

# Gary E. McGraw, Jr.

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## EMPLOYMENT HISTORY

**Fall 1995–present** Cigital, Inc., Dulles, VA

Summer 2001–present *Chief Technology Officer*

Summer 1998–Summer 2001 *Vice President, Corporate Technology*

Fall 1995–1998 *Research Scientist / Senior Research Scientist*

**Summer 1996–Winter 1999** *Krasnow Institute Associate*

Krasnow Institute for Advanced Study

George Mason University, Fairfax, VA

**Summer 1990–Fall 1995** *Researcher*

Center for Research on Concepts and Cognition

Indiana University, Bloomington, IN

**Fall 1993–Fall 1994** *Researcher*

Istituto per la Ricerca Scientifica e Tecnologica

Trento, Italia

**Fall term 1994 and Spring term 1993** *Visiting Assistant Professor of Computing Science*

Earlham College, Richmond, IN

Course: Programming Languages

**Fall 1988–Spring 1990** *Associate Instructor*

Computer Science Department

Indiana University, Bloomington, IN

Taught courses in Scheme, Pascal, and Assembly Language

**1985–1989** *President*

M<sup>2</sup> Computing, Inc.

Kingsport, TN

## EDUCATION

**1995** Ph.D., Computer Science and Cognitive Science

Indiana University, Bloomington, IN

Dissertation: Letter Spirit: Emergent High-Level Perception of Letters Using Fluid Concepts

Advisor: Douglas R. Hofstadter

**1990** M.S., Computer Science

Indiana University, Bloomington, IN

**1988** B.A., Philosophy (Minors: Mathematics, Scientific Computing)

University of Virginia, Charlottesville, VA

## BOARD MEMBERSHIPS

### CURRENT

**Cigital, Inc.**, Dulles, VA. Director, *Board of Directors*, 2004—.

**Barns of Rose Hill**, Berryville, VA. Director, *Board of Directors*, 2010—.

**Invincea**, Fairfax, VA. *Advisory Board*, 2010—.

**Raven White**, Palo Alto, CA. *Advisory Board*, 2006—.

**School of Informatics Dean's Advisory Council**, Indiana University, Bloomington, IN, 2005—.

### PAST

**NetCertainty**, Atlanta, GA. *Board of Directors* and *Technical Advisory Board*, 1999–2001.

**Infosec Research Council**, *Chair, Malicious Code Infosec Science and Technology Study Group*, Washington, D.C., 1999–2000.

**Finjan Software**, San Jose, CA. *Technical Advisory Board*, 1998–2002.

**Tovaris**, Charlottesville, VA. *Technical Advisory Board*, 2000–2002.

**Cenzic**, San Jose, CA. *Technical Advisory Board*, 2000–2003.

**Indigo Security**, Ann Arbor, MI. *Technical Advisory Board*, 2002–2004. (Acquired Tablus.)

**Authentica**, Waltham, MA. *Technical Advisory Board*, 2004–2006. (Acquired EMC.)

**Counterpane Internet Security, Inc.**, San Jose, CA. *Counterpane Advisory Board*, 2000–2006. (Acquired British Telecomm.)

**IEEE Computer Society**, Washington, D.C. *Board of Governors*, 2006–2008.

**Department of Computer Science Industrial Affiliates Board of Advisors**, University of California Davis, Davis, CA, 2000–2010.

**Fortify Software**, Menlo Park, CA. *Technical Advisory Board*, Chairman, 2004–2010. (Acquired HP.)

## GRANTS

**Co-Principal Investigator** AFRL Wright-Patterson Grant Number: F33615-02-C-1295, entitled *Protection Against Reverse Engineering: State of the Art in Disassembly and Decompilation*

**Co-Principal Investigator** Defense Advanced Research Projects Agency (DARPA) Grant number F30602-99-C-0172, entitled *An Investigation of Extensible System Security for Highly Resource-Constrained Wireless Devices*

**Co-Principal Investigator** Defense Advanced Research Projects Agency (DARPA) Grant number F30602-00-C-0079, entitled *Aspect Oriented Security Assurance Solution*

**Co-Principal Investigator** NIST Advanced Technology Program cooperative agreement number 1997-06-0005, entitled *Certifying Security in Electronic Commerce Components*

**Co-Principal Investigator** Rome Laboratory Grant number F30602-97-C-0117, entitled *Dynamic Security Analysis of COTS Applications*

**Principal Investigator** National Science Foundation Grant number DMI-9661393, entitled *SBIR Phase I: Genetic Algorithms for Software Test Data Generation*

**Principal Investigator** Defense Advanced Research Projects Agency (DARPA) Grant number DAAH01-97-C-0095, entitled *A Tool for Detecting the Existence of Unknown Corruptions in Real-Time*

