

Eric Freudenthal

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EDUCATION

May 2003: **Ph.D., Computer Science, Courant Institute, New York University**

Advisor: Allan Gottlieb

Title: [Comparing and Improving Centralized and Distributed Techniques for Coordinating Massively Parallel Shared-Memory Systems](#)

May 1985: **B.A., Computer Science, New York University**

EMPLOYMENT

2004-present: **Associate Professor, University of Texas at El Paso**

1986-2004: **Associate Research Scientist, Courant Institute, New York University**

2001-2004: Project lead for NYU [Parallel and Distributed Systems Group's Distributed Sanctuaries](#) project investigating infrastructure for dynamic deployment of programs and establishment of secure communication channels in partially trusted environments. Co-creator of "Coral-CDN" self-organizing proxy that serves 20M requests from hundreds of Planet-lab hosts daily.

1996-2001: Co-PI of NYU Recognition Lab, which participated in DARPA's MSTAR automatic target recognition program. Areas of research include target hypothesis generation, signature comparison, hypothesis refinement, and scalable deployment.

1986-1997: Assistant Research Scientist, Ultracomputer Research Laboratory. Contributions include algorithms for inter-process coordination, and the analysis and improvement of combining networks.

1985-1986: **Proprietor of small engineering firm.** Designed, programmed and manufactured digital image processing systems for biological research.

1983-1985: **System Design Engineer, Logic Systems** of Saddle Brook, NJ. Designed and supervised the manufacture and programming of digital device controllers and image processing systems. Responsibilities included design of analog and digital circuits, and embedded control software.

Prior experience includes circuit and system design for broadcasting and electronic instrumentation.

RESEARCH GRANTS and CONTRACTS

A Co-Design Approach for Advances in Software and Hardware, Co-PI with Shirley Moore (PI) and Ramon Ravelo, Air Force Office of Scientific Research \$1M 2012-2017

Faculty gift award. CALCULEX Corporation ~\$20K both in 2013, 2014.

Faculty gift award: Microsoft Corporation, \$27k, 2011.

Scientific Leadership Award: Integration of Homeland Security into Computational Studies and Computer Systems Research at UTEP. \$400k, Department of Homeland Security, 2010, 36mo.

Faculty gift award: Texas Instruments Corporation, \$30k, 2007-2010.

CPATH CDP: An Integrated, Multidisciplinary and Cross-Fertilizing Model for Computing Education (NSF / IIS), \$148k, with Francois Modave, 2007.

A Practical Sensing and Image Dissemination System for Pervasive Monitoring CDSR (Center for Defense Science Research) and WSMR (White Sands Missile Range) 1/2008

CCLI Phase 2: The Adaptation and Dissemination of a Programming-Centric Computer Literacy Course at HSIs, \$346k (NSF / DUE), with Ann Gates, 9/2007

Investigation of Technical Challenges Related to the Proposed WSMR Playbox, WSMR 9/2007

AAI-Utep Homeland Security Concept of Operation Study. AAI Corporation, October 2005.

Constraint Validation of RBAC (Role Based Access Control) Policy, ARL, September 2005

DAyOS: Dynamic Adaptability for Online Systems. IBM Faculty Award, January, 2005

Stable Trust Management through Quantified Reliability, with Vijay Karamcheti (PI), DARPA IPTO Seedling, March 2003.

Geometric Hashing for Target Recognition in SAR, with Ben Goldberg (PI). DARPA SPO/AFRL, through SAIC, September 2000.

Analysis of ATR Problem Complexity and Scalability, with Ben Goldberg of NYU (PI), John Wissinger and Bill Irving of Alphatech, and Tom Ryan of SAIC. This first phase STTR was granted by AFRL in the fall of 1998, Second phase was granted in the fall of 1999.

Model-based Reasoning in a Distributed Computing Environment, with Ben Goldberg (PI) and several educational and commercial partners. DARPA SPO/AFRL, 1999-2002.

