kam, and William C. Regli. In Proceedings of AAAI Spring Symposia on AI in Homeland Security. 2005.

P4. *Network Awareness for Mobile Agents on Ad Hoc Networks.* Maxim Peysakhov, Donovan Artz, Evan Sultanik, and William Regli. In Proceedings of the Third International Joint Conference on Autonomous Agents and Multi Agent Systems (AAMAS '04). July, 2004, New York, New York. (24.6% acceptance rate for full papers.)

P3. *Mobile Agent-Based Search for Service Discovery on Dynamic Peer-to-Peer Networks.* Evan Sultanik. In Proceedings of the Nineteenth National Conference on Artificial Intelligence (AAAI '04). Student Abstract. July, 2004.

P2. *Architecture and Performance of a Secure Wireless Agent-based Testbed.* Gustave Anderson, Leonardo Urbano, Gaurav Naik, David Dorsey, Andrew Mroczkowski, Donovan Artz, Nicholas Morizio, Andrew

Burnheimer, Kris Malfettone, Daniel Lapadat, Evan Sultanik, Saturnino Garcia, Maxim Peysakhov, William Regli, and Moshe Kam. In Proceedings of the Second International Information Assurance Workshop. IEEE. April, 2004. (39% acceptance rate.)

P1. *Secure Mobile Agents on Ad Hoc Wireless Networks*. Evan Sultanik, Donovan Artz, Gustave Anderson, Moshe Kam, William Regli, Max Peysakhov, Jonathan Sevy, Nadya Belov, Nicholas Morizio, and Andrew Mroczkowski. In Proceedings of the Fifteenth Innovative Applications of Artificial Intelligence Conference (IAAI '03). American Association for Artificial Intelligence. August, 2003, Acapulco, Mexico. (23% acceptance rate.)

2.6 Technical Reports

R1. *Agent Transport Simulation for Dynamic Peer-to-Peer Networks*. Evan A. Sultanik, Maxim D. Peysakhov, and William C. Regli. Drexel University Technical Report DU-CS-04-02.

2.7 Invited Talks

Date	**Title**	**Location**
June 12th, 2012	Emerging Technology Panelist	Available upon request.
June 12th, 2012	Anomalous Signal Detection from Social Media to Support Situation Awareness	Available upon request.
May 6th, 2010	Dominating Sets of Agents in Visibility Graphs: Distributed Algorithms for Art Gallery Problems	ϒΠΕ/CSGSC Student Research Series
March 18th, 2010	Automatic Construction, Maintenance, and Optimization of Dynamic Agent Organizations	The Johns Hopkins University Applied Physics Laboratory
March 20th, 2009	*Ad Hoc* Distributed Computation for Coordination, Optimization, and Organization	Koerner Symposium
October 6th, 2008	A Friendly Introduction to Artificial Intelligence	The Applied Communications and Information Networking Seminar Series
May 14th, 2008	Introduction to the Agent Systems Reference Model	Meeting of the Foundation for Intelligent Physical Agents in Estoril, Portugal
February 7th, 2008	Joe and Evan Kick Your !@#$%, LaTeX Style!	Drexel University Math and Computer Science Society
July 5th, 2007	An Introduction to Distributed Constraint Optimization	Drexel University Math and Computer Science Society
April 13th, 2007	Enabling Distributed Multiagent Coordination	Drexel Engineering Research Symposium
April 28th, 2006	Multi-Agent Planning and Scheduling in Stochastic Peer-to-Peer Environments	Drexel University Center for Telecommunications and Information Networking Seminar Series
February 7th, 2005	Enabling Information Dissemination on Dynamic Peer-to-Peer Networks	Drexel University Center for Telecommunications and Information Networking Seminar Series

2.8 Exhibits, Performances, Demonstrations, and other Creative Activities

D16. *Unsupervised Extraction of Situation Awareness Information from Social Media for Emergency Management*. Proceedings of the International Conference on Information Systems for Crisis Response and Management, April 24th, 2012, Vancouver, Canada.

D15. *Human-Robot Collaboration for Remote Surveillance.* AAAI Intelligent Systems Demonstration Program (AAAI '08), July 13th–17th, 2008, Chicago, Illinois.

D14. *DCOPolis: a Framework for Simulating and Deploying Distributed Constraint Reasoning Algorithms.* The International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS '08), May 12th–16th, 2008, Estoril, Portugal.

