REINHARD C. LAUBENBACHER, PH.D.

July 2017

Professor and Director
Center for Quantitative Medicine
UConn Health
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Professor of Computational Biology
Jackson Laboratory for Genomic Medicine
1 Discovery Drive
Farmington, CT 06030

ACADEME

Education

Ph.D.	Mathematics	1985	Northwestern University, Evanston IL
M.A.	Mathematics	1978	Indiana University, Bloomington, IN
Vordiplom	Mathematics	1975	University of Munich, Germany

Employment and Academic Positions

2013-present	Founding Director and Professor, Center for Quantitative Medicine, University of Connecticut Health Center, Farmington, CT
2013-present	Professor, Department of Cell Biology, School of Medicine, University of Connecticut, Farmington, CT
2013-present	Professor of Computational Biology, Jackson Laboratory for Genomic Medicine, Farmington, CT
2013-present	Member, Comprehensive Cancer Center, Jackson Laboratory, Bar Harbor, ME
2013-present	Professor, Center for Cell Analysis and Modeling, University of Connecticut Health Center, Farmington, CT
2013-present	Professor, Institute for Systems Genomics, University of Connecticut, Storrs, CT
2013-present	Affiliate Professor, Department of Computer Science and Engineering, University of Connecticut, Storr, CT
2013-present	Affiliate Professor, Department of Mathematics, University of Connecticut, Storrs, CT
2013-present	Adjunct Professor, Department of Mathematics, Virginia Tech, Blacksburg, VA
2008-present	Affiliate Faculty, Biomedical Engineering and Sciences (SBES), Virginia Polytechnic Institute and State University (Virginia Tech) - Wake Forest University
2005-present	Adjunct Professor, Department of Cancer Biology, Wake Forest University School of Medicine, Winston-Salem, NC
2008-2013	Director of Education & Outreach, Virginia Bioinformatics Institute –Virginia Tech, Blacksburg, VA
2003-2013	Faculty, Interdepartmental Ph.D. program “Genetics, Bioinformatics, and Computational Biology,” Virginia Tech, Blacksburg, VA
2001-2013	Professor, Department of Mathematics, Virginia Tech, Blacksburg, VA
2001-2013	Professor, Virginia Bioinformatics Institute at Virginia Tech, Blacksburg, VA

2011-2012	Member, Mathematical Biosciences Institute, The Ohio State University, Columbus, OH
2008-2009	Member, Statistical and Applied Mathematical Sciences Institute, Durham, NC
Spring 2007	Member, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN
1999-2004	Visiting Faculty, Basic and Applied Simulation Science Group, Los Alamos National Laboratory, Los Alamos, NM
1996-2001	Professor, Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM
Fall 1998	Member, Mathematical Sciences Research Institute, Berkeley, CA
1991-1996	Associate Professor, Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM
1993-1994	Visiting Associate Professor, Department of Mathematics, Cornell University, Ithaca, NY
1990-1991	Visiting Associate Professor, Department of Mathematics, Cornell University, Ithaca, NY
1985-1991	Assistant Professor, Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM
1983-1985	Lecturer, Department of Mathematics, Loyola University, Chicago, IL

Academic Honors and Awards

- Fellow of the Society for Mathematical Biology, 2017-present.
- Fellow of the American Association for the Advancement of Science (AAAS), 2015-present.
- Fellow of the American Mathematical Society, 2012-present.
- Nominee for Chair of AAAS Section A, 2016
- "Programs That Work" award for the Kids' Tech University outreach program, Virginia Department of Education and Virginia Math and Science Coalition, 2012.
- Phi Delta Kappa Award for Excellence in Education, 1998.
- Patricia Christmore Teaching Award, New Mexico State University, 1990.
- Fulbright Scholarship, 1977-1978.

RESEARCH

Interests

Mathematical and computational biology, systems biology, cancer systems biology, modeling and simulation of biological networks, multiscale modeling, analysis of health care data.

Research Support

Current Extramural Research Support

NIH 1U01EB024501-01
Role: PI
9/1/2017-8/30/2022
Modular design of multiscale models, with an application to the innate immune response to fungal respiratory pathogens.

UConn Research Excellence Program
Role: PI
6/1/2017-6/30/2018
Understanding the progression of ovarian cancer through the use of 3D bioprinting and mathematical modeling

NIH 3R01MH102854-03S1 (PI: Stevens)
Role: Subcontract PI
8/2017-9/2018
Dynamic connectivity in neural networks engaged for emotion regulation

NIH 1RO1GM114949-01A1 (subcontract to Worcester Polytechnic Institute)
Role: PI
9/1/2015-8/30/2019
Copper homeostasis in bacteria: Systems analysis from detailed molecular interactions

NIH Chuang (PI)
Role: Co-investigator
12/01/2015-11/30/2018
Big Genomic Data Skills Training for Professors

NIH Chuang (PI)
Role: Co-investigator
08/01/2017-06/30/2017
Big Genomic Data Skills Training for Professors (competitive supplement)

NSF-DMS 1460967
Role: PI
05/01/15-04/30/18
REU Site: Modeling and Simulation in Systems Biology

NIH 1R01CA188025-01 Torti (PI)
Role: Co-investigator
07/01/14-06/30/19
Iron addiction and the biology of ovarian cancer

W911NF-14-1-0486 U.S. Army Research Office
Role: PI
08/01/14-07/31/17
Biomathematics-Canalization: A fundamental design principle of gene regulatory networks

Select Completed Research Support

NSF DBI-1146819
Role: PI
6/2012-5/2016 (1-year no cost extension)
PlantSimLab: A simulation laboratory for plant biology
(Subaward to J. Glazebrook, Univ. of Minnesota, $62,017)

NIAID-NIH 1R21AI101619-01
Role: PI
6/2012-5/2014
The systems biology of iron homeostasis and the immune response to Aspergillus

NCI-NIH 1R21CA156133-01A1
Role: PI

8/2011-7/2013
A Systems Approach to Iron Metabolism in Cancer Cells

U.S. Army Research Office W911NF0910538
Role: PI
8/2009-7/2013
Computational Biomathematics: Toward Optimal Control of Complex Biological Systems

NSF-CMMI-0908201
Role: PI
10/2009-9/2013
Polynomial dynamical systems over finite fields: from structure to dynamics

NSF-DMS-1062878
Role: PI
1/2011-1/2014
REU Site: Modeling and Simulation in Systems Biology

USDA AFRI
PI: B. Tyler
Role: Co-PI
4/2011-3/2016
Integrated management of oomycete diseases of soybean and other crop plants

Wake Forest University Translational Science Institute (TSI)
V. Shulaev (PI)
Role: Co-PI
6/2008-5/2010
Translational breast cancer metabolomics
DMS-0755322-NSF – REU
Role: PI
5/2008 - 4/2011
REU Site: Modeling and Simulation of Biological Networks.

RO1CA120170-01A2 – NIH
V. Shulaev (PI)
Role: Co-PI
6/2007- 5/2010
Molecular fingerprinting of breast cancer development.

EEC-0609225- NSF
R. Davalos (PI)
Role: Co-PI
8/2006-8/2010
BBSI: Summer Institute for Quantitative and Integrative Bioengineering.

DMS-051144 – NSF
Role: PI
9/2005-8/2008
Mathematical algorithms for computer simulation.

RO1 GM068947-01 - NIH
Role: PI
5/2003-4/2008

A new mathematical modeling approach to biochemical networks, with an application to oxidative stress in yeast.

A mathematical foundation for computer simulation. Los Alamos National Laboratory (PI), 2003-04.

Algebraic algorithms for cell complexes. NSF (PI), 2002-04.

Biocomplexity-incubation activity: The mathematics of network dynamics in biological, social, and economic networks. NSF (PI), 2002-03.

Mathematical foundation of computer simulation. Los Alamos National Laboratory (PI), 1999-2002.

Decision related structures. U.S. Department of Defense (senior personnel), 1999-2002.

Cryptography as a teaching tool in secondary education. Los Alamos Nat.Laboratory (PI), 1999-2002.

A capstone course: learning mathematics through original sources. NSF (co-PI), 1997-1999.

Southwest Regional Institute in the mathematical sciences. NSF (subcontract), 1996-99.

Combinatorial dynamics. Defense Intelligence Systems Agency (senior personnel), 1996-98.

Noncommutative Gröbner bases and rewriting systems. NSA (co-PI), 1996-97.

Teaching with original sources. NSF (co-PI), 1995-96.

Using original sources in mathematics teacher education. Eisenhower Foundation (co-PI), 1995.

Computational algebraic geometry. NSA (PI), 1994-95.

Computational algebraic geometry. NSF (PI), 1994-95.

Teaching with original sources. NSF (co-PI), 1994-95.

Great problems of mathematics: summer workshop for high school students. NSF (co-PI), 1992-93.

PUBLICATIONS

Peer-Reviewed Articles and Chapters

1. A. Konstorum, A. Adler, T. Vella, and **R. Laubenbacher**, Addressing current challenges in cancer immunotherapy with mathematical and computational modeling, *J. Royal Soc. Interface,* **14**(131), DOI: 10.1098/rsif.2017.0240, 2017.
2. C. Kadelka, J. Kuipers, and **R. Laubenbacher**, The influence of canalization on the robustness of Boolean networks, *Physica D,* 2017, in press.
3. C. Brunson and **R. Laubenbacher**, Applications of network analysis to routinely collected health care data: A systematic review, *J. Amer. Med. Inform. Assoc*., 2017, in press.
4. C. Brunson, X. Wang, **R. Laubenbacher**, Effects of research complexity and competition on the incidence and growth of coauthorship in biomedicine, *PLoS One,* 12(3):e0173444, 2017*.*
5. C. Kadelka, Y. Li, J. Kuipers, J.O. Adeyeye, **R. Laubenbacher**, Multistate nested canalizing functions and their networks, *J. Theor. Comp. Sci.,* 2017, in press.
6. J. Chifman, S. Arat, Z. Deng, E. Lemler, J.C. Pino, L.A. Harris, M.A. Kochen, C.F. Lopez, S.A. Akman, F.M. Torti, S.V. Torti, **R. Laubenbacher**, Activated oncogenic pathway modifies iron network in breast epithelial cells: A dynamic modeling perspective, *PLoS Computational Biology* 13(2)*,* 2017.