A Computational Laboratory for Automatic Target Recognition, with Ben Goldberg (PI) and Davi Gieger. Air Force Office of Scientific Research, March 1998.

PATENTS

Tin Ear Assistive Device: Provisional patent filed in Feb 2015, Non-Provisional filed in Feb 2016.

System and method for distributing foveated data in a network, USPTO publication US 2004/0215716 A1 published October 28, 2004

JOURNAL ARTICLES

Gabriel Arellano, Edward Hudgins, David Pruitt, Adrian Veliz, Eric Freudenthal, and Vladik Kreinovich, *How to Gauge Disruptions Caused by Garbage Collection: Towards an Efficient Algorithm*, *Journal of Uncertain Systems*, Vol 10, No. 1, 2016, pp. 4 – 9.

Eric Freudenthal, Eric Hagedorn, and Olga Kosheleva, *Conservation of Energy Implies Conservation of Momentum: How We Can Explain Conservation of Momentum to Before-Calculus Students*, *Journal of Uncertain Systems*, Vol 8, No. 3, 2014, pp. 169 – 172.

Sharie R. Kranz, Carlo A. Amato, and Eric A. Freudenthal, *Coordinate an Attack Using the Calculator*, *J. Mathematics Teacher in the Middle School*, Volume 18, Issue 6, 2013, pp. 356 – 361.

Steven Gutstein, Olac Fuentes and Eric Freudenthal, *Knowledge Transfer in Deep Convolutional Neural Nets*, *International Journal on Artificial Intelligence Tools (IJAIT)*, 2008, pp. 555-567.

PAPERS in PEER-REVIEWED CONFERENCE PROCEEDINGS

Eric Freudenthal, Kien Lim, Sharie Kranz, Catherine Tabor and Jeremy Ramirez, *Using Programming to Strengthen Mathematics Learning in 9th Grade Algebra Classes*, *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, Atlanta, Georgia, 2013, pp. 23.1332.1 – 23.1332.15.

Carlo Amato, Sharie Kranz, Catherine Tabor, Juan Castillo, Alexandria Ogrey, Adrian Veliz, Art Duval, Kien Lim, Amy Wagler, and Eric Freudenthal, [iMPaCT-STEM: Games & Activities](#)

[that Motivate Exploration of Foundational Algebra Concepts—While Inadvertently Scaffolding Computational Thinking and Engineered Design](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, 2012, pp. 25.315.1 – 25.315.14.

Steven Gutstein, Olac Fuentes and Eric Freudenthal, Latent Learning - What your net also learned, *Proceedings of the International Joint Conference on Neural Networks (IJCNN)*, 2011, pp. 1316 – 1321.

Eric Freudenthal, Art Duval, Alexandria N. Ogrey, Kien Lim, Sarah Hug, Catherine Tabor, Rebeca Q. Gonzalez, and Alan Siegel, [Planting the seeds of computational thinking: An introduction to programming suitable for inclusion in STEM curricula](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, 2011, pp. 22.1159.1–22.1159.13.

Steven Gutstein, Olac Fuentes and Eric Freudenthal. Latent Learning in Deep Neural Nets, *Proceedings of the 2010 International Joint Conference on Neural Networks (IJCNN)*, 2010, pp. 1–6.

Eric Freudenthal, Alexandria N. Ogrey, Mary "Kay" Roy, Sarah Hug, and Rebeca Gonzalez, A Computational Introduction to STEM Studies, *Proceedings of American Society for Engineering Education Annual Conference (ASEE)*, 2010, pp. 15.18.1–15.18.22.

Virgilio Gonzalez and Eric Freudenthal, [Adoption Of Ccs0 Computational Methods And Circuit Analysis Techniques Into An Introductory Programming Course For Electrical Engineers](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, 2010, pp. 15.1382.1–15.1382.9.

