

CURRICULUM VITAE
John J Grefenstette, PhD
University of Pittsburgh

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EDUCATION and TRAINING

Undergraduate

5/1975 Carnegie Mellon University Pittsburgh, PA BS
Mathematics and Philosophy
University Honors

Graduate

8/1978 University of Pittsburgh Pittsburgh, PA MS
Computer Science

8/1980 University of Pittsburgh Pittsburgh, PA PhD
Computer Science
Robert P. Daley

APPOINTMENTS and POSITIONS

Academic

2014 - Present Graduate School of Public Health University of Pittsburgh Pittsburgh, PA Professor
Health Policy and Management

2010 - 2014 Graduate School of Public Health University of Pittsburgh Pittsburgh, PA Professor
Biostatistics

2010 - 2013 University of Pittsburgh Pittsburgh, PA Professor
Intelligent Systems Program

2009 - 2010 Graduate School of Public Health University of Pittsburgh Pittsburgh, PA Visiting Professor
Biostatistics

2009 - 2014 Graduate School of Public Health University of Pittsburgh Director
Public Health Dynamics

	Pittsburgh, PA	Laboratory
2009 - 2013	School of Systems Biology George Mason University Manassas, VA	Affiliate Faculty Bioinformatics and Computational Biology
2005 - 2009	School of Computational Sciences George Mason University Manassas, Virginia	Professor Bioinformatics and Computational Biology
2004 - 2011	Krasnow Institute George Mason University Fairfax, VA	Affiliate Faculty Center for Social Complexity
2003 - 2006	School of Computational Sciences George Mason University Manassas, VA	Assistant Dean
2002 - 2006	School of Computational Sciences George Mason University Manassas, VA	Chair Bioinformatics and Computational Biology
2000 - 2005	School of Computational Sciences George Mason University Manassas, VA	Associate Professor
1997 - 2000	Institute for Biosciences, Biotechnology and Research Bioinformatics George Mason University Manassas, VA	Associate Professor
1980 - 1986	Engineering Vanderbilt University Nashville, TN	Assistant Professor Computer Science
Non-Academic		
2001 - 2001	Parabon Computing, Inc Fairfax, VA	Director Parabon Labs
1986 - 1997	Naval Research Laboratory Washington, DC	Head of Machine Learning Navy Center for Applied Research in Artificial Intelligence

MEMBERSHIP in PROFESSIONAL and SCIENTIFIC SOCIETIES

1978 - 2004	Member, Association for Computing Machinery
1980 - Present	Member, IEEE Computer Society
1981 - 2003	Member, Sigma Xi
1982 - 1998	Member, American Association for Artificial Intelligence
1993 - 1997	Member, International Society for Genetic Algorithms
2012 - 2014	Member, Society for Epidemic Research

HONORS and AWARDS

1973	Phi Kappa Phi Scholarship Award, Carnegie Mellon University
1989	Alan Berman Research Publication Award, Naval Research Laboratory
1989 - 1997	Outstanding Performance Award, Naval Research Laboratory
1991	Alan Berman Research Publication Award, Naval Research Laboratory
1993	Technology Transfer Award, Naval Research Laboratory
1996	Best Paper Award, ISRAM-96 Conference, Montpellier, France
2010	Evolutionary Computation Pioneer Award, IEEE Computational Intelligence Society

PUBLICATIONS

Peer-reviewed Publications

1. Grefenstette JJ. Stability in L-systems. *Theoretical Computer Science*. 1983; 24 (1):53-71.
2. Grefenstette JJ. Network structure and the firing squad synchronization problem. *Journal of Computer and System Sciences*. 1983; 26 (1):139-152.
3. Grefenstette JJ. GENESIS: a system for using genetic search procedures. In: *Proc. Conf. Intelligent Systems and Machines*. Rochester, MI 1984. p.161-165.
4. Fitzpatrick J, Grefenstette JJ, Van Gucht D. Image registration by genetic search. In: *Proc. IEEE SOUTHEASTCON '84*. Louisville KY: IEEE; 1984. p.460-464.
5. Schaffer J, Grefenstette JJ. Multi-objective learning via genetic algorithms. In: *Proc. Ninth International Joint Conference on Artificial Intelligence (IJCAI-85)*. Los Angeles, CA: AAAI; 1985. p.593-595.
6. Grefenstette JJ, Gopal R, Rosmaita B, Van Gucht D. Genetic algorithms for the traveling salesman problem. In: *Proc. First Intl. Conf. Genetic Algorithms and Their Applications*. Hillsdale, NJ: Lawrence Erlbaum Assoc.; 1985. p.160-168.
7. Grefenstette JJ, Fitzpatrick J. Genetic search with approximate function evaluations. In: *Proc. First Intl. Conf. Genetic Algorithms and Their Applications*. Hillsdale, NJ: Lawrence Erlbaum Assoc.; 1985. p.112-120.
8. Grefenstette JJ. Optimization of control parameters for genetic algorithms. *IEEE Transactions on Systems, Man, and Cybernetics*. 1986; 16 (1):122-128.
9. Grefenstette JJ, Pettey C. Approaches to machine learning with genetic algorithms. In: *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, Atlanta, GA: IEEE; 1986. p.55-60.
10. Zhou H, Grefenstette JJ. Induction of finite automata by genetic algorithms. In: *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*. Atlanta, GA: IEEE; 1986. p.170-174.
11. Fitzpatrick JM, Pickens DR, Grefenstette JJ, Price RR, James AE. A technique for automatic motion correction in DSA. *Optical Engineering*. 1987; 26 (11):1085-1093.
12. Pettey C, Leuze M, Grefenstette JJ. A parallel genetic algorithm. In: *Proceedings of the Second International Conference on Genetic Algorithms and Their Applications*. Cambridge, MA: Lawrence Erlbaum Assoc.; 1987. p.155-161.
13. Grefenstette JJ. Multilevel credit assignment in a genetic learning system. In: *Proceedings of the Second International Conference on Genetic Algorithms and Their Applications*. Cambridge, MA: Lawrence Erlbaum Assoc; 1987. p.202-209.
14. Fitzpatrick JM, Grefenstette JJ. Genetic algorithms in noisy environments. *Machine Learning*. 1988; 3 (2):101-120.
15. Grefenstette JJ. Credit assignment in rule discovery system based on genetic algorithms.