D13. *Disaster Evacuation Support.* AAAI Intelligent Systems Demonstration Program (AAAI '07), July 22nd–26th, 2007, Vancouver, British Columbia.

D12. *Disaster Evacuation Support.* The International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS '07), May 14th–18th, 2007, Honalulu, Hawaii.

D11. *SWAT: A Secure Wireless Agent Testbed.* IEEE/AFCEA Military Communications Conference, October 17th–21st, 2005, Atlantic City, New Jersey.

D10. *The SINCE Experiment in the C4ISR "On the Move Testbed".* United States Army Communications and Electronics Command, August 8th–11th, 2005, Fort Dix, New Jersey.

D9. *The AI Technologies of the Philadelphia Area Urban Wireless Testbed.* AAAI Intelligent Systems Demonstration Program (AAAI '05), July, 2005, Pittsburgh, Pennsylvania.

D8. *SWAT: A Secure Wireless Agent Testbed.* The International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS '04), July, 2004, New York, New York.

D7. *SWAT: A Secure Wireless Agent Testbed.* AAAI Intelligent Systems Demonstration Program (AAAI '04), July, 2004, San Jose, California.

D6. *SWAT: A Secure Wireless Agent Testbed.* United States Army Communications and Electronics Command Research, Development and Engineering Command, June 23rd, 2004.

D5. *SWAT: A Secure Wireless Agent Testbed.* United States Army Communications and Electronics Command Research, Development and Engineering Command, June 3rd, 2004.

D4. *SWAT: A Secure Wireless Agent Testbed.* The International Conference on Planning and Scheduling Demonstration Program (ICAPS '04), June, 2004, Whistler, British Columbia.

D3. *SWAT: A Secure Wireless Agent Testbed.* The Fifth IEEE Workshop on Mobile Computing Systems Applications, October 9th–10th, 2003, Monterey, California.

D2. *SWAT: A Secure Wireless Agent Testbed.* The Ninth Annual International Conference on Mobile Computing and Networking (MobiCom '03), September 14th–19th, 2003, San Diego, California.

D1. *SWAT: A Secure Wireless Agent Testbed.* United States Army Communications and Electronics Command Research, Development and Engineering Command, April 30th, 2003.

2.9 Original Plans, Designs, Inventions and Patents

Date	Description
2011	**A Simple and Efficient Framework for Infinite Resolution Simulation** Provisional US patent filing.
2010	**Efficient Distributed Algorithm For The Location Design And Routing Problem** Provisional US patent filing number 61/314,417.
2009	**JTi*k*Z** A Java AWT/Swing Graphics drop-in replacement that renders to the Ti*k*Z/PGF LaTeX language. `http://jtikz.sourceforge.net/`
2007	**DCOPolis** A framework for simulating and deploying distributed constraint reasoning algorithms. See article **P12** and demonstration **D14**. `http://dcopolis.org/`
2006	**exam.cls** A LaTeX class file for easing the generation of exams, quizzes, and answer sheets (intended for instructors).
2006	**A Simple and Efficient Framework for Infinite Resolution Simulation** (Sefirs) Sefirs provides a Java Thread-like class that executes over simulated time. `http://sefirs.sourceforge.net/`
2005	**The Fast Locomotive Escape Expert** A stereo vision system for inexpensive consumer hardware, with applications in robot navigation. `http://www.fleebot.com/`
2005	**Résumé and Curriculum Vitæ Stylesheets** A series of XSL transforms, LaTeX class files and HTML templates for automatically converting a single XML-based representation of one's curriculum vitæ into a condensed résumé, full CV (in PDF), and also representations in HTML and plain text. It was used to automatically typeset this document!
2004	**BasicPlay** Software music synthesizer for Basic's "PLAY" language. `http://freshmeat.net/projects/basicplay/`
2003	**Macro Agent Transport Event-based Simulator** (MATES) Discrete event simulator for mobile agent systems running on dynamic, peer-to-peer networks. See articles **R1**, **B2**, and **T1**. `http://mates.sourceforge.net/`
2003	**Evan Sultanik's Semi-Comprehensive Guide to Philadelphia Area Dining** `http://restaurants.sultanik.com/`
2003	**Text-Based Intuitive Personal Information Organizer** (Tipio) `http://tipio.sourceforge.net/`

2.10 Technical Competencies

Able to quickly learn new programming languages and APIs.