7. G. An, B.G. Fitzpatrick, S. Christley, P. Federico, A. Kanarek, R. Miller Neilan, M. Oremland, R. Salinas, **R. Laubenbacher**, S. Lenhart, Optimization and control of agent-based models in biology: a perspective, *Bull. Math. Biol.,* 79(1), 2017.
8. D. Murrugarra, A. Veliz-Cuba, B. Aguilar, **R. Laubenbacher**, Identification of control targets in molecular Boolean network models via computational algebra, *BMC Syst. Biol.,* 2016, Sep 23;10(1):94.
9. M. Oremland, K.R. Michels, A.M. Bettina, C. Lawrence, B. Mehrad, **R. Laubenbacher**, A computational model of invasive aspergillosis in the lung and the role of iron, *BMC Systems Biology* **10**:34, doi: 10.1186/s12918-016-0275-2, 2016.
10. A. Ibrahim, P. Vera-Licona, **R. Laubenbacher**, T. Favre, AlgoRun, a Docker-based packaging system for platform-agnostic implemented algorithms, *Bioinformatics,* doi:10.1093/bioinformatics/btw120, 2016.
11. Tsurutani N, Mittal P, St Rose MC, Ngoi SM, Svedova J, Menoret A, Treadway FB, **Laubenbacher R**, Suárez-Ramírez JE, Cauley LS, Adler AJ, Vella AT, Costimulation Endows Immunotherapeutic CD8 T Cells with IL-36 Responsiveness during Aerobic Glycolysis, *J Immunol*., 196(1):124-34, 2016.
12. M.G. Brandon, B.A. Howard, C.B. Lawrence, **R. Laubenbacher**, Iron acquisition and oxidative stress response in Aspergillus fumigatus, *BMC Systems Biology,* **9** (19), 2015, doi: 10.1186/s12918-015-0163-1.
13. S. Arat, J. Bullerjahn, **R. Laubenbacher**, A network biology approach to denitrification in *Pseudomonas aeruginosa, PLoS One* **10** (2), 2015.
14. A. Veliz-Cuba, B. Aguilar, **R. Laubenbacher**, Dimension reduction of large sparse AND-NOT network models, *Electronic Notes in Theorical Computer Science* **316**, 83-95*,* 2015.
15. M. Oremland and **R. Laubenbacher,** Optimal harvesting for a predator-prey agent-based model using difference equations, *Bull. Math. Biol.,* **77** (3), 434-459, 2015.
16. A. Veliz-Cuba, B. Aguilar, F. Hinkelmann, **R. Laubenbacher**, Steady state analysis of Boolean molecular network models via model reduction and computational algebra, *BMC Bioinformatics,* **15**:221, 2014.
17. A.S. Jarrah, F. Castiglione, N.P. Evans, R.W. Grange, and **R. Laubenbacher**, A mathematical model of skeletal muscle disease and immune response in the mdx mouse, *BioMed Research International*, http://dx.doi.org/10.1155/2014/871810, 2014.
18. P. Vera-Licona, A.S. Jarrah, L.D. Garcia-Puente, J. McGee, **R. Laubenbacher,** An algebra-based method for inferring gene regulatory networks, *BMC Systems Biology* **8:37**, doi:10.1186/1752-0509-8-37, 2014 (chosen as one of "Editor's Picks").
19. M. Oremland and **R. Laubenbacher**, Using difference equations to find optimal tax structures on the SugarScape, *J. Economic Interaction and Coordination* **9** (2), 233-253, 2014.
20. M. Oremland and **R. Laubenbacher,** Optimization of agent-based models: scaling methods and heuristic algorithms, *J. Artificial Societies and Social Simulation* **17** (2) 6, 2014.
21. **R. Laubenbacher**, F. Hinkelmann, D. Murrugarra, and A. Veliz-Cuba, Algebraic models and their use in systems biology, in *Discrete and Topological Models in Molecular Biology,* N. Jonoska and M. Saito (eds.), Springer Verlag, NY, 2014.
22. J.C. Brunson, S. Fassino, A. McInnes, M. Narayan, B. Richardson, C. Frank, P. Ion, and **R. Laubenbacher,** Evolutionary events in a mathematical sciences research collaboration network, *Scientometrics,* **99** (3), 973-998, 2013.
23. A. Veliz-Cuba, D. Murrugarra, and **R. Laubenbacher,** Structure and dynamics of acyclic networks, *Discrete Event Dynamic Systems,* DOI 10.1007/s10626-013-0174-2, 2013.
24. W. Sha, A. Martins, **R. Laubenbacher,** P. Mendes, and V. Shulaev, The genome-wide early temporal response of Saccaromyces cerevisiae to oxidative stress induced by cumene hydroperoxide, *PLoS One*, **8**, 2013, doi: 10.1371/journal.pone.0074939.
25. Y. Li, D. Murrugarra, J.O. Adeyeye, and **R. Laubenbacher,** The number of canalyzing functions over any finite set, *Open J. of Discrete Math.,* **3** (3), 130-136, 2013.

26. C. Kadelka, D. Murrugarra, and **R. Laubenbacher**, Stabilizing gene regulatory networks through feedforward loops, *Chaos,* **23** (2), DOI: 10.1063/1.4808248, 2013.
27. Y. Li, J.O. Adeyeye, D. Murrugarra, B. Aguilar, **R. Laubenbacher**, Boolean nested canalizing functions: a comprehensive analysis, *J. Theor. Comp. Sci.,* **481,** 24-36, 2013.
28. A. Veliz-Cuba, K. Buschur, R. Hamerschock, A. Kniss, E. Wolff, **R.** Laubenbacher, AND-NOT logic framework for steady state analysis of Boolean network models, *Appl. Math. Inf. Sci.,* **7** (4), 2013.
29. J.O. Adeyeye, Y. Li, I.J. Williams, J.D. Green, and **R. Laubenbacher**, Monomial dynamical systems over Fq with bidirectional cycle dependency graph, *Far East Journal of Dynamical Systems,* **20** (2) 77-93, 2012.
30. **R. Laubenbacher,** F. Hinkelmann, and M. Oremland, Agent-based models and optimal control in biology: a discrete approach, in R. Robeva and T. L. Hodge (eds.), *Mathematical Concepts and Methods in Modern Biology,* Elsevier, Jan 2013.
31. F. Hinkelmann and **R. Laubenbacher**, Finite Fields in Biology, in G. Mullen and D. Panario (Eds.), *Handbook of Finite Fields,* CRC Press, Boca Raton, FL, 2013.
32. D. Murrugarra, A. Veliz-Cuba, B. Aguilar, S. Arat, and **R. Laubenbacher**, Modeling stochasticity and variability in gene regulatory networks, *EURASIP J. Bioinf. and Sys. Biol.*, 2012:5.
33. D. Murrugarra and **R. Laubenbacher**, The Number of Multistate Nested Canalyzing Functions, *Physica D,* **241***,* 929-938, 2012.
34. J. Chifman, A. Kniss, P. Neupane, I. Williams, B. Leung, P. Mendes, V. Hower, F.M. Torti, S.A. Akman, S.V. Torti, and **R. Laubenbacher**, The core control system of intracellular iron homeostasis: a mathematical model, *J. Theor. Biol.,* **300**, 91-99, 2012.
35. A. Veliz-Cuba and **R. Laubenbacher**, On the computation of fixed points in Boolean networks, *J. Appl. Math. Comp.* **39** (1-2), 145-153, 2012.
36. D. Murrugarra and **R. Laubenbacher**, Regulatory patterns in molecular interaction networks, *J. Theor. Biol.,* **288**, 66-72, 2011.
37. F. Hinkelmann, M. Brandon, B. Guang, R. McNeill, G. Blekherman, A. Veliz-Cuba, and **R. Laubenbacher**, ADAM: Analysis of the Dynamics of Algebraic Models of Biological Systems using Computer Algebra, *BMC Bioinformatics,* 12:295, 2011.
38. **R. Laubenbacher**, A systems biology approach to cancer drug discovery; in Dubitzky W., Wolkenhauer, O., Cho K.-H., Yokota H. (Eds), *Encyclopedia of Systems Biology,* Springer Verlag, New York, 2011.
39. D .Cortes, W. Shah, V. Hower, G. Blekherman, **R. Laubenbacher**, S. Akman, S. Torti, V. Shulaev, Differential gene expression in normal and transformed human mammary epithelial cells in response to oxidative stress, *Free Radical Biology and Medicine,* **50** (11) 1565-1574, 2011.
40. G. Blekherman, **R. Laubenbacher**, D. Cortes, P. Mendes, F. Torti, S. Akman, S. Torti, and V. Shulaev, Bioinformatics tools for cancer metabolomics, *Metabolomics,* **7** (3) 329-243, 2011 (featured on journal cover).
41. F. Hinkelmann, D. Murrugarra, A. Jarrah, and **R. Laubenbacher**, A mathematical framework for agent-based models of complex biological networks, *Bull. Math. Biol.* **73** (7), 1583-1603, 2011.
42. E. Dimitrova, L.D. Garcia, F. Hinkelmann, A. Jarrah, **R. Laubenbacher,** B. Stigler, M. Stillman, P. Vera-Licona, Parameter estimation for Boolean models of biological systems, *J. Theor. Comp. Sci*. **412**, 2816-2826, 2011.
43. F. Hinkelmann and **R. Laubenbacher**, Boolean models of bistable biological systems, *Discrete and Cont. Dynamical Systems* **4** (6), 1414-1456, 2011.
44. A. Veliz-Cuba, A.S. Jarrah, **R. Laubenbacher**, Polynomial Algebra of Discrete Models in Systems Biology, *Bioinformatics,* **26**, 1637-1643, 2010.
45. **R. Laubenbacher** and D. Pengelley, "Voici ce que j'ai trouvé:" Sophie Germain's grand plan to prove Fermat's Last Theorem, *Historia Mathematica,* **37** (4) 641-692, 2010.
46. E. Dimitrova, P. Vera-Licona, J. McGee, **R. Laubenbacher**, Discretization of time series data, *J. Comp. Biol.,* **17** (6), 853-868, 2010.