Eric Freudenthal, Alexandria N. Ogrey, Mary K. Roy, and Alan Siegel, A Computational Introduction to STEM Studies, *Proceedings of the Global Engineering Education Conference (EDUCON, IEEE)*, 2010, pp. 663 – 671.

Tanja Magoc, Eric Freudenthal, and Francois Modave, Computation for Science and Engineering, *Proceedings of the Global Engineering Conference (EDUCON, IEEE)*, 2010, pp. 991 – 995.

Eric Freudenthal, Mary K. Roy, Alexandria Ogrey, Tanja Magoc, and Alan Siegel, [A Computational Introduction to Computer Science](#), *Proceedings of the Annual Symposium of the Special Interest Group on Computer Science Education (ACM SIGCSE)*, 2010, pp 37 – 41.

Eric Freudenthal and Bivas Das, VPAF: a Flexible Framework for Establishing and Monitoring Prolonged Authorization Relationships, *Proceedings of the International Conference on Collaborative Computing (CollaborateCom, IEEE)*, 2009.

Eric Freudenthal, Mary K. Roy, Alexandria Nicole Ogrey, Alan Siegel and Ann Q. Gates, [CCS-0: A Computational Introduction to Programming, Mathematical Modeling, and Elementary Mechanics](#), *Proceedings of the Frontiers in Education Conference (FIE)*, fall 2009.

Eric Freudenthal, Brian A. Carter and Rafael Escalante, [Responding to Java-Centric CS Curricula: The Integration of C into a Course in Computer Organization](#), *Proceedings of the Frontiers in Education Conference (FIE)*, fall 2009.

Eric Freudenthal, Mary K. Roy and Ann Q. Gates, The Synergistic Integration of an Entering Students Program with an Engaging Introductory Course in Programming, *Proceedings of the Frontiers in Education Conference (FIE)*, fall 2009.

Eric Freudenthal, Mary K. Roy, Alexandria N. Ogrey, and Ann Q. Gates, [A Creatively Engaging Introductory Course in Computer Science that Gently Motivates Exploration of Advanced Mathematical Concepts](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, June 2009.

Eric Freudenthal and Brian Carter, [A Gentle Introduction to Addressing Modes in a First Course in Computer Organization](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, June 2009.

Eric Freudenthal, Frederick Katz, Luc Bivas Das, and Luc Longpre, [A Virtualized Network Teaching Laboratory](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, June 2009.

Virgilio Gonzalez, Eric Freudenthal, and Homer Nazeran, [Wireless Biomedical Data Collection – A Laboratory to Prepare Students for Emerging Engineering Areas](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, June 2009, pp. 14.22.1 – 14.22.10.

Eric Freudenthal, Brian Carter, Frederick Kautz, Alexandria Ogrey, Robert Preston and Arthur Walton, [Integration of C into an Introductory Course in Machine Organization](#), *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, June 2008.

Eric Freudenthal, Pilar Gonzalez, Olga Kosheleva, Mary Kay Roy, and Ann Q. Gates, A Creatively Engaging Introductory Course in Computer Science that Motivates Future Study and Assists with Career Choices at a Minority Serving Institution, *Proceedings of the American Society for Engineering Education Annual Conference (ASEE)*, June 2008.

Steven Gutstein, Olac Fuentes and Eric Freudenthal, The Utility of Knowledge Transfer for Noisy Data, *Proceedings of the FLAIRS-08 Conference*, Coconut Grove, Florida, May 2008, pp. 59-64.

Eric Freudenthal, Virgilio Gonzalez, Brian A. Carter, An Anti-Entropy Protocol Suitable For Managing Data Deletion in an Epidemic Data Transmission System, *Proceedings of the 24th Southern Biomedical Engineering Conference*, April, 2008.

