

## **RICHARD J. ENBODY**

Department of Computer Science and Engineering  
Michigan State University  
428 S. Shaw Lane, Room 3115  
East Lansing, Michigan 48824-1226  
email: enbody@cse.msu.edu  
URL: <http://www.cse.msu.edu/~enbody>  
(517) 353-3389

### **EDUCATION**

- 1982 - 1987 Ph.D., Computer Science  
Minor in Electrical Engineering  
University of Minnesota, Minneapolis, Minnesota
- 1972 - 1976 B.A., Mathematics  
Carleton College, Northfield, Minnesota

### **AWARDS**

- 2015 National Center for Women in IT EngageCSEdu Excellence Award  
1992 & 2008 MSU Engineering College Withrow Teaching Excellence Award

### **EXPERIENCE**

- 1993 - present Associate Professor  
Computer Science & Engineering, Michigan State University, E. Lansing, MI
- 2017 - 2018 Associate Chairperson  
Computer Science & Engineering, Michigan State University, E. Lansing, MI
- 1996 - 1999 Associate Chairperson  
Computer Science Dept., Michigan State University, East Lansing, MI
- 1998 Acting Chairperson  
Computer Science Dept., Michigan State University, East Lansing, MI
- 1987 - 1993 Assistant Professor  
Computer Science Dept., Michigan State University, East Lansing, MI
- 1983 Summer Programmer  
Control Data Corporation, Arden Hills, MN
- 1981 - 1982 Instructor  
Departments of Computer Science and Mathematics  
University of New Hampshire, Durham, NH
- 1978 - 1981 Mathematics Teacher, Dorm Master, Coach  
St. Paul's School, Concord, NH

1976 - 1978     Mathematics Teacher, Coach  
                         Hartford High School, White River Junction, VT

## **TECHNICAL AND PROFESSIONAL SOCIETIES**

Member, The Institute of Electrical and Electronic Engineers (IEEE)

Member, The Association of Computing Machinery (ACM)

Member, Information Systems Security Association (ISSA)

## **PATENTS**

“Micro-Fastening System and Method of Manufacture”. U.S. Patent 7,181,811 (February 27, 2007) with D. Tománek and Young-Kyun Kwon,

“Nanocapsules Containing Charged Particles, Their Uses and Methods of Forming the Same,” U.S. Patent 6,473,351 (October 29, 2002) with D. Tománek, Young-Kyun Kwon, and Mark W. Brehob.

“Secure Bit” U.S. Patent Pending with Kerek Piromsopa, U.S. Patent final application filed November 4, 2005: MSU ID #05-001

“Canary Bit” U.S. Patent Pending with Kerek Piromsopa, U.S. Patent application filed October 9, 2006.

## **BOOKS**

*Targeted Cyber Attacks: Multi-staged Attacks Driven by Exploits and Malware, Chinese translation*, with Aditya Sood, ISBN 978-7-118-11049-4, National Defense Industry Press, 2016

*Targeted Cyber Attacks: Multi-staged Attacks Driven by Exploits and Malware*, with Aditya Sood, ISBN 978-0128006047, Syngress, 2014

*The Practice of Computing using Python, 3rd Ed.*, with William Punch, ISBN 978-0-13-452051-3, Addison-Wesley, 2016.

*The Practice of Computing using Python, 2nd Ed.*, with William Punch, ISBN 978-0-13-280557-5, Addison-Wesley, 2013.

*The Practice of Computing using Python*, with William Punch, ISBN 978-0-13-611067-5, Addison-Wesley, 2011.

*Science and Applications of Nanotubes*, Edited by David Tomanek and Richard Enbody, Fundamental Materials Research Series, Kluwer Academic/Plenum Publishers, 2000.

## **JOURNAL PUBLICATIONS**

Sood, Zeadally, Enbody, “An Empirical Study of HTTP-based Financial Botnets,” *IEEE Trans. Dependable & Secure Computing*, March/April 2016, Vol. 13, no. 2, pp 236-251

Sood, Enbody, “US Military Defense Systems: The Anatomy of Cyber Espionage by Chinese Hackers!,” *Georgetown Journal of International Affairs*, December, 2014