- Machine Learning. 1988; 3 (3):225-245.
16. Grefenstette JJ. Credit assignment in genetic learning systems. In: Proceedings of the Seventh National Conference on Artificial Intelligence (AAAI-88). St. Paul, MN: Morgan Kaufmann; 1988. p.596-600.
 17. Grefenstette JJ. Incremental learning of control strategies with genetic algorithms. In: Proceedings of the Sixth International Workshop on Machine Learning. Ithaca, NY: Morgan Kaufmann; 1989. p.340-344.
 18. Grefenstette JJ. Learning rules from simulation models. In: Proceedings of the 1989 International Association of Knowledge Engineers Conference. Washington, DC: IAKE; 1989. p.117-122.
 19. Grefenstette JJ, Baker J. How genetic algorithms work: A critical look at implicit parallelism. In: Proceedings of the Third International Conference on Genetic Algorithms. San Mateo, CA: Morgan Kaufmann; 1989. p.20-27.
 20. Grefenstette JJ. A system for learning control strategies with genetic algorithms. In: Proceedings of the Third International Conference on Genetic Algorithms. San Mateo, CA: Morgan Kaufmann; 1989. p.183-190.
 21. Zhou H, Grefenstette JJ. Learning by analogy in genetic classifier systems. In: Proceedings of the Third International Conference on Genetic Algorithms. San Mateo, CA: Morgan Kaufmann; 1989. p.291-297.
 22. Grefenstette JJ, Ramsey CL, Schultz AC. Learning sequential decision rules using simulation models and competition. Machine Learning. 1990; 5 (4):355-381.
 23. Gordon D, Grefenstette JJ. Explanations of empirically derived reactive plans. In: Proceedings Seventh International Conference on Machine Learning. San Mateo, CA: Morgan Kaufmann; 1990. p.198-203.
 24. Shultz A, Grefenstette JJ. Improving tactical plans with genetic algorithms. In: Proceedings IEEE Conference on Tools for AI 90. Washington, DC: IEEE; 1990. p.328-334.
 25. Ramsey C, Schultz A, Grefenstette JJ. Simulation-assisted learning by competition: Effects of noise differences between training model and target environment. In: Proceedings Seventh International Conference on Machine Learning. San Mateo, CA: Morgan Kaufmann; 1990. p.211-215.
 26. Grefenstette JJ. Competition-based learning for reactive systems. In: Proceedings of DARPA Workshop on Innovative Approaches to Planning, Scheduling and Control. San Mateo, CA: Morgan Kaufmann; 1990. p.348-353.
 27. Cobb H, Grefenstette JJ. Learning the persistence of actions in reactive control rules. In: Proceedings of the Eighth International Machine Learning Workshop. San Mateo, CA: Morgan Kaufmann; 1991. p.293-297.
 28. Grefenstette JJ. Lamarckian learning in multi-agent environments. In: Proceedings of the Fourth International Conference of Genetic Algorithms. San Mateo, CA: Morgan Kaufmann; 1991. p.303-310.
 29. Grefenstette JJ. Conditions for implicit parallelism. In: Rawlins G, editor. Foundations of Genetic Algorithms. San Mateo, CA: Morgan Kaufmann; 1991. p.252-261.
 30. Grefenstette JJ. The evolution of strategies for multi-agent environments. Adaptive Behavior. 1992; 1 (1):65-90.
 31. Grefenstette JJ, Ramsey CL. An approach to anytime learning. In: Proc Ninth International Workshop on Machine Learning. San Mateo, CA: Morgan Kaufmann; 1992. p.189-195.
 32. Schultz AC, Grefenstette JJ, De Jong KA. Adaptive testing of controllers for autonomous vehicles. In: Proceedings of the Symposium on Autonomous Underwater Vehicle Technology. Washington, DC IEEE, 1992. p.158-164.
 33. Schultz AC, Grefenstette JJ. Using a genetic algorithm to learn behaviors for autonomous vehicles. In: Proceedings of the American Institute of Aeronautics and Astronautics

- Guidance, Navigation and Control Conference. Hilton Head, SC AIAA, 1992. p.739-749.
34. Grefenstette JJ. Genetic algorithms for changing environments. In: Maenner R, Manderick B, editors. Proceedings of Parallel Problem Solving from Nature-2. North-Holland, 1992. p.137-144.
 35. Schultz AC, Grefenstette JJ, De Jong KA. Test and evaluation by genetic algorithms. IEEE Expert. 1993; 8 (5):9-14.
 36. Ramsey CL, Grefenstette JJ. Case-based initialization of genetic algorithms. In: Proc. Fifth International Conference on Genetic Algorithms (ICGA 93). San Mateo, CA: Morgan Kaufmann; 1993. p.84-91.
 37. Grefenstette JJ. Deception considered harmful. In: Whitley D, editor. Foundations of Genetic Algorithms 2. San Mateo, CA: Morgan Kaufmann; 1993.
 38. Cobb HG, Grefenstette JJ. Genetic algorithms for tracking changing environments. In: Proc Fifth International Conference on Genetic Algorithms (ICGA 93),. San Mateo, CA: Morgan Kaufmann; 1993. p.523-530.
 39. Grefenstette JJ, Schultz AC. An evolutionary approach to learning in robots. Machine Learning Workshop on Robot Learning; New Brunswick NJ 1994. p.65-72.
 40. Ramsey CL, Grefenstette JJ. Case-based anytime learning. In: Aha DW, editor. Case Based Reasoning: Papers from the 1994 Workshop. Technical Report WS-94-07. Menlo Park, CA: AAI Press; 1994.
 41. Grefenstette JJ. Evolutionary algorithms in robotics. In: Jamshidi M, Nguyen C, editors. Robotics and Manufacturing: Recent Trends in Research, Education, and Applications, Vol 5. Proceedings of the Fifth International Symposium on Robotics and Manufacturing (ISRAM '94). New York: ASME Press; 1994. p.127-132.
 42. Grefenstette JJ. Predictive Models Using Fitness Distributions of Genetic Operators. In: Whitley D, Vose E, editors. Foundations of Genetic Algorithms 3. San Mateo, CA: Morgan Kaufmann; 1995.
 43. Grefenstette JJ. Robot learning with parallel genetic algorithms on networked computers. In: Proceedings of the 1995 Summer Computer Simulation Conference (SCSC '95). Ottawa, Ontario, Canada 1995. p.352-357.
 44. Potter MA, De Jong KA, Grefenstette JJ. A coevolutionary approach to learning sequential decision rules. In: Eshelman LJ, editor. Proc. Sixth International Conference on Genetic Algorithms (ICGA '95). 1995. p.366-372.
 45. Roache EA, Hickok KA, Loje KF, Hunt MW, Grefenstette JJ. Genetic algorithms for expert system validation. In: Proceedings of the 1995 Western Multiconference Society for Computer Simulation. Las Vegas, NV 1995.
 46. Grefenstette JJ, Daley RP. Methods for competitive and cooperative co-evolution. In: Adaptation, Co-evolution and Learning in Multiagent Systems: Papers from the 1996 AAI Symposium. Technical Report SS-96-01. Menlo Park, CA: AAI Press; 1996. p.45-50.
 47. Grefenstette JJ. Genetic learning for adaptation in autonomous robots. In: Jamshidi M, Pin F, Dauchez P, editors. Robotics and Manufacturing: Recent Trends in Research and Applications. Proc. of the Sixth International Symposium on Robotics and Manufacturing. New York: ASME Press; 1996. p.265-270.
 48. Schultz AC, Grefenstette JJ, Adams WL. Learning complex robotic behaviors. In: Jamshidi M, Pin F, Dauchez P, editors. Robotics and Manufacturing: Recent Trends in Research and Applications. Proc. of the Sixth International Symposium on Robotics and Manufacturing. New York: ASME; 1996. p.763-768.
 49. Schultz AC, Grefenstette JJ, Adams WL. RoboShepherd: Learning a complex behavior. In: Proc. of the Robots and Learning Workshop (RoboLearn '96). Key West, FL 1996. p.105-113.
 50. Yamauchi B, Schultz AC, Adams W, Graves K, Grefenstette JJ, Perzanowski D. ARIEL:

- Autonomous Robot for Integrated Exploration and Localization. In: Proceedings of the National Conference on Artificial Intelligence. 1997. p.804-805.
51. Ramsey CL, DeJong KA, Grefenstette JJ, Wu AS, Burke DS. Genome length as an evolutionary self-adaptation. In: Parallel Problem Solving from Nature, 5. 1998. p.345-353.
 52. Burke DS, De Jong KA, Grefenstette JJ, Ramsey CL, Wu AS. Putting more genetics into genetic algorithms. *Evolutionary computation*. 1998; 6 (4):387-410. PMID: PMC10030470. PMID: 10030470.
 53. Wu AS, DeJong KA, Burke DS, Grefenstette JJ, Ramsey CL. Visual analysis of evolutionary algorithms. *Congress on Evolutionary Computation*; 1999. p.1419-1425.
 54. Moriarty DE, Schultz AC, Grefenstette JJ. Evolutionary algorithms for reinforcement learning. *Journal of Artificial Intelligence Research*. 1999; 11:199-229.
 55. Grefenstette JJ. Evolvability in dynamic fitness landscapes: A genetic algorithm approach. In: *Proc. 1999 Congress on Evolutionary Computation*. Washington, DC 1999. p.2031-2038.
 56. Daley RP, Schultz A, Grefenstette JJ. Co-evolution of robot behaviors. In: *Proc. SPIE Int. Symp. On Intelligent Systems and Advanced Manufacturing (ISAM '99)*. Boston, MA 1999.
 57. Schultz AC, Grefenstette JJ. Continuous and embedded learning in autonomous vehicles: Adapting to sensor failures. In: *Proc. SPIE Int. Symp. On Aerospace/Defense Sensing, Simulation and Controls (AeroSense 2000)*. Orlando, FL 2000.
 58. Nash H, Blair D, Grefenstette JJ. Comparing algorithms for large-scale sequence analysis. In: *Proc. 2nd IEEE Int. Symp. on Bioinformatics and Biomedical Engineering (BIBE 2001)*. Rockville, MD IEEE, 2001. p.89-96.
 59. Kim S, Weinstein JN, Grefenstette JJ. Inference of large-scale topology of gene regulation networks by neural nets. In: *Proc. IEEE International Conference of Systems, Man, and Cybernetics*. Washington, DC IEEE, 2003. p.3969-3975.
 60. Lattner AD, Kim S, Cervone G, Grefenstette JJ. Experimental comparison of symbolic learning programs for the classification of gene network topology models. *FGML 2003 Workshop, Annual Meetings of the GI Working Group -- Machine Learning, Knowledge Discovery, Data Mining*; Karlsruhe, Germany 2003.
 61. Mathe E, Grefenstette JJ. Polyoptimizing genetic algorithms for feature selection. *Interface 2004: Classification and Clustering 36th Symposium on the Interface*; Baltimore, MD 2004.
 62. Matukumalli LK, Grefenstette JJ, Sonstegard TS, Van Tassell CP. EST-PAGE--managing and analyzing EST data. *Bioinformatics (Oxford, England)*. 2004 Jan 22; 20 (2):286-8. PMID: 14734326.
 63. Khan R, Alkharouf N, Beard H, Macdonald M, Chouikha I, Meyer S, Grefenstette J, Knap H, Matthews B. Microarray analysis of gene expression in soybean roots susceptible to the soybean cyst nematode two days post invasion. *Journal of nematology*. 2004 Sep; 36 (3):241-8. PMID: PMC2620781. PMID: 19262812.
 64. Doung D, Grefenstette JJ. SISTER: a Symbolic Interactionist Simulation of Trade and Emergent Roles. *Journal of Artificial Societies and Social Simulation*. 2005; 8 (1).
 65. Grefenstette JJ, Thompson K, Shannon W, Steinmeyer B. Genetic algorithms for feature selection using Mantel correlation scoring. *Interface 2005: Classification and Clustering 37th Symposium on the Interface*; St. Louis, MO 2005.
 66. Matukumalli LK, Grefenstette JJ, Hyten DL, Choi IY, Cregan PB, Van Tassell CP. SNP-PHAGE--High throughput SNP discovery pipeline. *BMC bioinformatics*. 2006; 7:468. PMID: PMC1626092. PMID: 17059604.
 67. Matukumalli LK, Grefenstette JJ, Hyten DL, Choi IY, Cregan PB, Van Tassell CP. Application of machine learning in SNP discovery. *BMC bioinformatics*. 2006; 7:4. PMID: PMC1955739. PMID: 16398931.
 68. Grefenstette J, Kim S, Kauffman S. An analysis of the class of gene regulatory functions

- implied by a biochemical model. *Bio Systems*. 2006 May; 84 (2):81-90. PMCID: PMC16384633. PMID: 16384633.
69. Ribiero AS, Grefenstette JJ, Could D, Hakkinen A, Rajala T, Yli-Harfa O. Selective advantages of stochastic phenotypic determination in unpredictable environments. *Fifth International Workshop on Computational Systems Biology (WCSB 2008)*; 2008 Jun; Leipzig, Germany 2008.
 70. Villa-Angulo R, Matukumalli LK, Gill CA, Choi J, Van Tassell CP, Grefenstette JJ. High-resolution haplotype block structure in the cattle genome. *BMC genetics*. 2009; 10:19. PMCID: PMC2684545. PMID: 19393054.
 71. Bovine HapMap Consortium, Gibbs RA, Taylor JF, Van Tassell CP, Barendse W, Eversole KA, Gill CA, Green RD, Hamernik DL, Kappes SM, Lien S, Matukumalli LK, McEwan JC, Nazareth LV, Schnabel RD, Weinstock GM, Wheeler DA, Ajmone-Marsan P, Boettcher PJ, Caetano AR, Garcia JF, Hanotte O, Mariani P, Skow LC, Sonstegard TS, Williams JL, Diallo B, Hailemariam L, Martinez ML, Morris CA, Silva LO, Spelman RJ, Mulatu W, Zhao K, Abbey CA, Agaba M, Araujo FR, Bunch RJ, Burton J, Gorni C, Olivier H, Harrison BE, Luff B, Machado MA, Mwakaya J, Plastow G, Sim W, Smith T, Thomas MB, Valentini A, Williams P, Womack J, Woolliams JA, Liu Y, Qin X, Worley KC, Gao C, Jiang H, Moore SS, Ren Y, Song XZ, Bustamante CD, Hernandez RD, Muzny DM, Patil S, San Lucas A, Fu Q, Kent MP, Vega R, Matukumalli A, McWilliam S, Sclep G, Bryc K, Choi J, Gao H, Grefenstette JJ, Murdoch B, Stella A, Villa-Angulo R, Wright M, Aerts J, Jann O, Negrini R, Goddard ME, Hayes BJ, Bradley DG, Barbosa da Silva M, Lau LP, Liu GE, Lynn DJ, Panzitta F, Dodds KG. Genome-wide survey of SNP variation uncovers the genetic structure of cattle breeds. *Science (New York, N.Y.)*. 2009 Apr 24; 324 (5926):528-32. PMCID: PMC2735092. PMID: 19390050.
 72. Gillette TA, Grefenstette JJ. On comparing neuronal morphologies with the constrained tree-edit-distance. *Neuroinformatics*. 2009 Sep; 7 (3):191-4. PMID: 19636974.
 73. Lee BY, Brown ST, Cooley PC, Zimmerman RK, Wheaton WD, Zimmer SM, Grefenstette JJ, Assi TM, Furphy TJ, Wagener DK, Burke DS. A computer simulation of employee vaccination to mitigate an influenza epidemic. *American journal of preventive medicine*. 2010 Mar; 38 (3):247-57. PMCID: PMC2833347. PMID: 20042311.
 74. Lee BY, Brown ST, Cooley P, Potter MA, Wheaton WD, Voorhees RE, Stebbins S, Grefenstette JJ, Zimmer SM, Zimmerman RK, Assi TM, Bailey RR, Wagener DK, Burke DS. Simulating school closure strategies to mitigate an influenza epidemic. *Journal of public health management and practice : JPHMP*. 2010 May; 16 (3):252-61. PMCID: PMC2901099. PMID: 20035236.
 75. Lee BY, Brown ST, Korch GW, Cooley PC, Zimmerman RK, Wheaton WD, Zimmer SM, Grefenstette JJ, Bailey RR, Assi TM, Burke DS. A computer simulation of vaccine prioritization, allocation, and rationing during the 2009 H1N1 influenza pandemic. *Vaccine*. 2010 Jul 12; 28 (31):4875-9. PMCID: PMC2906666. PMID: 20483192.
 76. Lee BY, Brown ST, Cooley P, Grefenstette JJ, Zimmerman RK, Zimmer SM, Potter MA, Rosenfeld R, Wheaton WD, Waring AE, Bacon KM, Burke DS. Vaccination deep into a pandemic wave potential mechanisms for a "third wave" and the impact of vaccination. *American journal of preventive medicine*. 2010 Nov; 39 (5):e21-9. PMCID: PMC2975455. PMID: 20965375.
 77. Brown ST, Tai JH, Bailey RR, Cooley PC, Wheaton WD, Potter MA, Voorhees RE, LeJeune M, Grefenstette JJ, Burke DS, McGlone SM, Lee BY. Would school closure for the 2009 H1N1 influenza epidemic have been worth the cost?: a computational simulation of Pennsylvania. *BMC public health*. 2011; 11:353. PMCID: PMC3119163. PMID: 21599920.
 78. Yonas MA, Borrebach JD, Burke JG, Brown ST, Philip KD, Burke D, Grefenstette JJ.