47. A. Jarrah, **R. Laubenbacher**, A. Veliz-Cuba, The dynamics of conjunctive and disjunctive Boolean network models, *Bull. Math. Biol.*, **72** (6), 1425-1447, 2010.
48. R. Robeva and **R. Laubenbacher,** Mathematical biology education: beyond calculus, *Science* **325***,* No. 5940, pp. 542-543, July 31, 2009.
49. **R. Laubenbacher** and A. Jarrah, Algebraic models in systems biology, *Methods in Enzymology*, **467**, 163-196, 2009.
50. **R. Laubenbacher,** V. Hower, A. Jarrah, S. V. Torti, V. Shulaev, P. Mendes, F. M. Torti, and S. Akman, A systems biology view of cancer, *Biochim Biophys Acta,* 2009, 1796(2):129-39.
51. **R. Laubenbacher**, A. S. Jarrah, E. Dimitrova. B. Stigler, and P. Vera-Licona, System identification for discrete polynomial models of gene regulatory networks, *System Identification*, 15(1): 29-41, 2009.
52. V. Hower, P. Mendes, F. M. Torti, **R. Laubenbacher**, S. Akman, V. Shulaev, and S. V. Torti, A General Map of Iron Metabolism and Tissue-specific Subnetworks, *Molecular Biosystems* **5** (5) 422-443, 2009.
53. **R. Laubenbacher** and B. Sturmfels, Computer algebra in systems biology, *The American Mathematical Monthly*, **116**, 882-891, 2009.
54. **R. Laubenbacher** and B. Stigler, Design of experiments and biochemical network inference, in *Algebraic and Geometric Methods in Statistics,* P. Gibilisco, E. Riccomagno, M.-P. Rogantin, H. P. Wynn (eds.), Cambridge University Press, 2009.
55. **R. Laubenbacher**, Jarrah A., H. S. Mortveit, and S. S. Ravi. The mathematics of agent-based modeling formalisms. *Encyclopedia of Complexity and System Science*. Springer Verlag, New York, 2009.
56. E. Sontag, A. Veliz-Cuba, **R. Laubenbacher**, and A. Jarrah, The effect of negative feedback loops on the dynamics of Boolean networks. *Biophysical Journal,* **95** (2):518-26, 2008.
57. P. V. Licona and **R. Laubenbacher**, Inference of ecological interaction networks, *Annales Zoologici Fennici,* 2008; 45(5): 459-464.
58. V. G. Romanovski, A. S. Jarrah, and **R. Laubenbacher**. The Cyclicity Problem for Two-dimensional Polynomial Systems, *Differential Equations and Control Processes* 2008; (Electronic journal, ISSN 1817-2172, http://www.math.spbu.ru/diffjournal/EN/numbers/2008.2/article.1.3.html)
59. V. Choi, Y. Huang, V. Lam, D. Potter, **R. Laubenbacher**, and K. Duca, Using formal concept analysis for microarray data comparison, *Journal of Bioinformatics and Computational Biology* 6 (1). PMID: 18324746, 2008.
60. A. Martins, P. Vera-Licona, and **R. Laubenbacher**. 'Model your genes the mathematical way' –a mathematical biology workshop for secondary school teachers, *Teaching Mathematics and its Applications* 2008; 27: 91-101.
61. M. Shapiro, K. Duca, E. Delgado-Eckert, V. Hadinoto, Jarrah A., **R. Laubenbacher**, K. Lee, N. Polys, and D. Thorley-Lawson. A Virtual Look at Epstein-Barr Virus Infection: Simulation Mechanism. *Journal of Theoretical Biology.* Feb 16 [Epub ahead of print] PMID: 18371986, 2008.
62. A. Jarrah, R. **Laubenbacher**. On the Algebraic Geometry of Polynomial Dynamical Systems. *Emerging Applications of Algebraic Geometry*, S. Sullivant and M. Putinar (ed.), IMA Volume. Springer. 2008.
63. D. Camacho, P. Vera-Licona, P. Mendes, and **R. Laubenbacher.** Comparison of reverse engineering methods using an in silico network. *Annals of the New York Academy of Sciences,* 2007; 1115:73-89.
64. A. Jarrah and **R. Laubenbacher**. Discrete Models of Biochemical Networks: The Toric Variety of Nested Canalyzing Functions, *Proc. of the Second Intl.Conf. on Algebraic Biology*, 2007; LNCS 4545, pp. 15-22.
65. A. Jarrah, B. Raposa and **R. Laubenbacher**. Nested Canalyzing, Unate Cascade, and Polynomial Functions. *Physica D: Nonlinear*, 2007; Vol. 233 (2), 167-174.

66. B. Stigler, A. Jarrah, M. Stillman, and **R. Laubenbacher** R. Reverse-Engineering of Dynamic Networks, *Annals of the New York Academy of Sciences*. 2007; Vol. 1115, 168-177.
67. E. Dimitrova, A. Jarrah, B. Stigler, and **R. Laubenbacher**. A Groebner Fan based Method for Biochemical Network in Proceedings of ISSAC'2007, ACM Press, pp.122-126
68. K.Duca, M.Shapiro, E.Delgado-Eckert, V. Hadinoto, A. Jarrah, **R. Laubenbacher** & D.A. Thorley-Lawson. A Virtual Look at Epstein–Barr Virus Infection: Biological Interpretations. *PLoS Pathog* 2007; 3(10): 1388-400.
69. F. Castiglione, K.A. Duca , A.S. Jarrah, **R. Laubenbacher**, D. Hochberg, D.A. Thorley-Lawson, Simulating Epstein-Barr virus infection with C-ImmSim**,** *Bioinformatics* 2007; 23 (11): 1371-1377.
70. A. Jarrah, **R. Laubenbacher**, B. Stigler, and M. Stillman, Reverse-engineering polynomial dynamical systems, *Adv. In Appl. Math.* 2007; 39:477–489. *(Top-cited article, 2005-2010)*
71. V. Choi, Y. Huang, V. Lam, D. Potter, **R. Laubenbacher**, and K. Duca, Using formal concept analysis for microarray data comparison, *5th Asia-Pacific Biocomputing Conference*, 2006.
72. O. Colon-Reyes, A. Jarrah, **R. Laubenbacher**, and B. Sturmfels, Monomial dynamical systems over finite fields, *Complex Systems* 2006; 16(4)**:**333-342.
73. **R. Laubenbacher**, B. Pareigis, Update schedules of sequential dynamical systems, *Discrete Applied Mathematics* 2006; 154**:**980-994.
74. L. Garcia, A. S. Jarrah, and **R. Laubenbacher**, Sequential dynamical systems over words, *Applied Math and Comp.* 2006; 174**:**500-510.
75. E. Babson, H. Barcelo, M. de Longueville, and **R. Laubenbacher**, Homotopy theory of graphs, *J. Alg. Comb.* 2006; 24:31-44.
76. **R. Laubenbacher** and P. Mendes, A discrete approach to top-down modeling of biochemical networks, in R. Eils and L. Kriete (eds.) *Computational Systems Biology*, Boston, Elsevier Academic Press, 2005, p229-247.
77. H. Barcelo and **R. Laubenbacher**, Perspectives on A-homotopy theory and its applications, *Discrete Mathematics* 2005; 298 (1-3): 39-61.
78. O. Colon-Reyes, **R. Laubenbacher**, B. Pareigis, Boolean Monomial Dynamical Systems, *Annals of Combinatorics* 2004; 8: 425-439.
79. A. Jarrah, H. Vastani, K. Duca, and **R. Laubenbacher**, An optimal control problem for *in vitro* virus competition, *Proc. Of the 43rd IEEE Conference on Decision and Control*, Bahamas, Dec. 2004.
80. A. Jarrah, **R. Laubenbacher**, Generic Cohen-Macaulay monomial ideals. *Ann. Comb.* 2004; 8(1): 45-61.
81. **R. Laubenbacher** and B. Stigler, A computational algebra approach to the reverse-engineering of gene regulatory networks, *J. Theor. Biol.* 2004; 229:523-537.
82. N. F. Polys, D. A. Bowman, C. North, **R. Laubenbacher**, and K. Duca, PathSim Visualizer: an information rich virtual environment framework for systems biology, *Proc. SIGGRAPH Web3D Session*, Los Angeles, 2004.
83. A. Jarrah, **R. Laubenbacher**, and V. Romanovski, The Sibirsky component of the center variety of polynomial differential systems, *J. Symbolic Comput.* 2003; 35(5): 577-589.
84. **R. Laubenbacher**, A computer algebra approach to reverse-engineering of biological systems, *Proceedings of the Intl. Symposium on Symbolic and Algebraic Computation*, Assoc. Comp. Mach., Philadelphia, PA, ACM: New York, 2003.
85. **R. Laubenbacher** and B. Pareigis, Decomposition and simulation of sequential dynamical systems, *Advances in Applied Math* 2003, 30: 655-678.
86. **R. Laubenbacher,** G. McGrath, and D. Pengelley, Lagrange and the solution of numerical equations, *Historia Mathematica* 2001; 28(3): 220-231.