- Sood, Enbody, "Crimeware-as-a-service – A survey of commoditized crimeware in the underground market," *International Journal of Critical Infrastructure Protection*, vol. 6, no. 1, March 2013, pp. 28-38
- Demott, Enbody, Punch, "Systematic Bug Finding and Fault Localization Enhanced with Input Data Tracking," *Computers & Security*, 2013, vol. 32, pp. 130-157
- Sood, Enbody, "The Art of Cyber Bank Robbery," *STSC Crosstalk Journal of Defense Software Engineering*, vol. 26, no. 5, Sept/Oct, 2013, pp. 9-16
- Sood, Greko, Enbody, "Abusing Glype Proxies - Attacks, Exploits and Defenses.," *Network Security*, pp. 8-15, December, 2012
- Sood, Bansal, Enbody, "Dissecting SpyEye - Understanding the design of third generation botnets," *Computer Networks*, vol. 52, no. 3, pp. 436-450, February 2013
- Sood, Enbody, "iPhone Malware Paradigm," *STSC CrossTalk - Journal of Defense Engineering*, Vol. 25, No. 2, Jan/Feb 2012, p. 4 - 8
- Sood, Enbody, "Cross Interface Attacks in Network Devices," *ISACA Journal*, Issue 6, December 2011
- Sood, Enbody, "Frametrapping the Framebusting Defense," *Elsevier NESE - Network Security Journal*, Vol. 2011, Issue 10, October 2011, p. 8-12.
- Sood, Enbody, "State of Declarative Security in Banking Websites," *Elsevier CFS - Computer, Fraud and Security Journal*, Issue 7, July 2011
- Sood, Enbody, "Browser User Interface Design Flaws: Exploiting User Ignorance," *STSC CrossTalk - Journal of Defense Engineering*, Vol. 24, No. 3, May/June 2011, p. 30 - 33.
- Sood, Enbody, "Spying on the browser: dissecting the design of malicious extensions," *Network Security*, Vol. 2011, Issue 5, May 2011, Pages 8-12
- Sood, Enbody, "Malvertising - Mode of Infections," *Elsevier CFS - Computer, Fraud and Security Journal*, Issue 4, April 2011
- Sood, Enbody, "Social Networks - Chain Exploitation," *ISACA Journal - Information Systems Audit and Control Association*, Issue 1, January 2011
- Piromsopa, Enbody, "Survey of Protections from Buffer-Overflow Attacks," *Engineering Journal*, vol 15, no 2, p. 31-52, 2011
- Sood, Enbody, "JavaScript Infection Model," *ISSA Journal - Information Systems Security Association*, Vol. 8, No. 11, November, 2010.
- LaRose, Rifon, Enbody, "Promoting Personal Responsibility for Internet Safety," *Communications of the ACM*, Vol. 51, No. 3, March 2008.
- Piromsopa, Enbody, "Secure Bit : Transparent, Hardware Buffer-Overflow Protection," *IEEE Transactions on Dependable and Secure Computing*, Vol. 3, No. 4, October-December 2006.
- Brehob, Wagner, Torng, Enbody, "Optimal replacement is NP-hard for non-standard caches." *IEEE Transactions on Computers*, vol. 53, no. 1, January 2004, pp. 73 - 76.
- Brehob, M, Enbody, R.J., Torng, E., Wagner, S., "On-line Restricted Cache Scheduling," *Journal of Scheduling*, 6:149-166, 2003.

- Enbody, R.J., Horoi, M. "Using Amdahl's Law as a Metric to Drive Code Parallelization: Two Case Studies," *International Journal of High Performance Computing Applications*, Vol. 15, No 1, Spring 2001, pp. 75 - 80.
- Enbody, R.J., Severance, C.R., and Petersen, P., "Managing the Overall Balance of Operating System Threads on a MultiProcessor using Automatic Self-Allocating Threads (ASAT)," *Journal of Parallel and Distributed Computing - Special Issue on Multithreading for Multiprocessors*, vol. 37, no. 1, August, pp. 106 - 112, 1996.
- Enbody, R.J., Chittor, S., and Jou, Tyan-shu, "A Simulator for Large, Wormhole-Routed Networks," *International Journal of Computer Simulation, Special Issue on the Simulation of Highly Parallel Systems*, vol. 2, no. 2, pp. 151 - 174, 1992.
- Enbody, R.J. and Du, H.C., "SPYDER: a serial/parallel goal-directed router," *INTEGRATION, the VLSI journal*, Vol. 7, 1989, pp. 151 - 187.
- "Dynamic Hashing Schemes," *ACM Computing Surveys*, Vol. 20, No. 2, June 1988, pp. 85 - 113. (Translated into Japanese for a special edition of *bit*, "Computer Science '88," April, 1990, pp. 43 - 68.)