- Dynamic Simulation of Community Crime and Crime-Reporting Behavior. In: Salerno J, Yang SJ, Nau D, Chai SK, editors. *Lecture Notes in Computer Science 6589: Proceedings of the 2011 International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction (SBP11)*. Springer, 2011. p.97-104.
79. Lee BY, Brown ST, Bailey RR, Zimmerman RK, Potter MA, McGlone SM, Cooley PC, Grefenstette JJ, Zimmer SM, Wheaton WD, Quinn SC, Voorhees RE, Burke DS. The benefits to all of ensuring equal and timely access to influenza vaccines in poor communities. *Health affairs (Project Hope)*. 2011 Jun; 30 (6):1141-50. PMID: PMC3385997. PMID: 21653968.
 80. Cooley P, Brown S, Cajka J, Chasteen B, Ganapathi L, Grefenstette J, Hollingsworth CR, Lee BY, Levine B, Wheaton WD, Wagener DK. The role of subway travel in an influenza epidemic: a New York City simulation. *Journal of urban health : bulletin of the New York Academy of Medicine*. 2011 Oct; 88 (5):982-95. PMID: PMC3191213. PMID: 21826584.
 81. Shim E, Grefenstette JJ, Albert SM, Cakouros BE, Burke DS. A game dynamic model for vaccine skeptics and vaccine believers: measles as an example. *Journal of theoretical biology*. 2012 Feb 21; 295:194-203. PMID: PMC3709470. PMID: 22108239.
 82. Paparian J, Brown S, Burke DS, Grefenstette JJ. FRED Navigator: An interactive system for visualizing results from large-scale epidemic simulations. 2012 IEEE 8th International Conference on e-Science (e-Science 2012); 2012 Oct 8-12; Chicago, IL IEEE, 2012 Oct. p.1-5.
 83. Potter MA, Brown ST, Cooley PC, Sweeney PM, Hershey TB, Gleason SM, Lee BY, Keane CR, Grefenstette J, Burke DS. School closure as an influenza mitigation strategy: how variations in legal authority and plan criteria can alter the impact. *BMC public health*. 2012 Nov 14; 12 (1):977. PMID: PMC3532840. PMID: 23148556.
 84. Potter MA, Brown ST, Lee BY, Grefenstette J, Keane CR, Lin CJ, Quinn SC, Stebbins S, Sweeney PM, Burke DS. Preparedness for pandemics: does variation among states affect the nation as a whole? *Journal of public health management and practice : JPHMP*. 2013; 18 (3):233-40. PMID: PMC3758226. PMID: 22473116.
 85. Grefenstette JJ, Brown ST, Rosenfeld R, DePasse J, Stone NT, Cooley PC, Wheaton WD, Fyshe A, Galloway DD, Sriram A, Guclu H, Abraham T, Burke DS. FRED (a Framework for Reconstructing Epidemic Dynamics): an open-source software system for modeling infectious diseases and control strategies using census-based populations. *BMC Public Health*. 2013; 13:940. PMID: PMC3852955. PMID: 24103508.
 86. Burke DS, Grefenstette JJ. Toward an integrated meta-model of public health dynamics for preparedness decision support. *J Public Health Manag Pract*. 2013; 19:S12-5. PMID: 23903387. doi: 10.1097/PHH.0b013e31828a842f.
 87. Kumar S, Grefenstette JJ, Galloway D, Albert SM, Burke DS. Policies to reduce influenza in the workplace: impact assessments using an agent-based model. *American Journal of Public Health*. 2013 Aug; 103 (8):1406-11. PMID: PMC3893051. PMID: 23763426. doi: 10.2105/AJPH.2013.301269.
 88. Yonas MA, Burke JG, Brown ST, Borrebach JD, Garland R, Burke DS, Grefenstette JJ. Dynamic simulation of crime perpetration and reporting to examine community intervention strategies. *Health Education & Behavior : The Official Publication of The Society For Public Health Education*. 2013 Oct; 40:87S-97S. PMID: PMC3964320. PMID: 24084404. doi: 10.1177/1090198113493090.
 89. van Panhuis WG, Grefenstette J, Jung SY, Chok NS, Cross A, Eng H, Lee BY, Zadorozhny V, Brown S, Cummings D, Burke DS. Contagious diseases in the United States from 1888 to the present. *The New England Journal of Medicine*. 2013 Nov 28; 369 (22):2152-8. PMID: 24283231.
 90. Lukens S, DePasse J, Rosenfeld R, Ghedin E, Mochan E, Brown ST, Grefenstette J,

- Burke DS, Swigon D, Clermont G. A large-scale immuno-epidemiological simulation of influenza A epidemics. *BMC Public Health*. 2014; 14:1019. PMID: 25266818. doi: 10.1186/1471-2458-14-1019.
91. van Panhuis WG, Paul P, Emerson C, Grefenstette J, Wilder R, Herbst AJ, Heymann D, Burke DS. A systematic review of barriers to data sharing in public health. *BMC Public Health*. 2014; 14:1144. PMID: 25377061. doi: 10.1186/1471-2458-14-1144.
 92. Kumar S, Piper K, Galloway DD, Hadler JL, Grefenstette JJ. Is population structure sufficient to generate area-level inequalities in influenza rates? An examination using agent-based models. *BMC Public Health*. 2015 Sep 23;15:947. doi: 10.1186/s12889-015-2284-2. PubMed PMID: 26400564; PubMed Central PMCID: PMC4579639.
 93. He T, Li K, Roberts MS, Spaulding AC, Ayer T, Grefenstette JJ, Chhatwal J. Prevention of Hepatitis C by Screening and Treatment in U.S. Prisons. *Ann Intern Med*. 2016 Jan 19;164(2):84-92. doi: 10.7326/M15-0617. Epub 2015 Nov 24. PubMed PMID: 26595252; PubMed Central PMCID: PMC4854298.