87. E. Aguirre, A. Jarrah, **R. Laubenbacher**, A. Ortiz-Navarro, and R. Torrez, Generic ideals and the Moreno-Socias conjecture, *Proceedings of the 2001 International Symposium on Symbolic and Algebraic Computation*, ACM, New York, 2001.
88. **R. Laubenbacher** and B. Pareigis, Equivalence relations on finite dynamical systems, *Advances in Applied Math* 2001; 237-251
89. H. Barcelo, X. Kramer, **R. Laubenbacher**, and C. Weaver, Foundations of a connectivity theory for simplicial complexes, *Adv. Appl. Math.* 2001; 26: 97-128.
90. **R. Laubenbacher** and I. Swanson, Permanental ideals, *J. Symbolic Comput.* 2000; 30: 195-205.
91. **R. Laubenbacher** and K. Schlauch, An algorithm for the Quillen-Suslin Theorem for quotients of polynomial rings by monomial ideals, *J. Symbolic Comput.* 2000; 30: 555-571.
92. **R. Laubenbacher** and C. Woodburn, A new algorithm for the Quillen-Suslin theorem for polynomial rings, *Contributions to Algebra and Geometry* 2000; 41(1): 23-32.
93. S. Hermiller, X. Kramer, and **R. Laubenbacher**, Monomial orderings, rewriting systems, and Groebner bases for the commutator ideal of a free algebra, *J. Symbolic Comput.* 1999; 27: 133-141.
94. M. Kolster and **R. Laubenbacher**, On higher class groups of orders, *Math. Z* 1998; 228: 229-246.
95. X. H. Kramer and **R. C. Laubenbacher**, Combinatorial homotopy of simplicial complexes and complex information systems, in D. Cox and B. Sturmfels (eds.), *Applications of Computational Algebraic Geometry,* American Math. Soc., Providence, RI, 1998.
96. **R. Laubenbacher** and C. Woodburn, An algorithm for the Quillen-Suslin theorem for monoid rings, *J Pure Appl Algebra* 1997; 117-118(0): 395-429.
97. **R. Laubenbacher** and B. Sturmfels, A normal form algorithm for modules over k[x,y]/(x,y), *J. Algebra* 1996; 184(3): 1001-1024.
98. D. Arnold and **R. Laubenbacher,** Finitely generated modules over pullback rings, *J. Algebra* 1996; 184(1): 304-322.
99. D. Arnold and **R. Laubenbacher,** Almost split sequences for dedekind-like rings (part II), *Comm. Algebra* 1995; 23: 111-130.
100. **R. Laubenbacher** and M. Siddoway, Great problems of mathematics: a workshop for high school students, *College Math. J.* 1994; 25: 112-114.
101. **R. Laubenbacher**, D. Pengelley and M. Siddoway, Recovering motivation in mathematics: teaching with original sources, *UME Trends* 1994.
102. **R. Laubenbacher** and D. Pengelley, Gauss, Eisenstein, and the “third” proof of the quadratic reciprocity theorem: ein kleines Schauspiel, *Mathematical Intelligencer* 1994; 16: 67-72.
103. **R. Laubenbacher** and D. Pengelley, Eisenstein’s misunderstood geometric proof of the quadratic reciprocity theorem, *College Math J* 1994; 25: 29-34.
104. **R. Laubenbacher,** Algebraic *K*-theory of poset representations, *K-Theory* 1993; 7: 17-21.
105. **R. Laubenbacher** and D. Pengelley, Great problems of mathematics: a course based on original sources, *Amer. Math. Monthly* 1992; 99(4): 313-317.
106. **R. C. Laubenbacher** and B.A. Magurn, SK_2 and K_3 of dihedral groups, *Canadian Journal of Math* 1992; 44(3): 591-623.
107. **R. Laubenbacher** and D. Webb, G_0 of integral group rings for groups with cyclic sylow subgroups, in R. K. Dennis and M. R. Stein (eds.), *Algebraic K-Theory, Commutative Algebra and Algebraic Geometry*, Contemporary Math 126: Amer. Math. Soc., Providence, RI, 1992.
108. **R.C. Laubenbacher** and D.L. Webb, The structure of the integral group ring of a finite group with cyclic sylow subgroups, *Comm. Algebra* 1991; 19(8): 2281-2290.
109. D. Arnold and **R. Laubenbacher,** Almost split sequences for Dedekind-like rings (part I), *J. London Math. Soc.* 1991; s2-43(2): 225-235.

110. **R. Laubenbacher** and D. Webb, On SG_n of orders, *J. Algebra* 1990; 133: 125-131.
111. **R. Laubenbacher,** On the *K*-theory of **Z***G*, *G* a group of square-free order, in J. F. Jardine and V. P. Snaith, *Algebraic K-theory: Connections With Geometry and Topology,* NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci, 279, 1987, 189-208.
112. **R. Laubenbacher,** Generalized Mayer-Vietoris sequences in algebraic *K*-theory, *J Pure Appl Algebra* 1988; 51(1-2): 175-192.
113. **R. Laubenbacher,** On the *K*-theory of **Z***G*, *G* a non-abelian group of order *pq*, *K-Theory* 1987; 1(5):499-506.

Book Chapters and Other Publications

1. **R. Laubenbacher** and E. Dimitrova, Boolean models in immunology, in *Systems Immunology: An Introduction to Modeling Methods for Scientists,* J. Das and C. Jayaprakash (eds.), Taylor&Francis Group, Abingdon, UK, 2017, in press.
2. **R. Laubenbacher,** Algebraic and Discrete Mathematical Methods for Modern Biology (R. Robeva, ed.), book review, *SIAM Review* **58** (2), 367-369, 2016.
3. **R. Laubenbacher,** You can do anything with a math degree, invited blog post on the *Blog On Teaching and Learning Mathematics,* American Mathematical Society, January 2015, http://blogs.ams.org/matheducation/
4. J. Chifman, **R. Laubenbacher**, and S. Torti, A systems biology approach to iron metabolism, in *A Systems Biology Approach to Blood,* S.J. Corey and M. Kimmels (eds.), Springer Verlag, NY, 2014, in press.
5. A. Martins, P. Vera-Licona, **R. Laubenbacher**, Computational systems biology: discrete models of gene regulatory networks, in *Undergraduate Mathematics for the Life Sciences: Processes, Models, and Directions,* T. Comar, J. Carpenter, and G. Ledder (eds.), Mathematical Association of America, Washington, D.C., 2013.
6. **R. Laubenbacher**, Cancer drug discovery: a systems biology approach, in W. Dubitzky, O. Wolkenhauer, K.-H. Cho, H. Yokata (Eds.), Encylopedia of Systems Biology, Springer Verlag, New York, 2012.
7. **R. Laubenbacher**, Algebraic methods in mathematical biology (editorial), *Bull. Math. Biol.* **73** (4) 701, 2011.
8. **R. Laubenbacher,** Mathematics in the Public Mind: the U.S.A., in *Public Awareness of Mathematics,* E. Behrends, N. Crato, F. Rodrigues (Eds.), Springer Verlag, Heidelberg, 2011.
9. **R. Laubenbacher**, D. Murragarra, and A. Veliz-Cuba, Structure and dynamics of polynomial dynamical systems, NSF Engineering Research and Innovation Conference, Atlanta, January 2011.
10. **R. Laubenbacher**, Science advocacy, letter to the editor, Notices of the Amer. Math. Soc. 2010, **57** (7): 823.
11. **R. Laubenbacher**, Congressional Testimony on 21st Century Biology, Hearing of the Subcommittee on Research and Education of the House Committee on Science and Technology, June 29, 2010, http://science.house.gov/publications/Testimony.aspx?TID=15466
12. **R. Laubenbacher** and A. Jarrah, Algebraic models of biochemical networks, in *Essential Numerical Computer Methods (Reliable Lab Solutions)*, M.L. Johnson (Ed). Academic Press, New York, 2010.
13. **R. Laubenbacher** and B. Sturmfels, Computeralgebra in der Systembiologie (reprint), *Informatik-Spektrum*, 2009; 32 (1): 27-32.
14. **R. Laubenbacher** and B. Sturmfels, Computeralgebra in der Systembiologie, *Computeralgebra Rundbrief: Sonderheft*, 2008, April, 62-66.
15. A. Jarrah and **R. Laubenbacher**, Finite dynamical systems: a mathematical framework for computer simulation, in *Mathematical Modeling, Simulation, Visualization and e-Learning*. D. Konate (ed.) Springer Verlag: 2008.

16. Sobral, B., D. Eckart, **R. Laubenbacher**, and P. Mendes. "The Role of Bioinformatics in Toxicogenomics and Proteomics." *Proceedings from NATO Advanced Workshop on Toxicogenomics and Proteomics*. Prague, Czech Republic, October 16-20, 2002.
17. Eduardo Cattani and **R. Laubenbacher** (eds.): Special Issue on Symbolic Computation in Algebra, Analysis, and Geometry - Foreword of the Guest Editors. J. Symb. Comput. 29(4-5): 483, 2000.
18. **R. Laubenbacher,** History of mathematics and the internet, *Newsletter of the British Society for the History of Mathematics* 1996; 28: 56-57.
19. **R. Laubenbacher** and D. Pengelley, Mathematical masterpieces: teaching with original sources, in R. Calinger (ed.), *History of Mathematics: Sources, Studies and Pedagogic Integration*, MAA, Washington, 1996.
20. **R. Laubenbacher** and D. Pengelley, Great theorems: the art of mathematics – a course based on original sources, *Newsletter of the International Study Group on the History and Pedagogy of Mathematics* 1993; 28: 9-10.
21. **R. Laubenbacher** and D. Pengelley, Honors mathematics in the liberal arts curriculum, *National Honors Report* 1989; 10: 21-22.