## **PUBLICATIONS**

### **Journal Publications**

1. Gary McGraw. (2011) Technology Transfer: A Software Security Marketplace Case Study, *IEEE Software*, Volume 28, Number 5, pages 9-11. September/October 2011.
2. Ann K. Sobel & Gary McGraw. (2010) Interview: Software Security in the Real World, *Computer*, Volume 43, Number 9, pages 47-53, September 2010.
3. Gary McGraw & Ming Chow. (2009) Securing Online Games: Safeguarding the Future of Software Security, *IEEE Security & Privacy*, Volume 7, Number 3, pages 11-12, May/June 2009.
4. Gary McGraw. (2008) How Things Work: Automated Code Review Tools for Security, *IEEE Computer*, Volume 41, Number 12, pages 92-95. December 2008.
5. Gary McGraw & Greg Hoglund. (2007) Online Games and Security, *IEEE Security & Privacy*, Volume 5, Number 5, pages 76-79, September/October 2007.
6. Gary McGraw, editor. (2004-2005) Building Security In, a Department of *IEEE Security & Privacy*, Volume 2, Numbers 2-6. Department articles:
  - a. Software Security (Gary McGraw) 2(2):80-83.
  - b. Misuse and Abuse Cases: Getting Past the Positive (Paco Hope, Annie Anton & Gary McGraw) 2(3):32-34.
  - c. Risk Analysis in Software Design (Denis Verdon & Gary McGraw) 2(4):79-84.
  - d. Software Security Testing (Bruce Potter & Gary McGraw) 2(5):81-85.
  - e. Static Analysis for Security (Brian Chess & Gary McGraw) 2(6):76-79.Volume 3, Numbers 1-6. Department articles:
  - a. Software Penetration Testing (Brad Arkin, Scott Stender & Gary McGraw) 3(1):84-87.
  - b. Knowledge for Software Security (Sean Barnum & Gary McGraw) 3(2):74-78.
  - c. Adopting a Software Security Improvement Program (Dan Taylor & Gary McGraw) 3(3):88-91.
  - d. A Portal for Software Security (Nancy R Mead & Gary McGraw) 3(4):75-79.
  - e. Bridging the Gap between Software Development and Information Security (Kenneth R. van Wyk & Gary McGraw) 3(5):75-79.
  - f. Seven Pernicious Kingdoms (Brian Chess, Yekaterina Tsipenyuk & Gary McGraw) 3(6):75-79.Volume 4, Numbers 1-6. Department articles:
  - g. Software Security and SOA, Danger Will Robinson (Jeremy Epstein, Scott Masumoto, & Gary McGraw) 4(1).
7. Ivan Arce & Gary McGraw, editors. (2004) Attacking Systems, a special issue of *IEEE Security & Privacy*, Volume 2, Number 4, July/August 2004.
8. Ivan Arce & Gary McGraw. (2004) Why Attacking Systems Is a Good Idea, *IEEE Security & Privacy*, Volume 2, Number 4, pages 17-19, July/August 2004.

9. Noopur Davis, Samuel Redwine, Gerlinde Zibulski, & Gary McGraw. (2004) Processes for Producing Secure Software: Summary of the US National Cybersecurity Summit Subgroup Report, *IEEE Security & Privacy*, Volume 2, Number 3, pages 18-25, May/June 2004.
10. Greg Hoglund & Gary McGraw. (2004) Attack Patterns. *CSI: Computer Security Journal*, Volume XX, Number 2, pages 15-32.
11. Bill Cheswick, Paul Kocher, Gary McGraw, & Avi Rubin. (2003) Bacon Ice Cream: The Best Mix of Proactive and Reactive Security. *IEEE Security & Privacy*, Volume 2, Number 4, pages 53-77.
12. Gary McGraw. (2003) From the Ground Up: The DIMACS Software Security Workshop. *IEEE Security & Privacy*, Volume 1, Number 2, pages 59-66.
13. Nancy Mead & Gary McGraw, editors. (2003) On the Horizon, Department of *IEEE Security & Privacy*, Volumes 1-2, Numbers 1-5 and Number 2. Six Department articles:
  - a. Two Views on Software Liability (Daniel Ryan and Carey Heckman) 1(1)
  - b. From the Ground Up: The DIMACS Software Security Workshop (Gary McGraw) 1(2):
  - c. Understanding Trusted Computing: Will Its Benefits Outweigh Its Drawbacks (Ed Felten)
  - d. Wireless Security's Future (Bruce Potter) 1(3)
  - e. SEHAS 2003: The Future of High Assurance Systems (Nancy Mead) 1(4)
  - f. A Call to Action: Look Beyond the Horizon (Jeannette Wing) 1(5)
  - g. Regulation and Information Security: Can Y2K Lessons Help Us? (Jeff Payne) 2(2): 58-61.
14. John Viega, J.T. Bloch, Tadyoshi Kohno, & Gary McGraw. (2002) Token-based scanning of source code for security problems. *ACM Transactions on Information Systems Security*, Volume 5, Number 3, pages 238-261.
15. Gary McGraw. (2002) Building Secure Software: Better than Protecting Bad Software. *IEEE Software*, Volume 19, Number 6, pages 57-59. (Point/Counterpoint with Greg Hoglund.)
16. Gary McGraw. (2002) Why Building Secure Software is Hard. *Computers and Security*, Volume 21, Number 3, pages 229-239.
17. Gary McGraw. (2002) On Bricks and Walls: Why Building Secure Software is Hard. *Cutter IT Journal*, Volume 15, Number 5, Pages 5-14, May 2002.
18. Gary McGraw. (2002) Managing Software Security Risks. *IEEE Computer*, Volume 35, Number 4, pages 99-101, April 2002.
19. Gary McGraw. (2002) Penetrate and Patch is Bad. *IEEE Software*, Volume 19, Number 1, page 15, January/February 2002.
20. CC Michael & Gary McGraw. (2001) Generating Software Test Data by Evolution. *IEEE Transactions on Software Engineering*, Volume 27, Number 12, pages 1085-1110, December 2001.
21. Gary McGraw & Greg Morrisett. (2000) Attacking Malicious Code: A Report to the Infosec Research Council. *IEEE Software*, Volume 17, Number 5, pages 33-41, September/October 2000.
22. John Viega, Gary McGraw, Tom Mutdosch, & Ed Felten. (2000) Statically Scanning Java Code: Finding Security Vulnerabilities. *IEEE Software*, Volume 17, Number 5, pages 68-74, September/October 2000.
23. Gary McGraw. (1999) Software Assurance for Security. *IEEE Computer*, Volume 32, Number 4, April 1999.

24. Gary McGraw & Ed Felten, editors. (1998) Mobile Code Security, *IEEE Internet Computing*, Volume 2, Number 6, November/December 1998.
25. Gary McGraw. (1998) Testing for Security During Development: Why we should scrap penetrate-and-patch. *IEEE Aerospace and Electronic Systems*, Volume 13, Number 4, pages 13-15, April 1998.
26. Jeff Voas, Frank Charron, Gary McGraw, Keith Miller, & Michael Friedman. (1997) Predicting How Badly “Good” Software can Behave. *IEEE Software*, Volume 14, Number 4, pages 73-83, July 1997.
27. Jeff Voas, Gary McGraw, Lora Kassab, & Larry Voas. (1997) Fault-injection: A Crystal Ball for Software Quality, *IEEE Computer*, Volume 30, Number 6, pages 29-36. June 1997.
28. Gary McGraw & Douglas R. Hofstadter. (1993) Perception and Creation of Diverse Alphabetic Styles. In *Artificial Intelligence and Simulation of Behaviour Quarterly*, Issue Number 85, pages 42-49. Autumn 1993. University of Sussex, UK.
29. Sushil Louis, Gary McGraw, & Richard Wyckoff. (1993) Case-based Reasoning Assisted Explanation of Genetic Algorithm Results. *Journal of Experimental and Theoretical Artificial Intelligence*, Volume 5, Number 1, pages 21-38. January-March 1993. Taylor and Francis, Washington.