Eric Freudenthal, David Herrera, Frederick Kautz, Carlos Natividad, Alexandria Ogrey, Justin Sipla and Leonardo Estevez, Suitability of NFC for Medical Device Communication and Power Delivery, *Proceedings of the IEEE/Engineering in Medicine and Biology Workshop*, November 2007

Ryan Spring, Eric Freudenthal and Leonardo Estevez, Practical Techniques for Limiting Disclosure of RF-Equipped Medical Devices, *Proceedings of the IEEE/Engineering in Medicine and Biology Workshop*, November 2007.

Eric Freudenthal, David Herrera, Steve Gutstein, Ryan Spring, and Luc Longpre, Fern: An updatable authenticated dictionary suitable for distributed caching. *Proceedings of Mathematical Methods, Models, and Architectures for Network Security Systems (MMM/ACNS)*, St. Petersburg, Russia, Sept. 2007.

Christian Servin, Martine Ceberio, Eric Freudenthal and Stefano Bistarelli, An Optimization Approach using Soft constraints for the Cascade Vulnerability Problem, *Proceedings of North American Fuzzy Information Processing Society (NAFIPS)*, IEEE, June, 2007.

Steven Gutstein, Olac Fuentes and Eric Freudenthal, [Knowledge Transfer in Deep Convolutional Neural Nets](#), *Proceedings of the Florida Artificial Intelligence Research Society Conference (FLAIRS-07)*, Key West, Florida, May 2007.

Pattama Jaksurat, Eric Freudenthal, Martine Ceberio, and Vladik Kerinovich. Probabilistic Approach to Trust: Ideas, Algorithms, and Simulations, *Proceedings of Tech '04*, November 2004. Also available as *UTEP Computer Science Technical Report UTEP-CS-04-26a*.

Michael Freedman, Eric Freudenthal, and David Mazières, [Democratizing Content Publication with CoralWeb](#). *Proceedings of Networked Systems Design and Implementation (NSDI)*, USENIX Association, 2004.

Eric Freudenthal and Vijay Karamcheti, DisCo: Middleware for Securely Deploying Decomposable Services in Partly Trusted Environments. In *Proceedings of the Int'l Conference on Distributed Computing Systems*, (ICDCS, IEEE), March 2004.

Eric Freudenthal, Tracy Pesin, Lawrence Port, Edward Keenan, and Vijay Karamcheti, dBAC: Distributed Role-based Access Control for Dynamic Environments. In *Proceedings of the 22nd Int'l Conference on Distributed Computing Systems (ICDCS, IEEE)*, pp411-420, IEEE, July 2002.

Eric Freudenthal, Lawrence Port, Tracy Pesin, Edward Keenan, and Vijay Karamcheti, Switchboard: Secure, Monitored Connections for Client-Server Communication, *Proceedings of the 22nd Int'l Conference on Distributed Computing Systems (ICDCS, IEEE)*, July 2002, pp. 660-665.

Raj Bhatnagar, Brent Siebert, Lynne Vettel, Eric Freudenthal, and David Morgenthaler, Chunk-based matching of images for ATR. In *Proceedings of Society of Photo-Optical Instrumentation Engineers (SPIE) #5095*, pp303-314, April 2003.

Eric Freudenthal, Eugene Lavelly, William Pierson, Mariam Argyle, Joshua Fishman, ATR Complexity and Template Set Size. *Proceedings of Society of Photo-Optical Instrumentation Engineers (SPIE) #4382*, fall 2001, pp. 286-297. Also appears in *Proceedings of Air Force Research Lab Automatic Target Recognition Theory Conference (AFRL, ATR)*, Dayton OH, 2001.

John Wissinger, Robert Ristroph, Joseph Diemunsch, William Severson, and Eric Freudenthal, MSTAR Extensible Search Engine and Model-Based Inference Toolkit, *Proceedings of Society of Photo-Optical Instrumentation Engineers (SPIE)*, Vol. 372, pp. 554-570, 1999.