Books

1. **R. Laubenbacher** (ed.), *Modeling and simulation of biological networks*, Symposia in Pure and Applied Mathematics, Providence, RI: Amer. Math. Soc., 2007.
2. A. Knoebel, **R. Laubenbacher,** J. Lodder and D. Pengelley, *Mathematical Masterpieces*. Undergraduate Texts in Mathematics. Readings in Mathematics. Springer-Verlag, New York, 2007.
3. E. L. Green, S. Hosten, **R. Laubenbacher**, and V. A. Powers (eds.), *Symbolic Computation: solving equations in algebra, geometry, and engineering,* Amer. Math. Soc, Providence, RI, 2002.
4. **R. Laubenbacher** and D. Pengelley, *Mathematical expeditions. Chronicles by the explorers.* Undergraduate Texts in Mathematics. Readings in Mathematics. Springer-Verlag, New York*,* 1999.
5. **R. Laubenbacher** and B. Sturmfels (eds.), *Theory of Algebraic Invariants* by D. Hilbert, translated from the German. Cambridge University Press, New York, 1993.

SELECTED PRESENTATIONS

2017

- *Turing, a software package for discrete modeling,* 2017 SIAM Conf. on Appl. Alg. Geom., Atlanta, August 1.
- *Modular design of multiscale models,* Da Vinci Convergence Symposium, Univ. Southern California, March 9.
- *Inference of molecular networks in systems biology,* University of Cincinnati School of Medicine, March 31.
- *Iron metabolism and its role in breast cancer,* plenary lecture, Annual Conference on Computational Biology, Center for Genome Research and Biocomputing, Oregon State University, April 7.

2016

- *Computational Systems Biology,* Director's Forum, Jackson Laboratory for Genomic Medicine, Farmington, CT, January 27.

- *Algebraic methods in computational biology,* University of Kentucky, Lexington, KY, February 4.
- *Algebraic methods in systems biology,* Texas Tech University, Lubbock, TX, April 14.
- *Mathematics: A Driver of Precision Medicine,* Texas Tech University, Lubbock, TX, April 13.
- *Algebraic Methods in Systems Biology,* Workshop on Contemporary Mathematical Challenges in the Life Sciences, Texas A&M University, May 16.
- *Algebraic Models in Systems Biology,* University of Buenos Aires, Buenos Aires, Argentina, August 3.
- *Quantitative Medicine Across Scales,* InCHIP, University of Connecticut, Storrs, September 29.
- *Quantitative Medicine,* Amherst College, November 3.

2015

- *Using algebra to infer gene regulatory networks,* University of California, Berkeley, February 9.
- *Multiscale modeling of the innate immune to Aspergillus fumigatus in the lung*, Pennsylvania State University, February 24.
- *Iron metabolism,* Center for Cell Analysis and Modeling, UConn Health, March 30.
- *Algebraic models in systems biology,* International Conference on Mathematical Sciences, University of Sharjah, Sharjah, United Arab Emirates, April 4.
- *The battle over iron: the innate immune response to Aspergillus fumigatus in the lung,* International Workshop on Modeling Metabolic Health, Cambridge, UK, October 6.

2014

- *Algebraic models in systems biology,* University of Wisconsin, Milwaukee, April 18.
- *A systems biology approach to iron metabolism*, Worcester Polytechnic Institute, Worcester, MA, March 26.
- *Steady analysis of Boolean network models through model reduction and computational algebra,* European Conf. on Comp. Biol. Workshop on the Logical Modelling and Analysis of Cellular Networks, September 8.
- *Dimension reduction of large sparse networks,* The Fifth International Workshop on Static Analysis and Systems Biology, September 10.
- *Attractors, Stochasticity, and Spatial Considerations in Mitochondrial Information Transfer,* National Cancer Institute Workshop on Mitochondrial Information Transfer, NIH, September 23.

2013

- *The battle for iron: A multiscale in silico model of Aspergillus fumigatus in the airway,* Q-Bio Winter Meeting, Honolulu, HI, February 18.
- *PlantSimLab: a simulation laboratory for plant biology,* Keystone Symposia Conference on Plant Immunity: Pathways and Translation, Big Sky, Montana, April 9.
- *Dynamical systems over finite fields in systems biology,* Workshop on "The Art of Iterating Rational Functions Over Finite Fields," Banff International Research Station, Banff Centre, Banff, Canada, May 8.
- *Iron regulation in health and disease: two case studies,* Jackson Laboratory for Genomic Medicine, Farmington, CT, May 20.
- *Iron regulation in health and disease: two case studies,* Jackson Laboratory, Bar Harbor, ME, May 22.
- *PlantSimLab: a simulation laboratory for plant biology,* Center for Cell Analysis and Signaling, UConn Health Center, Farmington, CT, June 13.

- *The battle for iron: a multiscale in silico model of Aspergillus fumigatus in the airway,* Annual Meeting of the Soc. for Industrial and Applied Math., San Diego, CA, July 11.

2012

- *Algebraic geometry in systems biology,* Dept. of Mathematics and Statistics, Bowling Green State University, Bowling Green, OH, January 20.
- *Patterns are everywhere: how and why?,* Kids' Tech University at Bowling Green State University, Bowling Green, OH, January 21.
- *Cancer Systems Biology,* Bioinformatics and Computational Biology Program, Iowa State University, February 1.
- *Algebraic models in systems biology,* Department of Mathematics, Mississippi State University, Mississippi State, MS, February 16.
- *Algebraic geometry for large networks,* DARPA Summit Meeting on Mathematics, Lake Tahoe, NV, February 21.
- *Algebraic models in systems biology,* Workshop on Discrete and Topological Models in Molecular Biology, Tampa, FL, March 13.
- *Steady state analysis of Boolean network models via a universal class of models,* Special Session on Dynamics of Complex Networks, AMS meeting, Washington, DC, March 18.
- *Wnt sigaling in melanoma cells,* Special Session on Mathematical Methods in Disease Modeling, AMS meeting, Washington, DC, March 18.
- *Algebraic models in systems biology,* Dept. of Mathematics, University of Delaware, Newark, DE, April 2.
- *Algebraic models in systems biology,* Department of Mathematics, University of Nebraska, Lincoln, NE, April 19.
- *Cancer systems biology,* Department of Mathematics, University of Nebraska, Lincoln, NE, April 20.
- *Algebraic methods is systems and evolutionary biology,* Mathematical Biosciences Institute, Columbus, OH, May 11.
- *Iron metabolism,* Mathematical Biosciences Institute, Columbus, OH, May 18.
- *Science and the fight against cancer,* keynote address, American Cancer Society, Relay for Life, Tazewell, VA, May 31.
- *The role of SIAM as an advocate for the mathematical sciences community,* SIAM Annual Meeting, Minneapolis, MN, July 12.
- *Downregulation of LRP6 inhibits growth of melanoma cells,* SIAM Annual Meeting, Minneapolis, MN, July 13.
- *Algebraic models in systems biology,* Department of Mathematics, University of Connecticut, Storrs, September 6.
- *Algebraic models in systems biology,* Department of Mathematics, Virginia Tech, September 21.
- *Algebraic models in systems biology,* Oregon State University, October 8.
- *Iron metabolism and the innate immune response to Aspergillus fumigatus,* Oregon State University, October 9.
- *Patterns are everywhere. Why and How?,* Kids' Tech University, Southwest Virginia Higher Education Center, Abingdon, VA.
- *Scientific posters: the good, the bad, and the ugly,* Virginia Tech SIAM Student Chapter, November 13.

2011

- *Algebraic geometry in systems biology,* Workshop on "Algebraic geometry in the sciences," University of Oslo, Norway, January 11.

- *Patterns are everywhere: how and why?,* Kids' Tech University at Virginia Tech, January 29.
- *A systems biology view of cancer,* Workshop at the Wake Forest University School of Medicine Cancer Biology Department, Winston-Salem, NC, March 25.
- *A systems biology view of cancer,* School of Pharmacy, Xavier University, New Orleans, March 28.
- *A systems biology view of cancer,* School of Medicine, Marshall University, Huntington, WV, April 4.
- *Cancer Systems Biology,* GBCB Seminar, Virginia Tech, Blacksburg, VA, April 21.
- *Trends in Modern Mathematical Biology,* keynote address, MAA PREP Workshop on "Mathematical Biology: Beyond Calculus." Sweet Briar College, Sweet Briar, VA, June 13.
- *A mathematical framework for agent based models of complex biological networks,* MAA PREP Workshop on "Mathematical Biology: Beyond Calculus." Sweet Briar College, Sweet Briar, VA, June 13.
- *Trends in symbolic computation development and applications,* panelist, 17th International Conference on Applications of Computer Algebra (ACA), Houston, TX, June 28.
- *Algebraic computation in bioinformatics and systems biology*, plenary address, 17th International Conference on Applications of Computer Algebra (ACA-2011), Houston, TX, June 29.
- *The relationship between iron metabolism and breast cancer,* Roche Pharma, Nutley, NJ, August 21.
- *Cancer Systems Biology,* New Mexico Center for Spatiotemporal Modeling of Cell Signaling, University of New Mexico, September 8.
- *Algebraic models in systems biology,* SIAM Conference on Applied Algebraic Geometry, Raleigh, NC, October 7.
- *Patterns are everywhere: how and why?,* Kids' Tech University at Virginia State University, October 22.
- *Algebraic computation in bioinformatics and systems biology,* plenary address, Conference on Technological Applications of Symbolic Computation, Granada, Spain, November 18.