## BOOK CHAPTERS

- Sood & Enbody, "Lifecycle of a botnet," in *Hackers and Hacking: A Reference Handbook*, ABC-CLIO, ISBN 978-1-61069-276-2j, 2013
- "Keeping Families Safe Online" in *New Directions in family reserch at Michigan State University* with Larose, R., and Rifon, N. by Whitten, P.S., Bokemeier, J.L., and Fitzgerald, H.E. (Eds.), 2008
- "Future Trends - IA-64" in *High Performance Computing* by Charles Severance and Kevin Dowd, O'Reilly and Assoc, 1998

## MAGAZINE ARTICLES

- Sood, Enbody, "Targeted Cyber Attacks - A Superset of Advanced Persistent Threats," *IEEE Security & Privacy*, vol. 11, no. 1, January/February 2013, pp. 54-61
- Sood, Bansal, Enbody, "Cybercrime : Dissecting the State of Underground Enterprise," *IEEE Internet Computing*, vol. 17, no. 1, January-February 2013, pp. 60-68.
- Sood, Bansal, Enbody, "Win-locker Ransomware," *Virus Bulletin*, Issue 11, November 2012
- Sood, Bansal, Enbody, "Inside ICE IX - Descendent of Zeus," *Virus Bulletin*, Issue 8, August 2012
- Sood, Enbody, "Circumventing SMS Based Two Factor Authentication (TFA)," *Digital Forensics Magazine*, August 2012
- Sood, Enbody, "Malware Design Strategies (Part 2)," *Virus Bulletin*, Issue 6, June 2012
- Sood, Enbody, "Malware Design Strategies (Part 1)," *Virus Bulletin*, Issue 5, May 2012

- Sood, Enbody, "Zombifying Targets - Malicious Phishing Campaigns," *Virus Bulletin*, Issue 4, April 2012
- Sood, Bansal, Enbody, "Dissecting the NGR Bot Framework," *Virus Bulletin*, Issue 1, January 2012
- Sood, Enbody, "Social Networks - Launchpads for Malware," *Commercial Crime International*, December, 2011
- Sood, Enbody, Bansal, "The Art of Stealing Banking Information - Form Grabbing on Fire," *Virus Bulletin*, Issue 11, November 2011
- Sood, Enbody, "Extending SQL Injection Using Buffer Overflows - Tactical Exploitation," *Hack In The Box Magazine*, Issue 7, September 2011
- Sood, Enbody, "Browser Malware Taxonomy," *Virus Bulletin Magazine*, Issue 6, June 2011
- Sood, Enbody, "Exploiting Web Virtual Hosting," *HackInTheBox (HITB) Magazine*, Issue 1, February 2011
- Sood, A, Enbody, R., and Bansal, R., "SpyEye Malware Infection Framework," *Virus Bulletin Magazine*, Issue 7, July 2011
- Sood, A, Enbody, R., and Bansal, R., "SpyEye Bot - Exploitation Tactics," *Virus Bulletin Magazine*, Issue 8, August 2011
- Enbody, R., Punch, W., "Teaching Python in the University," *Python Magazine*, August, 2009

## CONFERENCE PROCEEDINGS

- Sharma, Enbody "User Authentication And Identification From User Interface Interactions on Touch-Enabled Devices," *WiSec'17 Proceedings of the 2017 ACM Conference on Security and Privacy in Wireless and Mobile Networks*, Runner up for Best Paper, Boston, MA, July, 2017
- Lishinski, Yadav, Enbody "Students' Emotional Reactions to Programming Projects in Introduction to Programming: Measurement Approach and Influence on Learning Outcomes," *ICER '17 Proceedings of the 2017 ACM Conference on International Computing Education Research*, Tacoma, WA, September 2017
- Lishinski, Yadav, Good, Enbody "Learning to program: Gender Differences and Interactive Effects of Motivation, Goals, and Self-Efficacy on Student Performance," *ICER '16 Proceedings of the 2016 ACM Conference on International Computing Education Research*, Best Paper Award, Melbourne, Australia, September 2016
- Lishinski, Yadav, Good, Enbody "The Influence of Problem Solving Abilities on Students' Performance on Different Assessment Tasks in CS1.," *SIGCSE '16 Proceedings of the 47th ACM Technical Symposium on Computing Science Education*, Memphis, Tennessee, March, 2016
- Sood, Enbody, "Spying on SpyEye - What Lies Beneath?," *Hack In The Box Security Conference*, Amsterdam, Europe, May 2011
- Sood, Enbody, "The Conundrum of Declarative Security," *Workshop on Collaborative Methods for Security and Privacy*, Washington DC, USA, August 2010