Operating Systems Mac OS(X) [23 years], Windows [23 years], Linux (Gentoo, Ubuntu, Fedora, Arch) [19 years], BSD (FreeBSD, OpenBSD) [18 years], BeOS/Haiku [17 years], NeXT [14 years]

Languages Javascript [19 years], Bash [18 years], C/C++ [18 years], Perl [18 years], PL/SQL [17 years], PHP [15 years], TeX/LaTeX [14 years], Java [14 years], Lisp/Scheme [14 years], XML/XSLT [14 years], MIPS & x86 Assembly [13 years], Prolog [13 years], STRIPS/PDDL [13 years], VHDL [13 years], Postscript [12 years], Python [12 years], ML [11 years], BF [9 years], GolfScript [5 years]

Applications/APIs gcc [18 years], Apache [16 years], gnuplot [14 years], Maple [14 years], Matlab/Octave [14 years], graphviz [13 years], Ethereal/Wireshark [12 years], Kismet [12 years], OpenGL [12 years], SDL [12 years],

ACT-R [11 years], Drupal (plugin development) [11 years], Rainbow [11 years], Weka [11 years], OpenCV [10 years], SAS [10 years], numpy/scipy [9 years], MediaWiki (plugin development) [7 years], NetworkX [7 years], Hadoop [4 years], Lucene [4 years], Mahout [4 years]

2.11 Inane Metrics

Endre Szemerédi
János Komlós

Erdős Number[1] ≤ 3: Pál Erdős $\rightarrow$ Miklós Simonovits $\rightarrow$ Ali Shokoufandeh $\rightarrow$ Evan Sultanik.

Bacon Number ≤ 4: Kevin Bacon $\xrightarrow{\text{Where the Truth Lies (2005)}}$ Rachel Blanchard $\xrightarrow{\text{Road Trip (2000)}}$ Andy Dick (I) $\xrightarrow{\text{Hoodwinked! (2005)}}$ Troy Norton $\xrightarrow{\text{Building Character: Episode BDC-407 (2004)}^{\dagger}}$ Evan Sultanik.
† Television show.

Erdős-Bacon Number ≤ 7.

3 Fellowships, Prizes and Awards

Date	Award	Institution/Organization
2012	Stuart S. Janney Publication Grant	The Johns Hopkins University APL
2012	Government Purpose Innovation Award Nomination	The Johns Hopkins University APL
2010	Graduate Student Research Award	Drexel University College of Engineering
2008	Jay Modi Memorial Award	Drexel University Department of Computer Science
2008	Koerner Family Fellowship	Drexel University College of Engineering
2007	George Hill, Jr. Endowed Fellowship	Drexel University College of Engineering
2007	Graduate Research Fellowship Honorable Mention	National Science Foundation
2006	Provost Fellowship	Drexel University
2006	Graduate Research Fellowship Honorable Mention	National Science Foundation
2006	Undergraduate Award Honorable Mention	Computing Research Association
2005	Undergraduate Student Research Award	Drexel University College of Engineering
2004	Membership	Upsilon Pi Epsilon ($\Upsilon\Pi\mathrm{E}$) International Honor Society
2003	Scholarship	Drexel University BS/MS
2002	Membership	National Society of Collegiate Scholars
2002	Membership	Phi Eta Sigma ($\Phi\mathrm{N}\Sigma$) National Honor Society
2001	Scholarship	A. J. Drexel
2001	Rank of Eagle Scout	Boy Scouts of America
2001	Associate Membership	National Science and Technology Honor Society

[1] Note that this is also what is called a *monotone Erdős sequence*[2].
[2] *Figures of Merit*. Martin Tompa, ACM SIGACT News, **20**(1):62–71. Winter, 1989.