2010

- *Nested canalyzing polynomial dynamical systems,* Special Session on Applications of Algebraic Geometry, Amer. Math. Soc. Joint Mathematics Meetings 2010, San Francisco, CA, January 17.
- *The relationship between structure and dynamics in biological networks,* Western Michigan University, Kalamazoo, MI, March 25.
- *Mathematics-aided medicine,* Café Scientifique, Blacksburg, VA, March 29.
- *Cancer Systems Biology,* Jackson State University, Jackson, MS, April 29.
- *Mathematical Biology Education: Beyond Calculus,* Keynote Address, Math. Assoc. Amer. Workshop on Mathematical Biology, Sweet Briar College, Sweet Briar, VA, June 14.
- *Algebraic models in systems biology,* Plenary Lecture, Workshop for Young Researchers in Mathematical Biology, Mathematical Biosciences Institute, Columbus, OH, September 1.
- *Mathematics and the public in the U.S.A.,* Workshop on "Raising Public Awareness of Mathematics," Obidos, Portugal, September 27.
- *Mathematics and the Systems Biology of Cancer,* Minicourse, Annual meeting of the Society for the Advancement of Chicanos and Native Americans in Science, Anaheim, CA, September 30.

- *Toward a predictive model of iron metabolism,* Marie Curie Cancer Center, Paris, France, October 15.
- *Training in Cancer Systems Biology,* Annual Meeting of the Cancer Biology Training Consortium, Tuscon, AZ, November 5.
- *Algebraic models in systems biology,* University of Kentucky, November 18.
- *Algebraic models in systems biology,* Arizona State University, November 29.
- *Kids' Tech University,* Arizona State University, November 30.
- *A systems biology approach to iron metabolism in aging and cancer,* Conference on the Systems Biology of Human Aging, Philadelphia, December 7.
- *Toward a predictive model of intracellular iron homeostasis,* Glaxo-Smith-Kline, Philadelphia, December 9.
- *A systems biology approach to iron metabolism and cancer,* Workshop on Nanotechnology, Proteogenomics, and Visual Analytic Applications for Shistosomiasis Control, Abuja, Nigeria, December 15.

2009

- *Dynamical systems over graphs: the relationship between graph topology and dynamics,* Special Session on Applications of Topology, Amer. Mathematical Society, Joint Mathematics Meetings 2009, Washington, D.C., January 5.
- *Introduction to Systems Biology,* Department of Cancer Biology, Wake Forest University, Winston-Salem, NC, January 20.
- *Careers in computational biology,* Hampton University, Hampton, VA, January 22.
- *Algebraic models in systems biology*, Mathematics Department, Clemson University, January 26.
- *Biology + Math= Biology*, Oakwood University, Huntsville, AL, February 5.
- *Algebraic Methods in Systems Biology*, Amer. Mathematical Society, Plenary Address - Spring Southeastern Sectional Meeting, North Carolina State University, Raleigh, NC, April 4.
- *Experience in developing collaborations with MSI (particularly HBCUs) with VBI*, Achieving Inclusive Excellence in Grant Proposals Workshop, Virginia Tech, May 6.
- *Reverse-engineering in systems biology (short course),* Instituto Gulbenkian de Ciencia (IGC), Lisbon, Portugal, May 18-21.
- *Algebraic models in systems biology*, Mathematical Applications Seminar series, George Washington University, Washington, D.C., May 28.
- *Discrete models of gene regulation networks,* Plenary address, 15th International Conference on DNA Computing and Molecular Programming, University of Arkansas, Fayetteville, AR, June 10.
- *Parameter estimation for algebraic models*, Emerging Modelling Methodologies in Medicine and Biology, International Centre for Mathematical Sciences, Edinburgh, Scotland, July 21.
- *Experimental design and biochemical network inference,* Annual Meeting of the American Statistical Society, Washington, D.C., August 3.
- *The relationship between dynamics and structure of biological networks,* 47th IEEE Allerton Conference on Communication, Control, and Computing, Urbana-Champaign, IL, Sept. 30.
- *The relationship between dynamics and structure of biological networks,* Southern Methodist University, Dallas, TX, Oct 14.
- *Cancer systems biology,* National Conference of the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), Dallas, TX, Oct 16.
- *Careers in computational biology,* Norfolk State University, Norfolk, VA, Nov. 18.
- *A predictive model for the regulation of mammalian iron metabolism,* Harvard Medical School, Boston, MA, December 4.

2008

- *Metabolic fingerprinting of breast cancer*, Department of Biostatistics, Bioinformatics and Biomathematics, Georgetown University Medical School, Washington, DC.
- *Design of experiments and biochemical network inference*, Department of Statistics, University of Kentucky, Lexington, KY.
- *Algebraic Methods in Systems Biology,* University of Marburg, Germany.
- *An introduction to systems biology,* Statistical and Applied Mathematical Sciences Institute (SAMSI), Durham, NC.
- *Algebraic Methods in Systems Biology*, Department of Mathematics, Georgia Tech, Atlanta, GA.
- *Computer Algebra Methods for the Inference of Biochemical Networks,* Department of Mathematics, NC State University, Raleigh, NC.
- *The Dynamics of Conjunctive Boolean Networks*, Discrete Models of Biological Networks Workshop, Institut de Mathématiques de Luminy, Marseille, France.
- *Algebraic Methods in Systems Biology*, Institut des Hautes Études Scientifiques (IHÉS), Paris, France.
- Undergraduate Research Panel, Blackwell-Tapia Conference, SAMSI, Research Triangle Park, NC.
- *Data analysis for molecular fingerprinting of breast cancer*, American Mathematical Society (AMS) Joint International Meeting, Fudan University, Shanghai, China.
- *Algebraic Models in Systems Biology*, Shanghai Jiao Tong University, China.

2007

- *Parametric Inference of Biochemical Network Models,* SIAM Minisymposium on Mathematical Modeling of Complex Systems in Biology, Annual Joint Meetings of the AMS-MAA-SIAM, New Orleans, LA.
- *Parametric Inference of Biochemical Network Models,* Keynote lecture, 2nd Bioinformatics Research Symposium, Clemson University, Clemson, SC.
- *Polynomial dynamical systems over finite fields, with applications to modeling and simulation of biological networks,* IMA Workshop on Applications of Algebraic Geometry to Biology, Dynamics, and Statistics, University of Minnesota, Minneapolis, MN.
- *Biochemical network inference*, FLAD Computational Biology Collaboratorium (FCBC) at the Instituto Gulbenkian de Ciencia (IGC), Lisbon, Portugal.
- *Algebraic Methods in Systems Biology,* Applied Mathematical Sciences Summer Institute (AMSSI) California State Polytechnic University, Pomona, CA.
- *The Role of Mathematics in Systems Biology,* Second Argentinian Summer School in Biomathematics (BIOMAT), Córdoba, Argentina.
- *Discrete Models of Biochemical Networks: The Toric Variety of Nested Canalyzing Functions.* Algebraic Biology 2007, Research Institute for Symbolic Computation (RISC), Linz, Austria.
- *A mathematical formalism for agent-based modeling,* Discrete Mathematics and Algorithms Conference, Clemson University, Clemson, SC.
- *Complexity in biological systems,* Cyber-Enabled Discovery and Innovation (CDI) Workshop, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC.
- *Graduate studies in computational biology,* The Institute for Math Biology Education and Research (TIMBER), Appalachian State University, Boone, NC.

2006

- *A Computational Algebra Approach to the Reverse-engineering of Biochemical Networks,* Chinese Academy of Sciences, Shanghai, China.
- *Algebraic Models in Systems Biology,* Rutgers University, New Brunswick, NJ.
- *Discrete Models in Epidemiology,* Summer School - Mathematical Modeling in Epidemiology, San Salvador, El Salvador.
- *Finite Dynamical Systems,* Clemson University, Clemson, SC.
- *Mathematical Methods in Computational Biology,* Annual Meeting of the Soc. for the Advancement of Native Americans and Chicanos in Science (SACNAS).
- *A Computational Algebra Approach to Yeast Systems Biology,* Center for Genomics, Cuernavaca, Mexico.

2005

- *A Computational Algebra Approach to the Reverse Engineering of Gene Regulatory Networks,* Eastern Michigan University, Ypsilanti, MI.
- *System identification of biochemical networks,* Summer School on Nanoscience and Systems Biology, University of Munich, Germany.
- *System identification of biochemical networks using discrete models,* Fourth Workshop on the Computation of Biochemical Pathways and Genetic Networks, European Media Lab, Heidelberg, Germany.
- *Algebraic Models in Systems Biology,* 1st Intl. Conference on Algebraic Biology, Tokyo, Japan.
- *Algebraic Models in Systems Biology,* Academia Sinica, Taiwan, Taipeh.
- *Mathematical Methods in Computational Biology,* First Argentinian Summer School in Biomathematics (BIOMAT), Cordoba, Argentina.
- *A Computational Algebra Approach to Reverse-engineering of Biochemical Networks,* IMPA, Rio de Janeiro, Brazil.

2004

- *Mathematical Models of Biochemical Networks: a case study,* Bioinformatics Colloquium, Ludwig-Maximilians University, Munich, Germany.
- *Mathematics Methods in Bioinformatics,* Society for Advancement of Chicanos and Native Americans in Science (SACNAS) conference, Austin, TX.
- *An Optimal Control Problem for* in vitro *Virus Competition,* 43rd IEEE Conference on Decision and Control, Bahamas.
- *Discrete Models of Biochemical Networks,* Free University Amsterdam, Netherlands.
- *Finite Dynamical Systems: A Mathematical Foundation for Simulation Science,* Univ. Western Ontario, Canada.
- *Finite Dynamical Systems: Theory and Practice,* 16th Intl. Symposium on Mathematical Theory of Networks and Systems, Leuven, Belgium.

2003

- *A Computational Algebra Approach to the Modeling of Biochemical Systems,* Univ. Buenos Aires, Argentina.
- *A Computational Algebra Approach to the Modeling of Biochemical Systems,* Univ. of Cordoba, Argentina.
- *A Computer Algebra Approach to the Modeling of Biochemical Systems,* Plenary address, International Symposium on Symbolic and Algebraic Computation (ISSAC), Drexel University, Philadelphia, PA.
- *Modeling of Biochemical Networks,* ISSAC, Drexel University, Philadelphia
- *The Need for Data to Fit Models,* NIEHS Workshop on Systems Biology, Research Triangle Park, NC.