### Books and Chapters

30. Julia Allen, Sean Barnum, Robert Ellison, Gary McGraw & Nancy Mead. (2008) *Software Security Engineering: A Guide for Project Managers*, Addison-Wesley, New York.
31. Greg Hoglund & Gary McGraw. (2007) *Exploiting Online Games: Cheating Massively Distributed Systems*, Addison-Wesley, New York.
32. Gary McGraw. (2006) *Software Security: Building Security In*, Addison-Wesley, New York.
33. Greg Hoglund & Gary McGraw. (2004) *Exploiting Software: How to Break Code*, Addison-Wesley, New York.
34. Gary McGraw. (2002) Foreword, in *Wireless Security and Privacy: Best Practices and Design Techniques*, T. Swaminatha and C. Elden. Addison-Wesley, New York.
35. Gary McGraw & Douglas Hofstadter. (2002) Perception and Creation of Diverse Alphabetic Styles, Chapter 8 in *Creativity, Cognition, and Knowledge: An Interaction*, T. Dartnall (ed.). Praeger, Westport, CT.
36. John Viega & Gary McGraw. (2001) *Building Secure Software: How to Avoid Security Problems the Right Way*, Addison-Wesley Professional Computing Series, Addison-Wesley, New York.
37. Gary McGraw & Edward Felten. (1998) *Securing Java: Getting down to business with mobile code*, John Wiley & Sons, New York.
38. Jeff Voas & Gary McGraw. (1997) *Software Fault Injection: Inoculating Software Against Errors*, John Wiley & Sons, New York.
39. Gary McGraw & Edward Felten. (1996) *Java Security: Hostile Applets, Holes, and Antidotes*, John Wiley & Sons, New York.
40. Gary McGraw & Edward Felten. (1996) *Java Security*, A management briefing for SIGS Publications. New York.

41. Douglas Hofstadter & Gary McGraw. (1995) Letter Spirit: Esthetic Perception and Creative Play in the Rich Microcosm of the Alphabet, chapter 9 of *Fluid Concepts and Creative Analogies: Computer Models of the Fundamental Mechanisms of Thought*. Basic Books, New York.

#### Refereed Conference Publications

42. Paul Kocher, Ruby Lee, Gary McGraw, Anand Raghunathan & Srivaths Ravi. (2004) Security as a New Dimension in Embedded System Design. In the *Proceedings of DAC 2004*, June 7-11, 2004, San Diego, CA.
43. Gary McGraw. (2000) Will Openish Source Really Improve Security. In the *Proceedings of the 2000 IEEE Symposium on Security and Privacy*, May 2000, Oakland, CA.
44. John Viega, J.T. Bloch, Tadayoshi Kohno & Gary McGraw. (2000) ITS4: A Static Vulnerability Scanner for C and C++ Code. In the *Proceedings of ACSAC 2000*, December, 2000. Best Paper Award.
45. Gary McGraw, John Viega, J.T. Bloch, & Yoshi Kohno. (2000) ITS4: A Static Vulnerability Scanner for C and C++ Code. In the *Proceedings of International Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet (SGGR 2000)*. July 2000, L'Aquila, Italy.
46. Gary McGraw & John Viega. (1999) Why COTS Software Increases Security Risks. In *Proceedings of the ICSE Workshop on Testing Distributed Component-Based Systems*. May 1999.
47. Gary McGraw & Kevin Sullivan. (1998) Massive Games of Artificial Life on the Internet: A Testbed for Research on Survivability Architectures. In the *Proceedings of the Information Survivability Workshop 1998*, pages 139-154. October 28-30, Orlando, FL.
48. Christoph Michael & Gary McGraw. (1998) Automated Software Test Data Generation for Complex Programs. In *Proceedings of the 13<sup>th</sup> IEEE Automated Software Engineering Conference*, pages 136-146. October 13-16, Honolulu, Hawaii.
49. Anup Ghosh & Gary McGraw. (1998) An Approach for Certifying Security in Software Components. In *Proceedings of the 21st National Information Systems Security Conference*, pages 42-48. October 5-8, 1998, Crystal City, VA.
50. Anup Ghosh, Tom O'Connor, & Gary McGraw. (1998) An Automated Approach for Identifying Potential Vulnerabilities in Software. In the *Proceedings of the IEEE Symposium on Security and Privacy*, pages 104-114, Oakland, CA, May 3-6 1998.
51. Christoph Michael, Gary McGraw, Michael Schatz, & Curtis C. Walton. (1997) Genetic Algorithms for Dynamic Test Data Generation. In *Proceedings of the Twelfth IEEE International Automated Software Engineering Conference (ASE 97)*, pages 307-308. November 3-5, 1997. Tahoe, NV.
52. Gary McGraw. (1997) Java Security: Hostile Applets. In *Proceedings of Java Expo Europe*, pages 149-158. June 30-July 4, 1997. London.
53. Gary McGraw. (1997) Testing for Security During Development: Why we should scrap penetrate-and-patch. In *Proceedings of the 12<sup>th</sup> Annual Conference on Computer Assurance*, pages 117-119. June 16-19, 1997. Gaithersburg, MD.
54. Jeff Voas, Gary McGraw, & Anup Ghosh. (1997) Reducing Uncertainty About Survivability. In *Proceedings of the Information Survivability Workshop*, February 12-13, 1997. San Diego.
55. Jeff Voas, Anup Ghosh, Gary McGraw, & Keith Miller. (1996) Gluing Together Software Components: How Good is Your Glue? In *Proceedings of Pacific Northwest Software Quality Conference*, pages 338-349, Portland, OR, October, 1996.