Reviews, Proceedings of Conferences and Symposia (not peer-reviewed), Editorials

1. Grefenstette JJ. Genetic algorithms. *IEEE Expert*. 1993 Oct; 8 (5):5-8. (invited).

Books, Book Chapters, Monographs

1. Grefenstette JJ. Genetic Algorithms and Their Applications: Proceedings of the First International Conference on Genetic Algorithms. Hillsdale, NJ: Lawrence Erlbaum; 1985.
2. Grefenstette JJ. Genetic Algorithms and Their Applications: Proceedings of the Second International Conference on Genetic Algorithms. Hillsdale, NJ: Lawrence Erlbaum; 1987.
3. Grefenstette JJ. Incorporating problem specific knowledge into genetic algorithms. In: Davis L, editor. *Genetic Algorithms and Simulated Annealing*. London: Pitman, 1987.
4. Grefenstette JJ. Genetic algorithms and their applications. In: Kent A, Williams J, editors. *The Encyclopedia of Computer Science and Technology*, Vol. 21. New York: Marcel Dekker, 1990.
5. Grefenstette JJ. Strategy acquisition with genetic algorithms. In: Davis L, editor. *The Genetic Algorithms Handbook*. (pp. 186-201) . Boston: Van Nostrand Reinhold, 1991.
6. Grefenstette JJ. Learning decision strategies with genetic algorithms. In: *Lecture Notes in Artificial Intelligence 642*. (pp. 35-50) . Kluwer Academic Publishers, 1992. (invited).
7. Grefenstette JJ, De Jong K, Spears W. Competition-based learning. In: Meyrowitz A, Chipman S, editors. *Foundations of Knowledge Acquisition: Machine Learning*. (pp. 203-225) . Boston: Kluwer Academic Publishers, 1992. (invited).
8. Grefenstette JJ. Special Series on Genetic Algorithms, *IEEE Expert*. IEEE; 1993 Oct (invited).
9. Grefenstette JJ. *Genetic Algorithms for Machine Learning*. Kluwer Academic Publishers; 1994.
10. Schultz AC, Grefenstette JJ, De Jong KA. Learning to Break Things: Adaptive Testing of Intelligent Controllers. In: Baeck T, Fogel D, Michalewicz Z, editors. *The Handbook of Evolutionary Computation*. IOP Publishing and Oxford University Press, 1997.
11. Grefenstette JJ. Levels of Evolution for Control Systems. In: Fleming P, Zalzal A, editors. *Genetic Algorithms in Engineering Systems*. Peter Peregrinus Press, 1997. (invited).
12. Ribeiro AS, Grefenstette JJ, Kauffman SA. Modeling gene regulatory networks with delayed stochastic dynamics. In: Das S, Caragea D, Hsu WH, Welch SM, editors. *Computational Methodologies in Gene Regulatory Networks*. IGI Global Publishing, 2009.
13. Grefenstette JJ, Burke JG. Agent Based Modeling of Factors Influencing Community

Health. In: Burke JG, Albert SM, editors. Methods for Community Public Health Research: Integrated and Engaged Approaches. (pp. 45-68) . New York, NY: Springer Publishing Company, 2014.

Published Abstracts

1. Kim S, Weinstein JN, Grefenstette JJ. Inference of topological features of gene regulation networks by neural nets [abstract]. 2004 Nov 4 ; Bethesda, MD 2003 Nov.
2. Vakas DV, Grefenstette JJ. The emulation of social institutions as a method of coevolution [abstract]. In: 2005 Conference on Genetic and Evolutionary Computation (GECCO 2005; Proceedings of the 2005 Conference on Genetic and Evolutionary Computation (GECCO 2005),. 2005 Jun 25-29 ; Washington, DC ACM, 2005. 555-556.

RESEARCH

Current research support

Funding Agency: ROBERT WOOD JOHNSON FOUNDATION
Grant Number: 72858
Title of Grant: DEVELOPING PUBLIC HEALTH DECISION SUPPORT TOOLS:
FRED AGES AND STAGES AND MPDS
Principal Investigator: DS BURKE
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 8/1/2015 - 7/31/2018
Total Amount Awarded: \$95,442

Funding Agency: NIH
Grant Number: 1 R25 TW009717-01A1
Title of Grant: EMPOWERING INDIAN HEALTH RESEARCHERS WITH
COMPUTATIONAL MODELING TOOLS
Principal Investigator: C BUNKER
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 5/18/2015 - 4/30/2018
Total Amount Awarded: \$102,592

Funding Agency: NIH/NIGMS
Grant Number: 2U54 GM088491-06
Title of Grant: COMPUTATIONAL MODELS OF INFECTIOUS DISEASE
THREATS
Principal Investigator: DS BURKE
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 7/1/2014 - 6/30/2019
Total Amount Awarded: \$2,334,069

Funding Agency: BENTER FOUNDATION
Grant Number: 2013-29
Title of Grant: PUBLIC HEALTH INTERNATIONAL MODELING FELLOWS
INITIATIVE
Principal Investigator: D.S. BURKE
Grefenstette Role on Grant: Co-Investigator

Years Inclusive: 1/1/2014 - 12/31/2017
Total Amount Awarded: \$74,996

Funding Agency: BILL AND MELINDA GATES FOUNDATION
Grant Number: OPP1091931
Title of Grant: VMI II: APPLICATION OF COMPUTATIONAL MODELS TO GUIDE AND EVALUATE GLOBAL INFECTIOUS DISEASE CONTROL PROGRAMS

Principal Investigator: D.S. BURKE
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 7/1/2013 - 6/30/2017
Total Amount Awarded: \$491,689

Funding Agency: NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM (NIAAA)
Grant Number: P60-AA06282-36
Title of Grant: ENVIRONMENTAL APPROACHES TO PREVENTION, COMP #6: FRAMEOWRK FOR BEHAVIORAL RISK MODELS OF ALCOHOL-RELATED PROBLEMS

Principal Investigator: C. MAIR
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 12/01/17 - 11/30/18
Total Amount Awarded: \$268,451

Past research support

Funding Agency: XSEDE (NSF)
Grant Number: CDA140003
Title of Grant: SIMULATIONS OF EPIDEMICS TO SUPPORT PUBLIC HEALTH PLANNING

Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 7/1/2014 - 6/30/2015

Funding Agency: NIGMS/NIH
Grant Number: 1U54GM088491-01
Title of Grant: UNIVERSITY OF PITTSBURGH MIDAS NATIONAL CENTER OF EXCELLENCE

Principal Investigator: D.S. BURKE
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 6/15/2009 - 6/14/2014
Total Amount Awarded: \$2,164,007

Funding Agency: BENTER FOUNDATION
Grant Number: 2011-05
Title of Grant: GRADUATE SCHOOL OF PUBLIC HEALTH'S IN-COUNTRY PUBLIC HEALTH INTERNATIONAL MODELING AND FELLOWS INITIATIVE

Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 7/1/2011 - 10/30/2013

Total Amount Awarded: \$75,000
Funding Agency: CDC
Grant Number: 01CK000179-01
Title of Grant: QUANTIFYING CONTACT RATES AND MIXING PATTERNS IN SCHOOL AGE CHILDREN
Principal Investigator: S. ZIMMER
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 9/1/2011 - 8/31/2013