- *Polynomial Models of Finite Dynamical Systems,* Institute for Mathematics and its Applications, Minneapolis, MN.
- *Open Problems in Algebraic Statistics,* American Institute for Mathematics, Palo Alto, CA.
- *Mathematics in the Age of Networks,* Virginia Tech, Blacksburg, VA.
- *Finite Dynamical Systems: theory and practice,* Stanford University, Palo Alto, CA.
- *A Mathematical Foundation for PathSim: a rule-based spatial model of immune response to viral pathogens,* Ohio State University, Columbus, OH.
- *Symbolic Computation Methods in Computational Biology,* Technical University, Munich, Germany.
- *Computer Simulation and Biological Systems,* Plenary address, Mathematics Conference of the Puerto Rican Math Society, Ponce, Puerto Rico.
- *Computer Simulation of Immune Response to EBV Infection,* NIAID workshop, National Institutes of Health, Bethesda, MD.
- *Reverse Engineering of Gene Regulatory Networks,* University of Munich, Germany
- *Reverse-Engineering of Biological Networks,* Virginia Tech, Blacksburg, VA.

2002

- *A New Combinatorial Homotopy Theory of Graphs,* University of Western Ontario, New London, Canada.
- *Oh What a Tangled Web We Weave: The Age of Networks*, Biever Lecture, Loyola University, New Orleans, LA.
- *Polynomial Methods for Reverse-Engineering of Biochemical Networks,* University of California, Berkeley, CA.
- *Polynomial Methods in Mathematical Biology,* Virginia Tech, Blacksburg, VA.
- *A Categorical Framework for Sequential Dynamical Systems,* SIAM Conf. on Discrete Mathematics, San Diego, CA.

COMMITTEES & ORGANIZATIONS

Offices Held

- Secretary, AAAS Section A (Mathematics) 2018-2022
- Vice President for Science Policy, Society for Industrial and Applied Mathematics, 2009-2013
- Chair, Committee on Science Policy, Society for Industrial and Applied Mathematics, 2009-2013
- Member, Committee on Science Policy, Society for Industrial and Applied Mathematics, 2009-present
- Member, Society for Industrial and Applied Mathematics, Committee on Committees, 2008-2009

Editorial Boards/Advisory Boards

- Co-Editor-in-Chief, *Bulletin of Mathematical Biology,* 2016-present
- Member, Editorial Board, *BMC Systems Biology,* 2013-present
- Member, Editorial Board, *Journal of Algebra,* 2008-present
- Member, Editorial Board, *Bulletin of Mathematical Biology, 2008-2016*
- Member, Editorial Board, *Journal of Symbolic Computation,* 2003-present
- Member, Editorial Board, *Applied Mathematical Sciences* book series, Springer Verlag
- Member, Editorial Board, *Mathematical Modelling: Theory and Applications* book series, Springer Verlag

- Member, Advisory Board, "Multiscale Immune System Simulator for the Onset of Type 2 Diabetes, European Framework 7 project coordinated by Consiglio Nazionale della Ricerche, Italy, 2013-present
- Member, Host-Pathogen Working Group, Malaria Host-Pathogen Interaction Center, Emory University, 2013-present
- Member, Steering Committee, Visual Analytics in Biology Curriculum Network, Jackson State University, Jackson, MS, NSF funded, 2011-2013.
- Member, Scientific Advisory Committee, Mathematical Biosciences Institute, Ohio State University, 2011-2013
- Member, Steering Committee for Activity Group in Algebraic Geometry, Society for Industrial and Applied Mathematics (SIAM)
- Member, Minority Serving Institutions Advisory Council, Virginia Tech, 2008-2009
- Member, Program Committee, 9th Annual Computational Genomics Conference, Baltimore, 2006
- Member, External Advisory Committee, Alliance for the Advancement of Biomedical Research Excellence in Puerto Rico (AABRE-PR) 2005-present
- Member, Steering Committee, Interdepartmental Ph.D. Program "Genetics, Bioinformatics, and Computational Biology," Virginia Tech, 2003-2013
- Member, External advisory committee to the NIH-funded *Biomedical Research Infrastructure Network, University of Puerto Rico,* 2003-2006

Other Selected Professional Service

- Member, Program Committee, 15th Conference on Computational Methods for Systems Biology, Sept. 27-29, 2017, Darmstadt, Germany.
- Member, Member, MIRA Study Section, NIGMS, 2016.
- Member, Study Section on Multiscale Modeling, NIBIB, March 2014-2015.
- Ad hoc member, NIH "Modeling and Analysis of Biological Systems (MABS)" Study Section,2013-2016.
- Ad hoc member, NIAID Study Section, Omics Technologies for Predictive Modeling of Infectious Diseases, February 2013.
- Editor, Special issue, *Bull. Math. Biol.* **73**, 2011, Algebraic Methods in Mathematical Biology.
- Co-editor, Special issue on "Biomathematics: Newly developed applied mathematics and new mathematics arising from biosciences," *Discrete and Continuous Dynamical Systems,* Dec. 2011.
- Ad Hoc Member, Study Section on Cancer Genetics, National Cancer Institute, October 2010.
- Expert witness at Congressional Hearing on 21st Century Biology, Subcommittee on Research and Education of the House Committee on Science and Technology, June 29, 2010.
- Founder and President of Kids' Tech University (http://kidstechuniversity.org), 2009-present.
- Member, Study Section on Molecular Oncology, National Cancer Institute, 2009.
- Member, Study Section on Biological Data Management and Analysis, National Institute for General Medical Sciences, 2010.
- Reviewer for National Science Foundation, National Institutes of Health, and National Academy of Sciences.
- Reviewer for various mathematical and scientific journals.
- Seminar leader, NSF REU Summer Institute in Mathematics for Undergraduates, University of Puerto Rico, summer 2000, 2001.
- Co-teacher of MAA minicourse at 1995 National Meetings of AMS/MAA on "Teaching with Original Sources".

Program & Conference Organization

- Member, Program Committee, 12th International Conference on Computational Methods in Systems Biology, University of Manchester, Manchester, England, 2014.
- Member, Program Committee, 5th International Workshop on Static Analysis and Systems Biology, Munich, Germany, 2014.
- Co-chair, International Conference on Cell Biology, Virginia Tech, 2013.
- Member, Program Committee, 2012 RECOMB Conference on Regulatory and Systems Genomics, with DREAM Challenges, San Francisco.
- Member, Program Committee, SIAM Conference on Applications of Algebraic Geometry, Colorado State U., 2013.
- Co-organizer, Working Group on Optimal Control of Agent-based Models, National Institute for Mathematical and Biological Synthesis (NIMBioS), University of Tennessee, 2011-2013.
- Member, Program Committee, 21st International Conference on Database and Expert System Applications, 2010.
- Member, Organizing Committee, workshop on "Bootcamp on Cancer Modeling," Mathematical Biosciences Institute, Ohio State University, September 2010.
- Member, Organizing Committee, workshop on "Mathematical Developments Arising from Biology," Mathematical Biosciences Institute, Ohio State University, Nov. 2009.
- Member, Organizing Committee, 2011-2012 program on "Stochastics in Biological Systems," Mathematical Biosciences Institute, Ohio State University.
- Member, Organizing Committee, workshop on "Optimal Control and Optimization for Individual-based and Agent-based Models," National Institute for Mathematical and Biological Synthesis, University of Tennessee (NIMBioS), Dec. 2009.
- Program Leader, Program on Algebraic Methods in Systems Biology and Statistics, Statistical and Applied Mathematical Sciences Institute, Research Triangle Park, NC, 2008-2009.
- Co-organizer, Special Session on "Combinatorics and Discrete Dynamical Systems," 1st Joint Intl. Meeting of AMS and Shanghai Mathematical Soc., Shanghai, China, 2008.
- Co-organizer, Special Session on "Biomathematics: Newly Developed Applied Mathematics and New Mathematics Arising from Biosciences," 1st Joint Intl. Meeting of AMS and Shanghai Mathematical Soc., Shanghai, China, 2008.
- Member, Program Committee, 2nd International Conference on Bioinformatics Research and Development (BIRD), Vienna, Austria, 2008.
- Member, Program Committee, Mathematical Theory of Networks and Systems (MTNS), 2008.
- Member, Program Committee, RECOMB Systems Biology, 2007-present
- Co-organizer, 1st Canadian Discrete & Algorithmic Mathematics Conf. (CanaDAM), Alberta, Canada, 2007.
- Co-organizer, Atlantic Coast Conf. on Mathematics in the Life & Biological Sciences, Virginia Tech, 2007.
- Organizer, AMS Short Course on Mathematical Methods in Computational Biology, AMS-MAA-SIAM Joint Meetings, San Antonio, 2006.
- Co-organizer and co-principal lecturer, MSRI Graduate Summer Workshop on Mathematical Methods in Computational Biology, 2006.
- Member, Program Committee, First International Conference on Algebraic Biology, Tokyo, 2005.
- Organizer, session on genetic networks, International Symposium on the Mathematical Theory of Networks and Systems (MTNS), University of Notre Dame, 2002.
- Co-organizer, Joint U.S.-Canadian Conference on Symbolic Computational Algebra, Waterloo, Ontario, 2002.

- Member, Program Committee, International Symposium on Symbolic & Algebraic Computation(ISSAC) 2001.
- Co-organizer, AMS-SIAM summer conf. “Symbolic Computation and Polynomial System Solving,” 2000.
- Organizer, conference on “Cryptography as a Teaching Tool,” for NM high school teachers, 1998.
- Co-organizer of an AMS Special Session on Computational Algebraic Geometry, Joint Annual Meetings of the AMS/MAA/SIAM, San Diego, January 1997.
- Co-organizer of 22nd NMSU Holiday Symp. on “Rewriting techniques and Gröbner bases,” January 1996.
- Co-organizer of a contributed paper session on “Teaching with Original Sources” at the 1995 National Meetings of the AMS/MAA.
- Co-organizer of 21st NMSU Holiday Symposium on “Gröbner Bases and Convex Polytopes,” December 1994.