56. Gary McGraw & Douglas R. Hofstadter. (1996) Emergent Letter Perception: Implementing the Role Hypothesis. In the *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society*, pages 621-626, July 1996.
57. Gary McGraw & Christoph Michael. (1996) Automatic Generation of Test-Cases for Software Testing. In the *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society*, page 811, July 1996.
58. Gary McGraw & Anup Ghosh. (1996) Developing Expertise in Software Security: An Outsider's Perspective. In the working notes of the *Invitational Workshop on Computer Vulnerability Data Sharing*. National Institute of Standards and Technology, Gaithersburg, MD, June 1996.
59. Jeff Voas, Gary McGraw, Anup Ghosh, Frank Charron & Kieth Miller. (1996) Defining an adaptive software security metric from a dynamic software failure tolerance measure. In the *Proceedings of the Ninth Annual Conference on Computer Assurance (COMPASS'96)*, pages 250-263, June 1996.
60. Gary McGraw & Dave Hovemeyer. (1996) Untangling the Woven Web. In *Proceedings of the Thirteenth International Conference and Exposition on Testing Computer Software*, pages 111-119. June 1996.
61. Aaron S. Binns & Gary McGraw. (1996) Building a Java Software Engineering Tool. In *Proceedings of the 1996 IntraNet NY Conference*, April 1996.
62. Gary McGraw. (1995) Emergent Perception of Gridletters. In *Proceedings of the 1995 Midwest AI and Cognitive Science Conference*, pages 63-67, April 1995.
63. Gary McGraw, John Rehling & Robert Goldstone. (1994) Letter Perception: Toward a conceptual approach. In the *Proceedings of the Sixteenth Annual Conference of the Cognitive Science Society*, pages 613-618, Atlanta, GA, August 1994.
64. Gary McGraw & Douglas R. Hofstadter. (1993) Letter Spirit: An Architecture for Creativity in a Microdomain. In *Advances in Artificial Intelligence: Third Congress of the Italian Association for Artificial Intelligence (AI\*IA 93)*, P. Torasso (ed.), pages 65-70, Torino, October 26-8, 1993.
65. Gary McGraw & Douglas R. Hofstadter. (1993) Perception and Creation of Alphabetic Style. In *Artificial Intelligence and Creativity: Papers from the 1993 Spring Symposium*, AAAI Technical Report SS-93-01, AAAI Press.
66. Lisa Meeden, Gary McGraw & Doug Blank. (1993) Emergent Control and Planning in an Autonomous Vehicle. In *Proceedings of the Fifteenth Annual Conference of the Cognitive Science Society*, pages 735-740, June 1993.
67. Gary McGraw & Daniel Drasin. (1993) Recognition of Gridletters: Probing the Behavior of Three Competing Models. In *Proceedings of the Fifth Midwest AI and Cognitive Science Conference*, pages 63-67, April 1993.
68. Sushil Louis, Gary McGraw, & Richard Wyckoff. (1992) Automating Explanation of Genetic Algorithm Results (two paradigms collide). In *Proceedings of the Florida Artificial Intelligence Research Symposium 1992 (FLAIRS-92)*, pages 201-205, April 1992.
69. Gary McGraw. (1991) Chatterbox: Fluid Retrieval in a Case-Based System. In *Proceedings of the Third Midwest AI and Cognitive Science Conference*, pages 72-78, May 1991.

## **Dissertation**

70. Gary McGraw. (1995) Letter Spirit (part one): Emergent High-Level Perception of Letters Using Fluid Concepts. Available at <<http://www.cogsci.indiana.edu/farg/mcgraw/thesis.html>>.

#### Technical Reports and Submitted Articles

71. Gary McGraw and Nathaniel Fick. (2011) Separating the Threat from the Hype: What Washington Needs to Know About Cyber Security in AMERICA'S CYBER FUTURE: SECURITY AND PROSPERITY IN THE INFORMATION AGE VOLUMES I AND II, Center for a New American Security. June 2011.
72. Noopur Davis, Samuel Redwine, Gerlinde Zibuski, Gary McGraw, and Watts Humphrey. (2004) Summary of National Cyber Security Summit Subgroup Report: Processes for Producing Secure Software. April 2004.
73. National Cyber Security Task Force (Gary McGraw, contributor). (2004) Improving Security Across the Software Development Lifecycle. April 1, 2004.
74. Gary McGraw, Anup Ghosh, Frank Charron, and Michael Shatz. (1997) Towards Analyzing Security-Critical Software During Development, Technical Report, Reliable Software Technologies Corp, Sterling, VA 20166. August 1997.
75. Gary McGraw, John Rehling & Robert Goldstone. (1994) Roles in Letter Perception: Human data and computer models, Technical Report 90, Center for Research on Concepts and Cognition, 510 North Fess, Bloomington, IN 47405, July 1994.
76. Douglas Hofstadter & Gary McGraw. (1993) Letter Spirit: An Emergent Model of the Perception and Creation of Alphabetic Style. Technical Report 68, Center for Research on Concepts and Cognition, 510 North Fess, Bloomington, IN 47405, January 1993.
77. Gary McGraw. (1992) Letter Spirit: Recognition and Creation of Letterforms Based on Fluid Concepts. Technical Report 61, Center for Research on Concepts and Cognition, 510 North Fess, Bloomington, IN 47405, June 1992.
78. Gary McGraw, Robert Montante, and David Chalmers. (1990) Rapmaster Network: Exploring Temporal Pattern Processing with Recurrent Networks. Technical Report 336, Computer Science Department, Lindley Hall, Indiana University, Bloomington, IN 47405, April 1990.