Eric Freudenthal and Robert Hummel, Methods for Scoring and Aligning Peak Features in SAR Imagery, *Proceedings of the 47th Automatic Target Recognition Working Group Meeting (ATRWG)*, 28-30 October 1997, Redstone Arsenal, AL.

Eric Freudenthal and Allan Gottlieb, Process Coordination with Fetch & Increment, *Proceedings of the 4th Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS IV, ACM)*, Santa Clara, California, April 1991, pp. 260-268. Expanded version available as Ultracomputer Note 159, Courant Institute, New York University.

PEER-REVIEWED PUBLISHED ABSTRACTS

David Pruitt, Adrian Veliz, Eduardo Dragone, and Eric Freudenthal, Unification of Software Project Submission and Plagiarism Detection Simplifies Effective Cheating Detection, *16th International Sun Conference on Teaching and Learning*, March 2016, El Paso, TX.

Eric. Freudenthal, Kien Lim, Karla Carmona, Catherine Tabor, Integrating Programming into Physics and Algebra, *Proceedings of ACM Technical Symposium on Computer Science Education (SIGCSE)*, 2015, pp. 513 – 513.

Steven Gutstein, Eric Freudenthal, Ali Jamal-Kamali, Vladik Kreinovich and David Morgenthaler, [Rod-Spring Approximation: An Intuitive Approach to the Best-fit Least-squared Approximation](#), *Proceedings of the Frontiers of Education Conference (FIE)*, 2011, pp. S1D-1 – S1D-2.

Ali Jalal-Kamali and Eric Freudenthal, Using Graphical Programming to Contextualize a Conventional Programming Course, *Proceedings of the Frontiers of Engineering Conference (FIE)*, 2011, pp. F4G-1 – F4G-2.

Eric Freudenthal, Art Duval, and Alexandria Ogrey, Deepening math and science understandings through integration of computational thinking, *Proceedings of Understanding Interventions*, 2011, pp. 69 – 70.

Eric Freudenthal, Media Programming: A Gateway to College Math, *Sun Conference on Teaching and Learning*, El Paso, TX, 2010.

Eric Freudenthal, Ann Gates, Mary Kay Roy, and Alexandria Ogrey, Programming as a Window to Mathematical Analysis, *Sun Conference on Teaching and Learning*, El Paso, TX, 2009.

Eric Freudenthal, Mary Kay Roy, Alexandria Nicole Ogrey, Sherri Terrell, Olga Kosheleva, Pilar Gonzalez, and Ann Gates, Initial Evaluation of an Introductory Course in Programming that Assists in Career Choices, *Proceedings of the Frontiers in Education Conference (FIE)*, October 2008, F3E-15 - F3E-16.

Eric Freudenthal, Brian Carter, Frederick Kautz, and Alexandria Ogrey, Combined Introduction of C and Assembly Language With a Focus on Reduction of High Level Language Constructs, *Proceedings of the Frontiers of Education Conference (FIE)*, October 2008, S2H-3 - S2H-4.

Ryan Spring, Luc Longpre, and Eric Freudenthal, DeSPAC-SE: Making the Internet Safe for Grandma, *SE-Linux Symposium, 2006*. Also presented at *South Central Information Security Symposium*, Houston, 2006 and as a poster at the *Symposium on Networked Systems Design and Implementation (NSDI)*, IEEE, 2006.

Eric Freudenthal, Nick West, and Luc Longpre: ICE: Putting the Freeze on Malware. *South Central Information Security Symposium*, Austin, April 2005. Also presented as a poster at NSDI 2005.

Luc Longpre, Vladik Kreinovich, Eric Freudenthal, Martine Ceberio, Francois Modave, Neelabh Baijal, Wei Chen, Vinod Chirayath, Gang Xiang, and J. Ivan Vargas, Privacy, Protecting, Processing, and Measuring Loss, *South Central Information Security Symposium*, Austin, April 2005.