- Sood, Enbody, "The Good Hacker - Hunting Web Malware," *Proceedings of OWASP - Web Application Security Conference 2011*, Minneapolis, Minnesota, USA
- Sood, Enbody, "Browser Exploit Packs - Exploitation Paradigm," *Proceedings of 21st Annual Virus Bulletin Conference 2011*, Barcelona, Spain, October 2011
- Sood, Enbody, "Cross Interface Attacks: Malware Paradox," *Proceedings of the 13th Symposium of Association of Anti Virus Asia Researchers(AAVAR 2010)*, November 2010
- Sood, Enbody, "The Conundrum of Declarative Security - HTTP Response Headers: Lessons Learned," *Workshop on Collaborative Methods for Security and Privacy(USENIX CollSec 2010)*, August 2010
- DeMott, J., Enbody, R., Punch, W. 2011. "Towards an Automatic Exploit Pipeline." *Proceedings of the The 6th International Conference for Internet Technology and Secured Transactions (ICITST-2011)*. IEEE, Abu Dhabi, UAE
- Demott, J, Enbody, R., Punch, W. "ClusterFuzz: A Novel Distributed Fuzzing System including Fault Localization," *Blackhat 2010*
- Enbody, R., Punch, W., et al., "Measuring the Effect of Intervening Early With at Risk Students in a CS1 Course," *ASEE 2010*
- Enbody, R., Punch, W., "Performance of Python CS1 Students in Mid-level non-Python CS Courses," *SIGCSE 2010*
- Enbody, R., Punch, W., McCullen, M, "Python CS1 as Preparation for C++ CS2," *SIGCSE 2009*, p. 116 - 120
- Enbody, R., Rifon, N., LaRose, R., "Kepping Families Safe Online," *AMA 2008 Marketing & Public Policy Conference*, May, 2008
- Demott, J., Enbody, R., Punch, W., "Revolutionizing the Field of Grey-box Attack Surface Testing with Evolutionary Fuzzing," *Black Hat USA 2007 & DefCon 15*, 2007.
- Enbody, R., Zhang, Y., "A Mathematic Model for Securing Private Data in an Outsourcing Environment", *6th Security Conference*, 2007.
- Enbody, R., Piromsopa, K., "Architecting Security: A Secure Implementation of Hardware Buffer-Overflow Protection", *Third International Conference on Advances in Computer Science and Technology (ACST) 2007*.
- Piromsopa and Enbody, "Arbitrary Copy: Bypassing Buffer-Overflow Protections," *Sixth IEEE International Conference on Electro/Information Technology*, 2006, p. 580-584.
- Piromsopa and Enbody, "Buffer-Overflow Protection: The Theory," *Sixth IEEE International Conference on Electro/Information*, 2006, p. 454-458.
- Piromsopa and Enbody, "Defeating Buffer-Overflow Prevention Hardware," *Fifth Annual Workshop on Duplicating, Deconstructing, and Debunking.*, 2006, p. 58-65.
- DeMott and Enbody, "The Evolving Art of Fuzzing," *DEF CON 14*, 2006.
- Zhang, Enbody, Lloyd, "Proactive, Content-Aware, Sensitive Data Protection Framework for Enterprises," *Communication, Network and Information Security (CNIS 2006)*