#### Multimedia, Television and Radio (see links at <http://www.cigital.com/gem/press/>)

79. Gary McGraw (2006– ) The Silver Bullet Security Podcast with Gary McGraw. April 2006—. Syndicated by informIT. Some episodes published as the *Interview* Department of *IEEE Security & Privacy*.
- a. Avi Rubin, Johns Hopkins University, April 2006
  - b. Dan Geer, Chief Scientist, Verdasys, May 2006
  - c. Marcus Ranum, security guru, June 2006
  - d. Dana Epp, CEO, Scorpion Software, July 2006
  - e. Ed Felten, Princeton, August 2006
  - f. Michael Howard, Senior Security Program Manager, Microsoft, September 2006
  - g. John Stewart, CSO, Cisco, October 2006
  - h. Brian Chess, Chief Scientist, Fortify Software, November 2006
  - i. Bruce Schneier, CTO, Counterpane/British Telecom, December 2006
  - j. Fortify Software Technical Advisory Board, January 2007
  - k. Dorothy Denning, Naval Postgraduate School, February 2007
  - l. Becky Bace, Trident Capital, March 2007
  - m. Ross Anderson, Cambridge University, April 2007
  - n. Peter Neumann, SRI, May 2007
  - o. Annie Antón, North Carolina State University, June 2007
  - p. Greg Hoglund, CEO, hbgary, July 2007

- q. Eric Cole, CEO, Secure Anchor, August 2007
- r. Eugene Spafford, Purdue University, September 2007
- s. Mikko Hyppönen, Chief Research Officer, F-Secure, October 2007
- t. Markus Jakobsson, PARC, November 2007
- u. Cigital's Principal Consultants, December 2007
- v. Ed Amoroso, CSO, AT&T, January 2008
- w. Chris Wysopal, CTO, Veracode, February 2008
- x. Mary Ann Davidson, CSO, Oracle, March 2008
- y. Jon Swartz, reporter, USA Today, April 2008
- z. Adam Shostack, security expert, Microsoft, May 2008
- aa. Gunnar Peterson, Managing Principal, Arctec Group, June 2008
- bb. Bill Cheswick, AT&T Research, July 2008
- cc. Dennis Fisher, reporter, Techtarget, August 2008
- dd. Ken van Wyk, Principal, KRvW Associates, September 2008
- ee. Matt Bishop, UC Davis, October 2008
- ff. Jeremiah Grossman, WhiteHat, November 2008
- gg. Laurie Williams, NCSU, December 2008
- hh. Bill Brenner, CSO Online, January 2009
- ii. Daniel Suarez, author, February 2009
- jj. Gary McGraw, Cigital, March 2009 (by James McGovern, the Hartford)
- kk. Virgil Gligor, CMU, April 2009
- ll. Kay Connelly, Indiana University, May 2009
- mm. Matt Blaze, University of Pennsylvania, June 2009
- nn. Bob Blakley, Burton Group, July 2009
- oo. Fred Schneider, Cornell, August 2009
- pp. Gillian Hayes, UC Irvine, September 2009
- qq. Christofer Hoff, Cisco, October 2009
- rr. Steve Kent, BBN Technologies, November 2009
- ss. Lorrie Cranor, CMU, December 2009
- tt. David Rice, Monterey Group, January 2010
- uu. Greg Morrisett, Harvard, February 2010
- vv. Andrew Jaquith, Forrester, March 2010
- ww. Ivan Arce, Core Security, April 2010
- xx. Richard A. Clarke, Good Harbor, May 2010 (HD video)
- yy. Anup Ghosh, Invincea, June 2010
- zz. Paul Kocher, Cryptography Research, July 2010
- aaa. Richard Bejtlich, GE, August 2010
- bbb. Marc Donner, Google, September 2010
- ccc. Deborah Frincke, Pacific Northwest National Labs, October 2010
- ddd. Sammy Migués, Cigital, November 2010
- eee. Elinor Mills, CBS/C!Net, December 2010
- fff. John Savage, Brown University, January 2010
- ggg. Ralph Langner, Langner Communications, February 2010
- hhh. Neil Daswani, Dasient, March 2010
- iii. Carl Landwehr, National Science Foundation, April 2010
- jjj. Halvar Flake, Google, May 2010
- kkk. Craig Miller, MAPA Group, June 2010
- lll. Markus Schumacher, Virtual Forge, July 2010
- mmm. Giovanni Vigna, University of California Santa Barbara, August 2010
- nnn. Shari Lawrence Pfleeger, Dartmouth College, September 2010
- ooo. Bill Pugh, University of Maryland, October 2010
- ppp. John Steven, Cigital, November 2010

80. Gary McGraw (2011) *Gary McGraw on the BSIMM3 Data Release*, Threatpost. September 28, 2011.

81. Gary McGraw (2011) *IEEE Security & Privacy Cyberwar Panel at RSA Conference 2011*, Computing Now. February 16, 2011.
82. Gary McGraw (2011) *Advanced Persistent Threat: Industrial Strength Hacking, Expert Voices Speaker Series*, Booz Allen Hamilton. February 8, 2011.
83. Gary McGraw (2010) *Gary McGraw on Cyber War, Cyber FUD and Rhetoric*, Threatpost. November 30, 2010.
84. Gary McGraw (2010) *How to Develop More Secure Software - Practices from Thirty Organizations*, CERT podcast. September 28, 2010.
85. Gary McGraw (2010) *Gary McGraw on software security research*, SearchSecurity.com - Security Wire Weekly. May 17, 2010.
86. Gary McGraw (2010) *Secure coders, take note: BSIMM2 released*, CSO Online. May 12, 2010.
87. Gary McGraw (2010) *Gary McGraw on BSIMM2, Software Security and Cargo Cult Science*, Threatpost. May 12, 2010.
88. Gary McGraw (2010) *Special Webcast: The Impact of BSI-MM in Software Development Programs*, GEEKONOMICS. January 21, 2010.
89. Gary McGraw (2010) *The Building Security In Maturity Model*, CERIAS Security Seminar Podcast. January 20, 2010.
90. Gary McGraw (2010) *Software Security – An interview with Dr. Gary McGraw*, Imperva Security Podcasts. January 4, 2010.
91. Gary McGraw (2009–2010) *The Reality Check Security Podcast with Gary McGraw*. January 2009—. Syndicated by CSO Magazine.
  - a. Steve Lipner, Microsoft, January 2009
  - b. Jim Routh, the Depository Trust and Clearing Corporation (DTCC), February 2009
  - c. Eric Baize, EMC, March 2009
  - d. Brad Arkin, Adobe, April 2009
  - e. David Hahn, Wells Fargo, May 2009
  - f. Andy Steingruebl, Paypal, June 2009
  - g. Jerry Archer, Intuit, July 2009
  - h. Kris Inglis, vmware, September 2009
  - i. James McGovern and Bob Briggs, the Hartford, October 2009
  - j. Antti Vähä-Sipilä and Janne Uusilehto, Nokia, November 2009
  - k. Tom Lawton, Thomson Reuters, December 2009
  - l. Cassio Goldschmidt, Symantec, January 2010
92. Gary McGraw (2009) *Gary McGraw on Software Security, the BSIMM Model and Critical Thinking*, Digital Underground podcast. November 6, 2009.
93. Brian Chess & Gary McGraw (2009) *AND-401: Building Security In Maturity Model (BSIMM)*, RSA Conference 365. April 19, 2009.
94. Gary McGraw (2009) *FEA-105: Surveillance: Security, Privacy and Risk & HT2-303: Exploiting Online Games*. RSA Conference 365. April 17, 2009.
95. Gary McGraw (2009) *An Experience-Based Maturity Model for Software Security*, CERT Podcast. March 31, 2009.