Funding Agency: BILL AND MELINDA GATES FOUNDATION
Grant Number: 49276
Title of Grant: VACCINE MODELING INITIATIVE
Principal Investigator: D.S. BURKE
Grefenstette Role on Grant: Co-Investigator
Years Inclusive: 4/1/2008 - 4/30/2013

Funding Agency: LOCKHEED MARTIN, INC
Grant Number: BBMKS7501
Title of Grant: BIOSURVEILLANCE ALGORITHMS AND DECISION ENVIRONMENTS
Principal Investigator: M. WAGNER, J. GREFENSTETTE
Grefenstette Role on Grant: PI (multiple)
Years Inclusive: 12/1/2009 - 12/31/2010
Total Amount Awarded: \$320,000

Funding Agency: USDA CSREES
Grant Number: NRI 2007-35604-17870
Title of Grant: HAPLOTYPE ANALYSIS FROM BOVINE GENOTYPE DATA
Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 1/15/2007 - 1/14/2010
Total Amount Awarded: \$406,099

Funding Agency: USDA ARS
Grant Number: SCA 1275-21220-221-02
Title of Grant: APPLICATION OF BIOINFORMATICS TO IDENTIFICATION OF PLANT GENE FUNCTION
Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 9/1/1999 - 8/31/2009
Total Amount Awarded: \$390,139

Funding Agency: USDA ARS
Grant Number: SCA 1265-31000-098-03
Title of Grant: APPLICATIONS OF BIOINFORMATICS TO LIVESTOCK GENOMICS
Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 8/15/2004 - 8/14/2009

Total Amount Awarded: \$407,981

Funding Agency: PARABON COMPUTATION, INC /NASA
Grant Number: 0407-0071-251-01
Title of Grant: APPLICATION OF ADAPTIVE TESTING APPROACHES FOR COMPLEX SYSTEMS

Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 2/12/2007 - 7/31/2008
Total Amount Awarded: \$72,309

Funding Agency: BIOSPHEREX, LLC / NIH
Title of Grant: AN INTEGRATED KNOWLEDGEBASE OF PATENT CLAIMS AND GENOMIC DATA

Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 4/1/2006 - 9/30/2007
Total Amount Awarded: \$81,228

Funding Agency: NRL
Title of Grant: TOPICS IN EVOLUTIONARY COMPUTATION

Principal Investigator: J.J. GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 5/12/1998 - 3/14/2003
Total Amount Awarded: \$302,799

Funding Agency: WRAIR
Title of Grant: EMERGING DISEASES AS COMPLEX ADAPTIVE SYSTEMS

Principal Investigator: JJ GREFENSTETTE
Years Inclusive: 5/15/1996 - 9/30/1997
Total Amount Awarded: \$250,000

Funding Agency: NSF
Title of Grant: PARALLEL ALGORITHMS

Principal Investigator: J.J. GREFENSTETTE, M. LEUZE
Grefenstette Role on Grant: PI (multiple)
Years Inclusive: 9/1/1983 - 8/31/1985
Total Amount Awarded: \$102,202

Funding Agency: TEXAS INSTRUMENTS, INC
Title of Grant: INTERNATIONAL CONFERENCE ON GENETIC ALGORITHMS

Principal Investigator: JJ GREFENSTETTE
Grefenstette Role on Grant: PI (sole)
Years Inclusive: 1985
Total Amount Awarded: \$10,000

OTHER SCHOLARLY ACTIVITIES

Editorial Board(s)

1990 - 2000 Editor, 1995-1997, Machine Learning
1990 - 2010 Adaptive Behavior
1993 - 1996 Founding Associate Editor, Evolutionary Computation

Manuscript Reviewer

2012 Reviewer, IEEE Trans Parallel and Distributed Systems
2012 Reviewer, FEBS Letters
2012 - 2016 Reviewer, Health Education and Behavior
2013 – 2016 Reviewer, The Lancet Global Health
2016 Reviewer, Theoretical Biology and Medical Modelling

PATENTS

1. Blair D, Grefenstette J, Nash H, Newfield D, Lucien D Apparatus and method for providing sequence database comparison. 7,231,390. Issued on 2007 Jun 12.
2. Grefenstette JJ Polyoptimizing genetic algorithm for finding multiple solutions to problems. 7,437,336. Issued on 2008 Oct 14.

INVITED PRESENTATIONS

1. Potter MA, Brown S, Lee BY, Grefenstette JJ, Keane C, Lin CJ, Quinn SC, Stebbins S, Sweeney PM, Burke D. Preparedness for Pandemics: Does Variation Among States Affect the Nation as a Whole? Presented at: MIDAS National Network Meeting; 2012 Feb 3; Boston, MA.
2. Grefenstette JJ. FRED: A Framework for Reconstructing Epidemiological Dynamics. Presented at: FDA Workshop on Using Influenza Disease Models for Evaluation of Risks and Benefits of Vaccines; 2012 Aug 23; Washington, DC.
3. Grefenstette JJ, Lakoski JM, Kinchington E. FRED Navigator. Presented at: MIDAS Science Education Meeting; 2012 Sep 19; Washington, DC.
4. Grefenstette JJ, Lakoski JM, Kinchington E. FRED Navigator. Presented at: MIDAS Science Education Workshop; 2012 Nov 14; Arlington, VA.
5. Van panhuis W, Zollman K, Kumar S, Dabass A, Grefenstette JJ, Burke DS. Polio modeling meta-model. Presented at: Polio Modeling Meeting; 2013 Jan 29; Atlanta, GA.
6. Grefenstette JJ, Lakoski JM, Kinchington E, Burke DS. FRED Navigator. Presented at: MIDAS National Network Meeting; 2013 May 5; Austin, TX.
7. Grefenstette JJ. Agent-based Modeling for Public Health. Presented at: Summer Institute for Training in Biostatistics (SIBS); 2013 Jul 17.
8. Grefenstette JJ. PA Health Simulation. Presented at: Seminar for PA Secretary of Health; 2013 Oct 3.
9. Grefenstette JJ. Modeling for Public Health. Presented at: PUBHLT Overview Course; 2013 Nov 4.
10. Grefenstette JJ. Public Health Dynamics Modeling and Simulation. Presented at: PUBHLT Overview Course; 2013 Nov 6.
11. Simulation of Vaccination Policies and Behavior. Presented at: IDM Seminar and Journal Club; 2013 Nov 25.
12. Grefenstette JJ. Agent-based Modeling of Infection Disease. Presented at: EPI 2187: Epidemiological Methods 2; 2013 Dec 5.
13. Grefenstette JJ. Commentary on Agent Based Models. Presented at: Complex Systems, Health Disparities & Population Health: Building Bridges; 2014 Feb 24-25; Bethesda, MD.