- Zhang and Enbody, "Protecting Private Data in an Outsourcing Environment," *Communications, Internet and Information Technology (CIIT 2006)*
- Brehob, M, Enbody, R.J., Torng, E., Wagner, S., "On-line Restricted Cache Scheduling," *Proceedings of the 12th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, p. 374-383, 2001.
- Stockman, G, Enbody, R.J., "Teaching Advanced Students C++ with Computer Vision," *Computer Vision and Pattern Recognition: Combined Research-Curriculum Development in Computer Vision Workshop*, Dec., 2001.
- Horoi, M., Enbody, R., Tomanek, D., "High Performance Implementation of a Carbon Molecular Dynamics Code on a Cluster of Workstations," *American Physics Society*, March, 2000.
- Enbody, R.J., "A Virtual University CS1 Course as a Platform for Web-based Education Experimentation," *American Society for Engineering Education Annual Conference*, June, 1999.
- Hughes, J., Rover, D., and Enbody, R.J., "Towards a More Collegial and Consultative ABET Visit," *Frontiers in Education*, November, 1999.
- Brehob, M, Enbody, R.J., Kwon, Y-K, Tomanek, D., "The Potential of Carbon-based Memory Systems," *1999 IEEE International Workshop on Memory Technology, Design, and Testing*, August 1999, p.110-114.
- Enbody, R.J. and Horoi, M., "Performance Analysis and Optimization of a Parallel Carbon Molecular Dynamic Code on a Cray T3E," *International Conference on Parallel Processing*, August, 1998, p. 62-69.
- Horoi, M., Enbody, R. J., "High Performance Implementation of a Carbon Molecular Dynamic Code on a Cray T3E." *American Physical Society Annual Meeting 1998*.
- Enbody, R.J., "The Computer Architecture Sequence at Michigan State University," *International Symposium on Computer Architecture Workshop on Computer Architecture Education*, June, 1998. (Also reprinted in the "IEEE Computer Society Technical Committee on Computer Architecture Newsletter" p. 10-12, February 1999.)
- Enbody, R.J., Kelly, P., Moore, W.M., "Performance Monitoring in Advanced Computer Architecture," *International Symposium on Computer Architecture Workshop on Computer Architecture Education*, June, 1998.
- Enbody, R.J. "Our Experience Developing CQI Procedures for ABET 2000 Accreditation", *IEEE Frontiers In Education 1998*, p.878 - 883.
- Enbody, R.J. and Severance, C.R., "Comparing Gang Scheduling with Dynamic Space Sharing on Symmetric Multiprocessors Using Automatic Self-Allocating Threads (ASAT)," *International Parallel Processing Symposium*, April, 1997, pp. 288 - 293.
- Enbody, R.J. and Severance, C.R., "Automatic Self-allocating Threads (ASAT) on an SGI Challenge, " *International Conference on Parallel Processing*, August, 1996, vol. III, pp. 132 - 139.
- Enbody, R.J. and Severance, C.R., "A Possible Addition to HPF 3.0 - Real Valued Indexed (RVI) Arrays," *High Performance Computing Symposium 96*, New Orleans, Louisiana, April, 1996, pp. 248-253.

- Severance C, Enbody R, "Automatic Self Allocating Threads on a Convex Exemplar," Proceedings 1996 Convex Users Group, May 1996.
- Enbody, R.J., Severance, C.R., Steve Wallach and Brad Funkhouser, "Automatic Self-allocating Threads (ASAT) On The Convex Exemplar," *24th International Conference on Parallel Processing*, Oconomowoc, Wisconsin, 1995, Vol. 1. pp. 24 - 31.
- Enbody, R.J., Li, T.Y., Xiaozhuo, Y., "A Parallel Algorithm For The Nonsymmetric Eigenvalue Problems," *7th SIAM Conference on Parallel Processing for Scientific Computing*, San Francisco, 1995, pp. 569-570.
- Enbody, R.J., Purdy, R., Severance, C.R., "Dynamic Load Balancing," *7th SIAM Conference on Parallel Processing for Scientific Computing*, San Francisco, 1995, pp. 645-646.
- W.F. Punch, E.D. Goodman, Min Pei, Lai Chia-Shun, P. Hovland and R. Enbody, "Further Research on Feature Selection and Classification Using Genetic Algorithms", *5th International Conference on Genetic Algorithms*, Urbana-Champaign, July 1993, pg 557.
- Goodman, Punch, Pei, Enbody, Lai, Hovland, "Genetic Algorithms: New Implementations and New Applications," *CAD-93*, Yalta, May, 1993.
- Nesbeitt, P., Enbody, R. J., Bulgac, A., Tománek, D., Overney, G., Severance, C., "A Topology- and Problem-Independent Scalable Parallel Approach to Molecular Dynamics Simulation", *Sixth SIAM Conference on Parallel Processing for Scientific Computing*, March, 1993, pp. 170 - 173.
- Severance, C., Enbody, R. J., Bulgac, A., Tománek, D., "Real-Valued Array Indices: A Possible FORTRAN Extension," *Sixth SIAM Conference on Parallel Processing for Scientific Computing*, March, 1993, pp. 979 - 982.
- Enbody, R.J., and Jou, T-S, "A Scalable Snoopy Coherence Scheme on Distributed Shared-Memory Multiprocessors," *IEEE Supercomputing'92*, 1992, pp. 652 - 659.
- Enbody, R.J., and Jou, T-S, "Address-Separated Multibus Architecture," *International Conference On Parallel And Distributed Systems*, 1992, pp. 82 - 89.
- Punch, W. F., and Enbody, R. J., "Teaching the Concept of Computation to Junior High-School Students," *IEEE Frontiers in Education Conference*, 1992, pp. 292 - 297.
- Robinson, D., Cheng, B.H.C., Enbody, R.J., "A Transparent Monitoring Tool for Shared-Memory Multiprocessors," *16th Annual IEEE International Conference on Computer Software and Applications (COMPSAC)*, 1992, pp. 227 - 232.
- Newman, T., Jain, A., Enbody, R.J., "3D Object Recognition: Interpretation Tree Search on a MIMD Machine" *IAPR's 11th International Conference on Pattern Recognition (Architectures for Vision and Pattern Recognition Track)*, 1992, pp. A-337 - A-340.
- Enbody, R.J., and Chittor, S., "Predicting the Effect of Mapping on the Communication Performance of Large Multicomputers," *1991 Int'l Conference on Parallel Processing*, Vol. II, pp. 1 - 4.