96. Gary McGraw (2009) *How to Write Apps without Security Sinkholes*, CSO Online's Security Insights podcast. March 17, 2009.
97. Gary McGraw (2009) *Why top ten lists don't work.*, SearchSecurity.com, Newsmaker Podcast. February 16, 2009.
98. Gary McGraw (2009) *Are vulnerability lists helpful?*, SearchSecurity.com, Security Squad podcast. January 19, 2009.
99. Gary McGraw (2009) *OWASP Podcast Series #5*, January 15, 2009.
100. Gary McGraw (2008) *How to Start a Secure Software Development Program*, CERT Podcast series, August 20, 2008.
101. Gary McGraw (2008) *The State of Software Security*, Security Wire Weekly Podcast, SearchSecurity.com, July 31, 2008.
102. Gary McGraw (2008) *Network Security Podcast*, Episode 107, June 10, 2008.
103. Gary McGraw (2008) *The New Face of Cybercrime*, Documentary movie appearance, January 2008.
104. Gary McGraw (2007) *Exploiting Online Games*, Hugh Thompson Show on AT&T Tech Network, October 31, 2007.
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- 2003:** [7 hits] CIO Magazine (11/1), New Jersey Star-Ledger (8/15), **Wall Street Journal** (8/15), CSO Magazine (8), SC Magazine (4), SD Magazine (3/26), SD Times (3/1)
- 2002:** [42 hits] **Businessweek** (12/17), Seattle Post-Intelligencer (9/2), Atlanta Journal-Constitution (8/31), San Diego Tribune (5/20), **Reuters/CNN/Philadelphia Enquirer/San Jose Mercury News** (4/28), **New York Times** (4/14, front page), Seattle Times (4/14), Washington Business Journal (3/22), Information Security Magazine (3), *Microsoft Flaw Coverage* (2/14):**Wall Street Journal** (broke story), cnet, **Reuters/New York Times**, zdnet, Internet News, ComputerWorld, **AP, USA Today**, E4 Engineering, Seattle Times, Reuters/Wired, Information Week, NewsFactor Network, ENT News, **MSNBC**, PC World/IDG, Reuters/Excite, eWeek, **International Herald Tribune** (see < <http://www.cigital.com/news/news-arch-mscompiler.html>>); **LA Times** (2/11), via Satellite (2/2), San Diego Union Tribune (1/28), **Reuters/CNN** (1/17), **Wall Street Journal** (1/17), eBusiness Journal (1/7), Internet World (1/3)
- 2001:** [14 hits] **Businessweek online** (12/11), MIT Technology Review (12), News.com (11/28), ZDNet (11/28), C!Net (11/26), **CNN** (10/26), **Wall Street Journal** (10/15), San Jose Mercury News (9/19), Interactive Week (6/25), SD Times (5/1), Interactive Week (4/2), SD Times (4/1), Interactive Week (3/30), Christian Science Monitor (2/15),
- 2000:** [13 hits] Interactive Week (11/15), Network World (10/11), ZDNet (9/28), C!Net (8/17), Pacific Connection (8), Federal Computer Week (6/16), Infoworld (5/16), NY Daily News (5/14), C!Net (5/11), C!Net (5/5), Interactive Week (3/13), C!Net (2/12), C!Net (2/9),
- 1999:** [37 hits] **New York Times** (12/22), Interactive Week (12/20), Network World Fusion (12/17), **Washington Post** (12/16), InfoWorld (12/16), PC Week (12/16), **CNN** (12/16), ZDNet (12/16), C!Net (12/15), Internet News (12/15), Computer World (12/15), **Wall Street Journal** (MSNBC, ZDNet, 12/14), Computer World (11/15), C!Net (11/14), Internet World (10/1), **New York Times** (11/13), Internet News (11/13), **CNN** (11/3), **MSNBC** (11/3), **CNNi** (11/2), C!Net (8/30), Javaworld (8/30), C!Net (8/25), Industry Standard (6/28), Interactive Week (6/9), Interactive Week (4/12), Infoworld (4/8), Internet News (4/7), PC Week (4/7), **USA Today** (4/6), **Wall Street Journal** (3/26), Interactive Week (2/27), **ZDTV Screen Savers** (2/2), **USA Today** (1/26), Internet World (1/11), ZDNet (1/6)
- 1998:** [11 hits] **CNN** (12/22), Infoworld (12/21), Sys-CON Radio (12/14), Interactive Week (11/25), Computerworld (7/20), TechWeb (7/17), C!Net (7/17), **New York Times** (7/17), Internet World (5/11), C!Net (2/19), Network (2)
- 1997:** [18 hits] Network World (11/3), WebWeek (11/3), ZDNet (11/10), MokaByte (7), WebWeek (6/23), IntraNet (6), C!Net (5/9), **Wall Street Journal** (4/30), C!Net (4/29), ZDNet (4/29), PC Week (4/28), First Monday (4), Web Review (3/24), Computerworld (3/17), **Wall Street Journal** (3/14), Information Security Bulletin (3), Web Week (1/20), Packet (1/1)

## KEYNOTES AND INVITED LECTURES

### Keynote Talks

How do I Secure my Software?

Hotel Technology Next Generation, San Diego, CA, February 2011.

Architectural Risk Analysis

Innovation Sandbox, RSA, San Francisco, CA, February 2011.