Professional Memberships

- American Association for the Advancement of Science
- American Mathematical Society
- Society for Industrial and Applied Mathematics
- Association for Women in Mathematics
- Society for Mathematical Biology
- International Society for Systems Biology

TRAINING

Graduate Students

Current

Name	Grad.	Program	Institution
Bandita Adhikari	2019	Biomed. Sci. Ph.D.	UConn Health
Russell Posner	2018	M.D./Ph.D.	UConn Health

Former

Name	Grad.	Current Position	Institution
Ulysses Andrews	2016	Mathematics	UConn
Seda Arat	2015	Postdoctoral Fellow	Jackson Laboratory, Bar Harbor, ME
Claus Kadelka	2015	Postdoctoral Fellow	University of Zurich, Switzerland
Shernita Lee	2014	Postdoctoral Fellow	Univ. of North Carolina, Chapel Hill
Matt Oremland	2013	Staff Scientist	Regeneron
Ariane Hofmann	2012	Ph.D. student,	Biosys. Sci., ETH Zuerich
David Murrugarra	2012	Assistant Professor	University of Kentucky
Franziska Hinkelman	2011	Staff Scientist	Google Munich

Alan Veliz-Cuba	2010	Assistant Professor	University of Dayton, OH
Paola Vera-Licona	2007	Assistant Professsor	UConn Health Center
Elena Dimitrova	2006	Associate Professor	Clemson University, Department of Mathematical Sciences
Brandylin Stigler	2005	Associate Professor	Southern Methodist University, Department of Mathematics
Dustin Potter	2005	Real Estate Investor	
Omar Colón-Reyes	2005	Associate Professor	Univ. of Puerto Rico (Mayaguez), Department of Mathematics
Luis Garcia-Puenta	2004	Professor	Sam Houston State University, Department of Mathematics
Abdul Jarrah	2002	Professor	American University, Sharjah, UAE
Karen Schlauch	1998	Professor	University Nevada–Reno, Department of Biochemistry & Molecular Biology
Xenia Kramer	1996	Senior Research Scientist	Private Industry
Cynthia Woodburn	1994	Professor	Pittsburg State University, Department of Mathematics

Postdoctoral Fellows

Current

Name	Current Position	Dates of Training	Institution
Sherli Chenthittayil	Postdoctoral	2017-2018	UConn Health
Anna Konstorum	Postdoctoral	2015-2017	UConn Health
Cory Brunson	Postdoctoral	2014-2016	UConn Health
Byoungkoo Lee	Postdoctoral	2016-2017	UConn Health

Former

Name	Current Position	Dates of Training	Institution
Sook Ha	Asst. Professor	2013-2016	Virginia Military Institute
Anael Verdugo	Asst. Professor	2012-2013	UC Fullerton
Greg Blekherman	Assoc. Professor	2009-2010	Georgia Tech
Julia Chifman	Asst. Professor	2009-2013	American University Washington DC
Valarie Hower	Assoc. Professor	2008-2009	Miami University

BUSINESS EXPERIENCE

Co-founder and Chief Scientific Officer, 3RBiosystems, 10755 Scripps Poway Pkwy 456, San Diego, CA 92131.

The company was incorporated in 2012. Its focus is the development and application of a systems biology platform for diagnostics and prognostics related to cancer immunotherapy.

MEDIA COVERAGE

Interview with Melinda Lanius, in the *Notices of the American Mathematical Society,* **64** (5), 456-460, May 2017.

"Thank you, Sophie, and I'm sorry," *Scientific American,* April 1, 2017.
https://blogs.scientificamerican.com/roots-of-unity/thank-you-sophie-and-im-sorry/

"On Pi Day, Computational Biologists Share What They Love About Math," Biomedical Beat, NIGMS, March 14, 2017
https://biobeat.nigms.nih.gov/2017/03/on-pi-day-computational-biologists-share-what-they-love-about-math/

UConn Health "Faculty Spotlight," January 2017
http://cqm.uchc.edu/2017/01/13/dr-reinhard-laubenbacher-features-in-winter-2017-series-faculty-spotlight/

"UConn/JAX forum emphasizes team work," UConn Today, March 17, 2016
http://today.uconn.edu/2016/03/uconn-jax-forum-emphasizes-teamwork/

"Laubenbacher named Editor-In-Chief of Bulletin of Mathematical Biology," UConn Today, February 9, 2016
http://today.uconn.edu/school-stories/laubenbacher-named-editor-in-chief-of-bulletin-of-mathematical-biology/

UConn Health commercial, January 28, 2016, https://www.youtube.com/watch?v=khWUwbPzofY

"UConn health scientist named AAAS fellow," Hartford.Business.com, January 25, 2016
http://www.hartfordbusiness.com/article/20160125/PRINTEDITION/301219926/101424

"UConn Health/JAX scientist named AAAS fellow," UConn Today, November 24, 2015,
http://today.uconn.edu/2015/11/uconn-healthjax-scientist-named-aaas-fellow/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+uconn-today+%28UConn+Today%29
"Data science and the future of medicine." Interview by General Electric Media Office, October 2014,
https://www.youtube.com/watch?v=mmao2MxACyo

All hands on deck: getting kids excited about STEM, H. Korbey, KQED Mindshift, September 2013, http://blogs.kqed.org/mindshift/2013/09/all-hands-on-deck-getting-kids-excited-about-stem/

First JAX Genomic Medicine joint recruit: Reinhard Laubenbacher named co-director of UConn Center for Quantitative Medicine, Jackson Laboratory website, July 2013, http://www.jax.org/news/archives/2013/JAX-UConn-recruit.html

New co-director named at Center for Quantitative Medicine, UConn Health Center website, July 2013, http://today.uconn.edu/blog/2013/07/new-co-director-named-at-center-for-quantitative-medicine/

Scholar of the Week, Office of the Vice President for Research, Virginia Tech, April 2013, http://www.research.vt.edu/scholar-of-the-week/reinhard-laubenbacher

Engaged Scholar of the Month, Virginia Tech, October 2011, http://www.outreach.vt.edu/

Agricultural Biodiversity Weblog, May 3, 2010, *Getting to grips with ecological interactions,* http://agro.biodiver.se/2010/05/getting-to-grips-with-ecological-interactions/

Virginia Tech Magazine, Winter 2009-10, vol 32, no. 2, *Kids' Tech University: Shaping the future of science.*

BioSpace Biotech and Pharmaceutical News and Jobs, Nov 19, 2009, *Systems Biology: A Field of Unlimited Possibilities*, http://www.biospace.com/news_story.aspx?NewsEntityId=163319

Graduating Engineer, October 28, 2009, Bioinformatics Careers, http://www.graduatingengineer.com/articles/20091031/Bioinformatics-Careers

BreastCancer.Net News, July 10, 2009, A systems biology view of cancer.

Science Daily, July 2009, Systems biology recommended as clinical approach to cancer, http://www.sciencedaily.com/releases/2009/07/090709110838.htm

Genetic Engineering and Biotechnology News, podcast interview on cancer systems biology, http://www.genengnews.com/gencasts.aspx?id=274

SIAM News – January 2009 "Thoughts from SIAM's New VP" by Reinhard Laubenbacher. Vol. 42, No. 1, p. 12.

The Collegiate Times – February 2, 2009 "Program engenders kids' scientific interests" by Justin Graves. http://www.collegiatetimes.com/stories/2009/02/02/program_engenders_kids__scientific_interests

The Roanoke Times – February 1, 2009 "Bringing math to life at Virginia Tech" by Greg Esposito. http://www.roanoke.com/news/nrv/wb/193174

The Roanoke Times – December 8, 2008 " 'Kids Tech' strives to cultivate wonder" by Greg Esposito. http://www.roanoke.com/news/nrv/wb/186945

Education Week – November 21, 2008 “Virginia Tech to Engage Kids In STEM” by Katie Ash. http://blogs.edweek.org/edweek/DigitalEducation/2008/11/virginia_tech_to_engage_kids_i.html

News/Talk 960 WFIR – November 21, 2008 “Virginia Tech to launch Kid's Tech University” radio spot with Timothy Martin. http://www.wfir960.com/wire/stories/03693_Kids-Tech-11-21-WEB_033116.asp

Associated Press – November 18, 2008 “Virginia Tech to become Kids' Tech, too.” http://www.wdbj7.com/global/story.asp?s=9369988

SIAM News – November 16, 2008 “Fall Update for SIAM” by James Crowley. Vol. 41, No. 9, p. 3. http://www.siam.org/news/news.php?id=1458

Bioinform Newsletter – March 7, 2008 “Challenges of Comparing Network Inference Methods” by Bernadette Toner. Vol. 12, No.10. http://www.bioinform.com/issues/12_10/expression_profile/145550-1.html

Science News – March 1, 2008 “A Mathematical Tragedy” by Julie J. Rehmeyer. Part II of II. Vol. 173, No. 9. http://www.sciencenews.org/articles/20080301/mathtrek.asp

Science News – February 23, 2008 “An Attack on Fermat” by Julie J. Rehmeyer. Part I of II. Vol. 173, No. 8. http://www.sciencenews.org/articles/20080223/mathtrek.asp

Science – February 2008 “A Woman Who Counted” by Barry Cipra. Vol. 319, p. 899. http://www.sciencemag.org/cgi/content/full/319/5865/899a

Science – February 2004 “The Mathematical Biology Job Market” by Jim Kling. http://biology-web.nmsu.edu/math/Next%20Wave%20--%20Kling.htm