- Enbody, R.J., Tan, K., Lynn, G., "Routing the 3D Chip," *28th Design Automation Conference*, June, 1991, pp. 132 - 137.
- Enbody, R.J., and Chittor, S., "Performance Evaluation of Mesh-Connected Wormhole-Routed Networks for Interprocessor Communication in Multicomputers," *IEEE/ACM Supercomputing '90*, November, 1990, pp. 647 - 656.
- Enbody, R.J., and Chittor, S., "Performance Degradation in Large Wormhole-Routed Interprocessor Communication Networks," *1990 Int'l Conference on Parallel Processing*, August, 1990, pp. 424 - 428.
- Enbody, R.J., and Chittor, S., "Will 2D Mesh replace Hypercubes?," *PARBASE-90: International Conference on Databases, Parallel Architectures, and their Applications*, March, 1990, pp. 117 - 119.
- Enbody, R.J., and Chittor, S., "Hypercubes vs. 2D Mesh," *4th SIAM Conference on Parallel Processing for Scientific Computing*, December, 1989, pp. 313 - 318.
- Enbody, R.J., and Chittor, S., "Link Switching: A Communication Architecture for Configurable Parallel Systems," *Proc. 8th Int'l Phoenix Conference on Computers and Communications*, March, 1989, pp. 386 - 390.
- Enbody, R.J., Robinson, D.F., and Sun, X-H., "A Pipelined Parallel Approach for Solving Dense Linear Systems," *4th Conference on Hypercube Concurrent Computers and Applications*, March, 1989.
- Enbody, R.J. and Du, H.C., "General Purpose Router," *Proc. 24th Design Automation Conference*, July 1987, pp. 637 - 640.
- Enbody, R.J. and Du, H.C., "Near Optimal  $n$ -layer Channel Routing," *Proc. 23th Design Automation Conference*, July 1986, pp. 708 - 714.

## POSTER SESSIONS

- Severance, C.R., Enbody, R.J., "Software-Based, Automatic, Self-Adjusting Threads (ASAT) for Parallel Supercomputers," *Supercomputing '94*, Washington D.C., November, 1994.
- Severance, C.R., Enbody, R.J., Purdy, R., "Evolving Dynamic Load Balancing to Shared Memory Parallel Processors," *Supercomputing '94*, Washington D.C., November, 1994.
- Enbody, R.J., and Chittor, S., "Iterative Matrix-Vector Products on the Connection Machine for Neural Network Simulation," *4th SIAM Conference on Parallel Processing for Scientific Computing*, December, 1989.

## Ph.D. STUDENTS GRADUATED

- Chittor, Suresh, 1991: Microarchitect, Microprocessor Group MD6-SET, Intel Corporation, Beaverton, Oregon
- Jou, Tyan-Shu, 1993: Director, Accton Technology Corp., Taiwan
- Severance, Charles, 1996: Clinical Associate Professor, School of Information, University of Michigan, Ann Arbor, Michigan
- Brehob, Mark, 2003: Department of Computer Science, University of Michigan, Ann Arbor, Michigan
- Piromsopa, Kerk, 2006: Department of Computer Engineering, Chulalongkorn University, Bangkok, Thailand

Demott, Jared, 2012: Principal Security Researcher, Bromium  
Cupertino, CA

Sood, Aditya, 2013: Chief Security Architect, Symantic, Mountain View, CA