4 Teaching and Advising

4.1 Courses Taught

Semester	Title	Level	Capacity
Winter 2013	CS610: *Advanced Artificial Intelligence*	Graduate	Adjunct Professor
Fall 2012	CS510: *Artificial Intelligence*	Graduate	Adjunct Professor
Winter 2011	CS610: *Advanced Artificial Intelligence*	Graduate	Adjunct Professor
Fall 2010	CS510: *Artificial Intelligence*	Graduate	Adjunct Professor
Winter 2008	CS481: *Advanced Artificial Intelligence*	Undergraduate	Guest Lecturer
Fall 2007	CS380: *Introduction to Artificial Intelligence*	Undergraduate	Instructor

➥ Course/Faculty Assessment (6/24 Students Responded)	Avg.	Std. Dev.
The course objectives and requirements were clearly communicated	4.5	0.5
What is your overall rating of the course? (5 = outstanding, 1 = poor)	4.83	0.37
The instructor was well prepared for the lectures	4.00	0.82
The instructor's communication skills were good	4.33	0.94
The instructor's attitude toward the students was positive and helpful	4.50	0.50
The instructor provided timely feedback on student performance	4.17	0.69
What is your overall rating of the instructor? (5=outstanding, 3=average, 1=poor)	4.33	0.75

5 = Very Great Extent, 4 = Great Extent, 3 = Moderate Extent, 2 = Limited Extent, 1 = Not At All

Fall 2006	CS380: *Introduction to Artificial Intelligence*	Undergraduate	Instructor

➥ Course/Faculty Assessment (12/22 Students Responded)	Avg.	Std. Dev.
The course objectives and requirements were clearly communicated	4.82	0.39
What is your overall rating of the course? (5 = outstanding, 1 = poor)	4.45	0.66
The instructor was well prepared for the lectures	4.36	0.64
The instructor's communication skills were good	4.55	0.66
The instructor's attitude toward the students was positive and helpful	4.82	0.39
The instructor provided timely feedback on student performance	4.64	0.48
What is your overall rating of the instructor? (5=outstanding, 3=average, 1=poor)	4.64	0.48

5 = Very Great Extent, 4 = Great Extent, 3 = Moderate Extent, 2 = Limited Extent, 1 = Not At All

Fall 2006	CS510: *Artificial Intelligence*	Graduate	Guest Lecturer

5 Service

Date	Activity
2012	Reviewer for the Journal of Autonomous Agents and Multi-Agent Systems.
2011	Reviewer for the Journal of Autonomous Agents and Multi-Agent Systems.
2011	Program Committee member for the Military Communications Conference (MILCOM).
2011	Program Committee member for the International Workshop on Distributed Constraint Reasoning.
2011	Facilitator for the Global Assimilation of Information for Action Workshops (`http://gaia.jhuapl.edu/`).
2011	Program Committee member for the AAAI Conference on Artificial Intelligence.
2011	Program Committee member for the International Workshop on Optimisation in Multi-Agent Systems.
2011	Program Committee member for the International Joint Conference on Autonomous Agents and Multiagent Systems.
2010	Co-chair of the International Workshop on Distributed Constraint Reasoning.
2010	External reviewer for the Journal of Artificial Intelligence Research.
2009	External reviewer for The International Journal for Computers and Their Applications.
2009	Reviewer for the Privacy Enhancing Technologies Symposium.
2009	Reviewer for the Performance Metrics for Intelligent Systems Workshop.
2008	Reviewer for the International Joint Conference Autonomous Agents and Multiagent Systems.
2007	Reviewer for the International Joint Conference on Artificial Intelligence.
2006	Reviewer for the ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems.
2006–2009	President of the Drexel University Computer Science Graduate Student Council[3].
2004	Chartering member of Drexel University chapter of the IEEE Computer Society.
2000–2001	Assistant Scoutmaster for Boy Scout Troop 133.

6 Other

Active United States Department of Defense Top Secret Clearance.; and Violinist (for over 25 years).

7 References

William C. Regli
`regli@drexel.edu`
+1 215 895 6827

Deputy Director
Department of Computer Science
College of Computing and Informatics
Drexel University
306 Rush Building
3141 Chestnut Street,
Philadelphia, PA 19104

Moshe Kam
`moshe.kam@njit.edu`
+1 973 596 6506

IEEE 2010 President
Dean of Engineering
Newark College of Engineering
New Jersey Institute of Technology
University Heights Newark, New Jersey 07102

Ali Shokoufandeh
`ashokouf@cs.drexel.edu`
+1 215 895 2671

Professor
Department of Computer Science
College of Engineering
Drexel University
University Crossings 100
3141 Chestnut Street,
Philadelphia, PA 19104

[3] `http://csgsc.cs.drexel.edu/`

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A Academic Genealogy