14. Agent-based Modeling for Public Health. Presented at: Summer Institute for Training in Biostatistics (SIBS); 2014 Jul 16; Pittsburgh.
15. Grefenstette JJ. Models and Forecasting. Presented at: MIDAS Reverse Site Visit; 2014 Sep 25; Pittsburgh.
16. Grefenstette JJ. Agent Based Modeling for Public Health. Presented at: JHCF Salk Fellowship Program; 2014 Oct 27; Pittsburgh.
17. Grefenstette JJ. Pitt MIDAS Center of Excellence. Poster presented at: MIDAS National Meeting; 2014 Nov 6; New Orleans.
18. Grefenstette JJ. Agent Based Modeling for Public Health. Presented at: EPI 2187: Epidemiological Methods 2; 2014 Nov 18; Pittsburgh.
19. Grefenstette JJ. How can modeling help in an emerging epidemic? Presented at: Perspectives on Ebola; 2014 Dec 5; University of Pittsburgh.
20. Grefenstette JJ, Krauland MG, Galloway DD, Robert MS, Burke, DS. FRED with Ages and Stages: An agent-based simulation platform with long-term demographic dynamics. Poster presented at: MIDAS National Meeting; 2016 May 23; Washington DC.
21. Grefenstette JJ. Using FRED and Optima Predict to Simulate a Health Emergency in Pittsburgh, presented at OnePGH: Resilient Pittsburgh Air Quality Disaster Modeling, April 2017
22. Grefenstette JJ. Agent-Based Modeling for Public Health: the FRED System, Robert Wood Johnson Foundation Seminar, May 2017
23. Grefenstette, JJ. Agent Based Modeling: the FRED System, presented at the *Modeling the World's Systems Conference*, Pittsburgh, May 2018
24. Grefenstette, JJ. Using Simulation for Public Health and Emergency Planning with FRED, presented at the *Conference on Computational Methods for Fostering a Health Community*, Pittsburgh, March 2018 (delivered by David Galloway due to weather emergency)

OTHER PRESENTATIONS

1. Potter MA, Lee BY, Brown ST, Cooley PC, Wheaton B, Voorhees R, Stebbins S, Grefenstette J, Zimmer S, Zimmerman RK, Assi TM, Bailey R, Wagener D, Burke D. Should Schools Close to Mitigate a Flu Pandemic? How Computational Models Assist in Decision-Making. Presented at: 2010 Preparedness Summit of the National Association of County and City Health Officials; 2010 Feb 17; Atlanta, GA.
2. Margaret A. Potter, Brown S, Lee BY, Sweeney PM, Lin CJ, Zhou X, Hershey T, Gleason SM, Epstein JM, Cooley P, Grefenstette JJ, Burke DS. Agent-based Modeling of Public Health System Preparedness: School Closure as a Pandemic Mitigation Strategy. Presented at: Public Health Systems & Services Research Keeneland Conference 2010; 2010 Apr 12; Lexington, KY.
3. Potter MA, Brown ST, Lee BY, Sweeney PM, Lin CJ, Zhou X, Hershey T, Gleason SM, Epstein J, Cooley P, Grefenstette J, Burke D. Agent-Based Modeling of Public Health System Preparedness: School Closure as a Pandemic Mitigation Strategy. Presented at: Public Health & Services Research Keeneland Conference 2010; 2010 Apr 21; Lexington, KY.
4. Margaret A. Potter, Brown S, Lee BY, Sweeney PM, Lin CJ, Zhou X, Hershey T, Gleason SM, Epstein JM, Cooley P, Grefenstette JJ, Burke DS. Agent-based Modeling of Public Health System Preparedness: School Closure as a Pandemic Mitigation Strategy. Presented at: Models of Infectious Disease Agent Study (MIDAS) Network Meeting; 2010

May 5; Washington, DC.

5. Potter MA, Brown S, Lee BY, Sweeney PM, Hershey TB, Baily R, Tai J, Lin CJ, Zhou X, Gleason SM, Epstein J, Keane C, Cooley P, Stebbins S, Grefenstette JJ, Burke D. State Specific Indicators of Preparedness for Closing Schools as a Pandemic Mitigation Strategy: Results from Computational Modeling. Presented at: Academy Health, Public Health Systems Research Interest Group; 2010 Jun 29; Boston, MA.
6. Margaret A. Potter, Brown S, Lee BY, Sweeney PM, Hershey T, Bailey R, Tai J, Lin CJ, Zhou X, Gleason SM, Epstein J, Keane C, Cooley P, Stebbins S, Grefenstette JJ, Burke DS. State Specific Indicators of Preparedness for Closing Schools as a Pandemic Mitigation Strategy: Results from Computational Modeling. Presented at: AcademyHealth Public Health Systems Research Interest Group Annual Meeting; 2010 Jun 30; Boston, MA.
7. Margaret A. Potter, Brown S, Epstein JM, Gleason SM, Grefenstette JJ, Hershey T, Keane C, Lin CJ, Quinn SC, Stebbins S, Sweeney PM, Zhou X, Burke DS. Preparedness for Pandemics: Does Variation among States Affect the Nation as a Whole? Poster presented at: CDC's 2010 Modeling for Public Health Action: From Epidemiology to Operations Conference; 2010 Dec 9; Atlanta, GA.
8. Margaret A. Potter, Brown S, Lee BY, Gleason SM, Grefenstette JJ, Hershey T, Keane C, Lin CJ, Quinn S, Stebbins S, Sweeney PM, Zhou X, Epstein JM, Burke DS. Preparedness for Pandemics: Does Variation among States Affect the Nation as a Whole? Poster presented at: AcademyHealth Public Health Systems Research Interest Group Annual Meeting; 2011 Jun; Seattle, WA.
9. Potter MA, Brown S, Lee BY, Gleason SM, Grefenstette JJ, Hershey TB, Keane C, Lin CJ, Quinn SC, Stebbins S, Sweeney PM, Zhou X, Burke D. Preparedness for Pandemics: Does Variation Among States Affect the Nation as a Whole? Presented at: AcademyHealth Public Health Systems Research Interest Group Annual Meeting; 2011 Jun 14; Seattle, WA.
10. Grefenstette JJ. Representing Socio-economic and Health Behavior in Large-scale Agent-based Models. Presented at: Society for Epidemiologic Research SER 2012; 2012 Jun 27-30; Minneapolis, MN.
11. Paparian J, Grefenstette JJ, Brown S, Burke DS. FRED Navigator. Presented at: 8th IEEE International Conference on eScience (eScience 2012); 2012 Oct 8-12; Chicago, IL.
12. Brown S, Tai JH, Cooley PC, Wheaton WD, Margaret A. Potter, Voorhees R, LeJeune M, Grefenstette JJ, Burke DS, McGlone SM, Lee BY. Would school closure for the 2009 H1N1 influenza have been worth the cost?: A computational Model. Presented at: Dynamics of Preparedness Conference; 2012 Oct 22-23; Pittsburgh, PA.
13. Grefenstette JJ. Data Acquisition, Curation and Access for Modeling. Presented at: Dynamics of Preparedness Conference; 2012 Oct 22-23; Pittsburgh, PA.
14. Kumar S, Grefenstette JJ, Galloway D, Shim E, Guclu H, Burke DS, Albert SM. Examining the Impact of Access to Paid Sick Days on Influenza Incidence in the Workplace. Presented at: American Public Health Association 140th Annual Meeting; 2012 Oct 27-31; San Francisco, CA.
15. Grefenstette JJ, Burke DS, Van panhuis W. Making Public Health Data Linkable. Presented at: 23rd International CODATA Conference; 2012 Oct 28-31; Taipei, Taiwan.
16. Van panhuis W, Emerson C, Grefenstette JJ, Wilder R, Burke DS. Digitizing and sharing public health data for decision making. Presented at: 23rd International CODATA Conference; 2012 Oct 29; Taipei, Taiwan.
17. Grefenstette JJ. FRED: A Framework for Reconstructing Epidemiological Dynamics. Presented at: MIDAS MISSION Software Workshop; 2012 Nov 14; Arlington, VA.
18. Burke DS, Grefenstette JJ. Best Practices in Infectious Disease Modeling. Presented at:

- MIDAS National Network Meeting; 2012 Nov 14-16; Arlington, VA.
19. Van panhuis W, Grefenstette JJ, Burke DS. Opportunities and Barriers to Open Data Access. Presented at: MIDAS National Network Meeting; 2012 Nov 14-16; Arlington, VA.
 20. Grefenstette JJ. Agent Based Models. Presented at: MIDAS Legal Analytics Workshop; 2013 Oct 7-8; Pittsburgh, PA.
 21. Kumar S, Galloway DD, Grefenstette JJ. Why do income disparities in respiratory infection attack rates arise? Tests of conceptual models using agent-based modeling. Poster presented at: Complex Systems, Health Disparities & Population Health: Building Bridges; 2014 Feb 24-25; Bethesda, MD.
 22. Grefenstette JJ. Hands-on Experience with MIDAS Decision Tools. Presented at: NACCHO Preparedness Summit; 2014 Apr 1-4; Atlanta, GA.
 23. MIDAS Decision Tools. Presented at: MISSION Workshop at MIDAS National Network Meeting; 2014 Apr 11; Atlanta GA.
 24. Grefenstette JJ. Data and Simulation Models for Public Health. Presented at: SciColl Meeting; 2014 Oct 23; Washington DC.
 25. Grefenstette JJ. Research at Pitt MIDAS Center. Presented at: MIDAS National Meeting; 2014 Nov 6; New Orleans.
 26. Krauland M, Grefenstette JJ, Burke DS. Modeling the Effects of Low Measles Vaccination Rates on Neighboring Geographic Areas. Poster presented at: MIDAS National Meeting; 2015 Apr 22; Atlanta.

TEACHING

Graduate Courses

Year(s)	Course Number & Title	Role
1998 - 2001	Bioinformatics Track, Masters of New Professional Studies (MNPS)	Curriculum developer; Instructor
2000 - 2001	Bioinformatics Ph.D. Proposal	Committee Member
2001 - 2002	Bioinformatics M.S. Program	Designer
2002 - 2005	Bioinformatics M.S. Program	Coordinator
2005	Bioinformatics Certificate Program	Designer
2011 - 2012	PUBHLT 2023, PARTICIPATORY MODELING IN PUBLIC HEALTH	Instructor (on team)
8/27/2012 - 12/15/2012	BIOST - 2090 - 28821, SPECIAL TOPICS 3	Primary Instructor
8/26/2013 - 12/14/2013	BIOST - 2098 - 28777, AGENT BASED MODELING	Primary Instructor
8/25/2014 - 12/13/2014	BIOST - 2098 - 26577, AGENT BASED MODELING	Primary Instructor

Postdoctoral Courses

Year(s)	Course Number & Title	Role
2011	ISSH 2011, AGENT-BASED MODELING TRACK	Co-lead of Agent-Based Modeling Track

MENTORING AND ADVISING

Undergraduate Students

Year(s)	Student's Name & Department/Degree/Discipline	Role
2012	Jack Paparian FRED Navigator Visualization Tool	Supervisor for MIDAS Summer Research Program
2013	Clayton Gordon FRED mobile app	Supervisor for MIDAS Summer Research Program
2013	Christine Lim Modeling health behavior	Supervisor for MIDAS Summer Research Program
2014	Melinda Jenner Modeling H1N1 pandemic in Pennsylvania	Supervisor for MIDAS Summer Research Program
2015	Isaac Freedman Honors Program, Pitt Network models infectious disease	B. Phil. Committee Member

Master's Students

Year(s)	Student's Name & Department/Degree/Discipline	Role
2010 - 2011	Jeffrey Borrebach M.S. (2013) Community Crime Modeling	GSR Supervisor
2010 - 2011	Jaiwei Huang M.S. (12/2011) Network analysis in an agent-based model of influenza epidemics	Technical Advisor to Thesis
2015	Xuan Li M.S. Biostatistics Network analysis of infectious disease	Committee Member

Doctoral Students

Year(s)	Student's Name & Department/Degree/Discipline	Role
1982 - 1987	James E. Baker PhD (1987) Balancing Diversity and Convergence in Genetic Search	Advisor
1983 - 1987	Hayong Zhou	Advisor

	PhD (1987) CSM - A Genetic Classifier System with Memory for Learning by Analogy	
1997 - 2004	Sohyoung Kim PhD (2004) Mechanisms and Models of Gene Regulation	Advisor
1998 - 2004	Lakshmi K. Matukumalli PhD (2004) Development of Bioinformatics Applications for Prediction and Validation of Polymorphisms in Soybean (Glycine max) Genome Using EST Data	Advisor
1998 - 2004	Nila Banerjee PhD (2004) Combinatorial Transcriptional Regulation of Yeast Cell-cycle	Committee Chair
1998 - 2005	Thomas Heiman PhD (2005) An Empirical Assessment of Aggregation and Asynchrony on the Inference of Metabolic Networks from Metabolite Expression Data	Advisor
1999 - 2004	Deborah Vakas Duong PhD (2004) SISTER: A Symbolic Interactionist Simulation of Trade and Emergent Roles	Advisor
2004 - 2009	Rafael Villa-Angulo PhD (2009) Computational Methods for Haplotype Inference with Application to Haplotype Block Characterization in Cattle	Advisor
2010 - 2014	Yongjua Laosiritaworn PhD (2014) Computational modeling to address burden of influenza and strategies of control measures in Thailand	Committee Member
2011 - 2013	Xiaozhi Zhou PhD (2013) Improvement of model efficiency and evaluation of intervention strategies in an agent-based simulation model of infectious disease: Local sensitivity analysis, Probabilistic sensitivity analysis, Latin hypercube sampling, and their	Advisor

	applications	
2012 - 2014	Andrew Topp Community Crime Modeling	GSR Supervisor
2014 - 2015	Guido Camargo Modeling vector borne disease in Colombia	Co-supervisor, Committee member
2014 - 2017	Mina Kabiri Computer Simulation in Health Policy: Methodology and Applications in the Management of Chronic Diseases	Committee Member

Postdoc or Fellow

Year(s)	Student's Name & Department/Degree/Discipline
1995 - 1997	Brian Tamauchi Adaptive robotics
1996 - 1997	Annie S. Wu Evolutionary Machine Learning
2004 - 2009	Lakshmi Kumar Matukumalli Cattle Genomics

Mentored Faculty

Year(s)	Faculty Member's Name & Department/Degree/Discipline
2012 - 2013	Jagpreet Chhatwal Optimal treatment and screening strategies for hepatitis C

SERVICE

Service to Internal Organizations

Department Committees

2009 - 2017	Chair, PHDL IT Committee
2010 - 2011	Member, Biostatistics Faculty Search Committee
2010 - 2015	Member, PHDL Seminar Series Committee
2010 - 2015	Member, Selection Committee for MIDAS Summer Research Program
2012 - 2013	Member, BCHS Faculty Search Committee
2012 - 2015	Chair, PHDL Curriculum Committee
2013 - 2014	Member, HPM Faculty Search Committee

Service to External Organizations

Professional Practice

2014-2017 Reviewer for Promotion and Tenure, Tampere University of Technology
(TUT)

2018 Selection Committee for IEEE Evolutionary Computation Pioneer Award