Eric Freudenthal and Allan Gottlieb, A New Look at the Effectiveness of Hardware Combining, *Proceedings of the Shared Memory Workshop at the International Symposium on Computer Architecture (ISCA)*, Barcelona, 1998, p12.

REGIONAL CONFERENCE PRESENTATIONS

Eric Freudenthal and Francisco Zapata, Grading by Skill in STEM Courses, *10th Joint UTEP/NMSU Workshop on Mathematics, Computer Science, and Computational Sciences*, 2011.

Eric Freudenthal, CCS0: A Computational Introduction to Programming, Mathematical Modeling, and Elementary Mechanics, *Association of Computer Educators in Texas Annual Conference*, fall 2009.

Eric Freudenthal, Eliciting Engagement and Creativity in Students Attending a First Course in Algorithms, *Association of Computer Educators in Texas Annual Conference (ACET)*, fall 2009

Bivas Das and Eric A. Freudenthal, Modularized Trust Management for Distributed Coalition Environments, *6th Joint UTEP/NMSU Workshop on Mathematics, Computer Science, and Computational Sciences*, 2009.

Eric Freudenthal and Ann Q. Gates, Media Exposed: A Highly Motivational Introductory Programming Course That Assists Students with Career Choices, *Association of Teaching Educators in Texas (ACET)*, October 2008.

Eric Freudenthal and Brian Carter, Integrating the Teaching of C and Assembly Language, *Association of Teaching Educators in Texas (ACET)*, October 2008.

ARTICLES in PERIODICALS

Eric Freudenthal, Using Graphical Programming to Introduce Computer Science, In *CSTA Voice*, Volume 7, Issue 3, Association of Computing Machinery, July 2011.

GUEST LECTURES and WORKSHOPS

Eric Freudenthal, *Computational Computer Science Zero*, 50 minute workshop at Conference for International Research in Cross-cultural Learning and Education, El Paso, July 2009.

Eric Freudenthal, *Computational Computer Science Zero*, Half-day workshop at Association of Computer Educators in Texas Annual Conference, 2009.

Eric Freudenthal, *Using Computation to Introduce the Mathematical Modeling of Dynamic Systems to Freshmen*, presenter of four hour workshop sponsored by the First Year Programs Division, American Society of Engineering Education Annual Conference, Spring 2010.

Eric Freudenthal, *Introduction to Computational Systems*, Invited Speaker, Purdue University, December 2, 2009.

Eric Freudenthal, *Computational Computer Science Zero*, Half-day workshop at Association of Computer Educators in Texas Annual Conference, Fall 2009

Eric Freudenthal, *Programming, Physics, and Fun*, Invited talk on “Computational CS-Zero” presented to faculty and students enrolled in honors program in computer science at Lehman College, CUNY, Spring 2009.

Eric Freudenthal, *Full day workshop on introductory programming courses* presented at Florida International University (FIU) to faculty from FIU and Metro-Dade College. Spring 2009.

TECHNICAL REPORTS

Milijana Suskavcevic, Olga Kosheleva, Ann Gates, and Eric Freudenthal, *Preliminary Assessment of Attitudes towards Mathematics for a Non-STEM Section of Computational Computer Science Zero*, UTEP Computer Science Technical Report #UTEP-CS-09-13, Spring 2009.

Alan Siegel and Eric Freudenthal, [Experiments in teaching an engaging and demystifying introduction to algorithms: Installment 1: Huffman Codes](#), UTEP Computer Science Technical Report #UTEP-CS-09-12, 2009.

Eric Freudenthal, David Herrera, Ryan Spring, and Luc Longpre, *Fern: An Updatable Authenticated Dictionary Suitable for Distributed Caching*. UTEP Computer Science Technical Report # UTEP-CS-06-45-A; *Abbreviated version in Proceedings of ACNS 2007*.

Eric Freudenthal and Allan Gottlieb, *Comparing the Performance of Centralized and Distributed Coordination on Systems with Improved Combining Switches*, NYU Computer Science Technical Report TR-2003-849, November 2003.