Attack Trends 2010 –or- Why Software Security

ACS, Control Systems Security, Washington, DC, September 2011.

SNI Security Conference, Knoxville, TN, September 2011.

CERN, Geneva, Switzerland, March 2011.

Bank of America Security Summit, Charlotte, NC, May 2010.

Smart Grid Equals Dumb Security?

NRECA, Atlanta, GA, February 2010. See video <<http://www.cigital.com/justiceleague/2010/03/22/smart-grid-equals-dumb-security/>>.

Software Security and the BSIMM

AERES, Vienna, Austria, August 2011.  
Software Experts Summit, Mountain View, CA, May 2011.  
Fannie Mae, CSO Security Summit, Washington, DC, January 2011.  
SE OOP, Munich, Germany, January 2010.  
Distinguished Lecture, University of Leuven, Leuven, Belgium, February 2010.

#### The Building Security In Maturity Model (BSIMM)

NESSOS, Internet Days EU, Poznan, Poland, October 2011.  
NLgovCERT, Rotterdam, the Netherlands, November 2010.  
ELSAG datamat, Pescara, Italy, October 2010.  
SANS Software Security Summit, San Francisco, CA, February 2010.  
Siemens Software Security Day, Munich, Germany, January 2010.  
OWASP Brazil, Brasilia, Brazil, October 2009.  
UNCC Security Conference, Charlotte, NC, October 2009.  
CMU Cylab Corporate Partners Meeting, Pittsburgh, PA, October 2009.  
NY Poly Distinguished Lecture, Brooklyn, NY, September 2009.  
FFIEC/OCC Technical Conference, Washington, DC, August 2009.  
Usenix Security, Montreal, Canada, August 2009.  
FS-ISAC (financial services information security assurance center), St. Pete, Florida, May 2009.  
ROOTS 2009, Bergen, Norway, April 2009.  
Department of Homeland Security Software Assurance Forum, Washington, DC, March 2009.

#### Software Security: State of the Practice

SAP Quality Day, Heidelberg, Germany, March 2011.  
Secappdev, Leuven, Belgium, March 2009.  
NDSS, San Diego, CA, February 2009.  
cioZone virtual keynote, September 2008.  
Fidelity Developer Forum, Boston, MA, September 2008.  
World Congress on Software Quality, Washington, DC, September 2008.  
SIFMA, NY, NY, June 2008.  
SANS Application Security Summit, Las Vegas, NV, June 2008.  
BITS, Washington, DC, March 2008.  
Interop Moscow, Moscow, Russia, April 2008.  
OWASP Europe, Ghent, Belgium, May 2008.

#### Exploiting Online Games

Sioux Hot or Not, Eindhoven, The Netherlands, November 2009.  
Distinguished Lecture, Orfalea College School of Business, Cal Poly, San Luis Obispo, CA, October 2008.  
Security Day, Export Import Bank, Washington, DC, September 2008.  
Forrester Security Conference, Boston, MA, September 2008.  
OWASP Europe, Ghent, Belgium, May 2008.  
OWASP Hartford Chapter, Hartford, CN, February 2008.  
NDSS, San Diego, CA, February 2008.  
National Academy of Sciences, Washington, D.C., January 2007.  
ROOTS 2007, Bergen, Norway, April 2007.  
Usenix Technical Conference, Santa Clara, CA, June 2007.  
Usenix Security, Boston, MA, August 2007.  
MISTI Network Security, San Francisco, CA, September 2007.  
DTCC Security Day, New York, NY, September 2007.  
eCrime Conference, Pittsburgh, PA, October 2007.

#### Software Security: Building Security In

Hotel New Technology Group, Lausanne, Switzerland, October 2007.  
S3 con (Software Security Summit), San Jose, CA, April 2007.  
Canadian Bankers Association, Toronto, CA, January 2007.  
ISSRE 2006, Chapel Hill, NC, November 2006.

IBM Security Forum, White Plains, NY, September 2006.  
Symantec CIO Summit, Sea Island, GA, September 2006.  
S3 con (Software Security Summit), San Diego, CA, January 2006.  
Financial Services ISAC, Florida, May 2006.  
Software Best Practices, Boston, MA, September 2006.

#### Software Security Testing

FutureTest, NY, NY, February 2008.  
Verify, Washington, DC, October 2007.  
STARwest, LA, CA, October 2006.

#### Exploiting Software

Software Best Practices, Boston, MA, September 2005.  
ROOTS 2005, Bergen, Norway, April 2005.  
Security Decisions 2005, Chicago, IL, April 2005.

#### Wireless Security

Security Conference, MIS Training Institute, Orlando, FL, February 2003.

#### Building Secure Software

Sustainable Computing Consortium, Pittsburgh, PA, September 2003.  
XP Universe, New Orleans, LA, August 2003.  
Software Development West, Santa Clara, CA, March 2003.  
Foundations of Software Engineering, Charleston, SC, November 2002.  
SREIS, Raleigh, NC, October 2002.  
Secure iWorld, MIS Training Institute, San Diego, CA, August 2002.  
NATO Workshop on Advances in Intrusion Detection, Estoril, Portugal, May 2002.  
NORDU 2002, 4<sup>th</sup> EurOpen Usenix Conference, Helsinki, Finland, February 2002.

#### Attacking Malicious Code

SANS 2001, Baltimore, MD. May 2001.

#### Towards Secure Executable Content: Java Security

HASE 97, IEEE High-Assurance Systems Engineering Workshop, Bethesda, MD. August 1997.

#### Why Monitoring Mobile Code is Harder than it Sounds

1st Usenix Workshop on Intrusion Detection and Network Monitoring, Santa Clara, CA, April 7-12 1999.

#### **Selected Panels**

##### Cyber War: How We Learned to Stop Worrying and Love the Cyber Bomb

RSA, San Francisco, CA, February 16, 2011.

##### Picking a Yardstick to Measure Your Software Security Practice

RSA, San Francisco, CA, February 24, 2010.

##### Lifestyle Hacking: Social Networks and Gen Y Meet Security and Privacy

RSA, San Francisco, CA, February 23, 2010.

##### Surveillance: Security, Privacy and Risk

RSA 2209, San Francisco, CA, April 10, 2009.