Eric Freudenthal and Vijay Karamcheti, *QTM: Trust Management with Quantified Stochastic Attributes*, NYU Computer Science Technical Report TR2003-848, August 2003.

Eric Freudenthal, *Evaluation of Inter-processor Triggers as a Coordination Primitive for Shared-Memory MIMD (Multiple Instruction – Multiple Data) Computers*. The 1992 MPCl Yearly Report: Harnessing the Killer Micros, p 241-242, UCRL-ID-107022-92, Lawrence Livermore National Laboratory. Also available as *Ultracomputer Note 185*, Courant Institute, New York University.

Eric Freudenthal, *A Short Note on Parallel Power-of-Two Buddy Allocation for Shared Memory MIMD Machines*, Ultracomputer System Software Note 66, Courant Institute, New York University, February, 1992.

Eric Freudenthal and Oliver Peze, *Efficient Synchronization Algorithms Using Fetch & Add on Multiple Bit-field Integers*, Ultracomputer Note 148, Courant Institute, New York University, February, 1988.

PROFESSIONAL SOCIETIES

IEEE (Institute of Electrical and Electronic Engineers) Computer Society
ACM (Association for Computing Machinery)
USENIX (Advanced Computing Technical Association) 2005-
ASEE (American Society for Engineering Education)
NYAS (New York Academy of Sciences) , lapsed
Texas ACET (Association of Computer Educators in Texas) 2005-2012
Sigma Xi

AWARD

Henning Biermann Award 2004, Granted for outstanding contributions by a PhD student to education or service to the Computer Science department of the Courant Institute.

COURSES TAUGHT

Special Topics in High Performance Systems (Graduate)
Advanced Operating Systems (Graduate)
Theory of Operating Systems
Computer Organization
Computer Networks
Data Structures
Medical Communication
Computer Security

SERVICE

University of Texas at El Paso

Web Task Force 2015-
Senate IT Committee 2015-
CS Search Committee 2012
Engineering College Council 2010- (chair 2013-)
ECE Search Committee 2008
Department liaison to College of Engineering summer camp program for local teens 2005-2007
Departmental committee: Systems, Undergraduate curriculum 2012-
Organizer of departmental colloquium 2004-2010
USENIX (advanced computing society) campus representative 2005-
Hiring Committee, University Counseling Center 2005-2010
Organizer and leader of departmental freshman orientation 2005-2010
Chair, Faculty Senate Student Organizations and Activities Committee 2008-2010

Academic Community

Invited participant in NSF-sponsored workshops examining how to integrate parallelism into undergraduate CS programs. 2015, 2016.

Board member of the Association of Computer Educators in Texas, 2009-2014.

Participant in multiple NSF review panels related to computing systems research and STEM education (approximately annually)

Tertiary educational research grant proposal reviewer for the country of Singapore 2015.

Program committee: 5th Annual International Conference on Collaborative Computing (IEEE) 2009, Co-HPC Workshop (Supecomputing Conference) 2014 -

Peer-review referee: Engineering in Medicine and Biology Society (IEEE), Information and Knowledge Management (ACM), Frontiers in Education, American Society for Engineering Education, Collaboratecom (IEEE), J. Learning and Individual Differences (Elsevier),

Community Service

Volunteer relationship-skills teacher for youth incarcerated in Las Cruces, NM. 2006-2012

Vice President of the Bronx-Riverdale Society for Ethical Culture. 2002-2003

Trustee, Unirondack Summer Camp, 1996-1999.

Founding chair of adult education program at the First Unitarian Society of Brooklyn, 1993-1996. Administered program, mentored new workshop leaders, and taught.

New York Cares, 1994-1995. Informal mentoring of NYC youth.

Trustee and Membership Chair of the Brooklyn Society for Ethical Culture, 1989-1992.