##### Software security meets hardware security: Real attacks and best practices

COMDEX, Las Vegas, NV, November 18, 2003.

##### Proactive versus Reactive Security: What's the best mix?

RSA, San Francisco, CA, February 25, 2004.  
Network+Interop, Las Vegas, NV, 2003.

Software Security: The Emperor's New Clothes?  
ISOC Network and Distributed System Security Conference, San Diego, CA, February 2002.

Attacking Malicious Code  
IEEE ICDSN, New York, NY, June 28, 2000.

Will open source really improve security?  
DARPA workshop on information security, Phoenix, Arizona, April 19, 2001.  
IEEE Symposium on Security and Privacy 2000, Oakland, CA, May 16, 2000.

The Economics of Security  
ISOC Symposium on Network and Distributed System Security, San Diego, February 3, 2000.

Software Risk Management for Embedded Internet  
Embedded Internet Conference, Santa Clara, CA, September 1999.  
Embedded Internet Conference, San Jose, CA, September 2000.

The Java Virtual Machine  
Java Business Expo, JavaWorld panel, New York, December 1998.

E-Commerce Security  
ISOC Symposium on Network and Distributed System Security, San Diego, March 12, 1998.

Is Information Security an Oxymoron?  
COMPASS 97, 12th Annual Conference on Computer Assurance, Gaithersburg, MD. June 1997.

Java Security  
ISSRE '96, 7th International Symposium on Software Reliability Engineering, White Plains, NY. Oct 1996.

Security Siblings  
NISSC, 19th National Information Systems Security Conference, Baltimore, MD. Oct 1996.

Secure Networking and Assurance Technologies  
NISSC, 19th National Information Systems Security Conference, Baltimore, MD. Oct 1996.

### **Selected Invited Lectures, Tutorials, and Trade Shows**

Java Security Meets Smart Cards  
IEEE Northern Virginia Chapter, Dulles, VA, February, 2001.  
Mobile Commerce, San Jose, CA, October 2000.  
Applied Physics Laboratory, Johns Hopkins University, Baltimore, MD, September 2000.  
Cooperation in Security Workshop, TNO, Rotterdam, the Netherlands, September 2000.  
Smart Card Forum, Washington, DC, September 1999.

Building Secure Software  
CVS, Providence, RI, January 2004.  
Hewlett Packard (HP), Cupertino, CA, December 2003.  
Wachovia, Charlotte, SC, December 2003.  
University of Alabama, Tuscaloosa, AL, October 2003.  
CERT/CC, Software Engineering Institute, Pittsburgh, PA, October 2003.  
Carnegie Mellon University (CMU), ECE, Pittsburgh, PA, October 2003.  
HSBC, NY, NY, July 2003.  
ISSA (Northern Virginia), Reston, VA, June 2003.

GTECH, West Greenwich, RI, June 2003.  
Dartmouth College, Hanover, NH, June 2003.  
George Mason University, Fairfax, VA, May 2003.  
Johns Hopkins University, Baltimore, MD, March 2003.  
James Madison University, Harrisonburg, VA, February 2003.  
Software Productivity Consortium, Dulles, VA, October 2002.  
Goldman Sachs, NY, NY, October 2002.  
Information Assurance Task Force (IATF), Advanced Physics Laboratory, Johns Hopkins, MD, October 2002.  
Pershing, New York, NY, September 2002.  
Radian Securities, Philadelphia, PA, August 2002.  
State Street Bank, Boston, MA, August 2002.  
Usenix Security, San Francisco, CA, August 2002.  
AT&T Research, Florham Park, NJ, June 2002.  
Virginia Information Security Exchange (VISE), Richmond, VA, June 2002.  
Istituto per la Ricerca Scientifica et Tecnologica (IRST), Trento, Italy, May 2002.  
University of Missouri, Rolla, MI, April 2002.  
Johns Hopkins University, Baltimore, MD, April 2002.  
University of Maryland, College Park, MD, April 2002.  
North Carolina State University, Raleigh, NC, April 2002.  
Xerox PARC, Palo Alto, CA, March 2002.  
Waterloo University, Waterloo, CA, March 2002.  
Women In Technology, Inc. (WITI), Reston, VA, March 2002.  
ISOC Network and Distributed System Security Conference, San Diego, CA, February 2002.  
Georgetown University, Washington, DC, February 2002.  
Center for Applied Cryptographic Research, 9<sup>th</sup> Security Workshop, Ottawa, Canada, November 2001.  
IEEE Northern Virginia Chapter, Dulles, VA, November 2001.  
University of Virginia, Charlottesville, VA, October 2001.  
Information Warfare Conference, NY, NY, October 2001.  
FS-ISAC, Financial Services Information Sharing and Analysis Center, Fort Meyers, Florida, October 2001.  
2<sup>nd</sup> International School On Foundations of Security Analysis and Design, Bertinoro, Italy, September 2001.  
CSI Network Security, New Orleans, LA, June 2001.  
CommerceNet, Social Security Administration, Baltimore, MD, May 2001.  
Microsoft Research Cambridge, Cambridge, UK, April 2001.  
Barclay's, London, UK, April 2001.  
Stanford University, Palo Alto, CA, April 2001.  
Microsoft, Redmond, WA, March 2001.  
University of Virginia Department of Computer Science, March 2001.  
ISOC Network and Distributed System Security Conference, San Diego, CA, February 2001.  
Indiana University Department of Computer Science, January 2001.  
Purdue University (CERIAS), West Lafayette, IN, January 2001.  
SIAC, New York, NY, May 1999.  
Federal Reserve Bank of Chicago, Chicago, IL, July 2000.

#### Mobile Code Security and Java Architecture

ISOC Network and Distributed System Security Conference, San Diego, CA, February 1999.  
Charles Schwabb, San Francisco, CA, July 1999.  
ISOC Network and Distributed System Security Conference, San Diego, CA, February 2000.

#### New Issues in Java Security

Java Expo Europe, London, July 1998.  
Software Development Expo East, Washington, D.C., August 1998.  
SIGS Conference for Java Developers, San Jose, CA, October 1998.  
SANS Network Security 98, Orlando, FL, October 1998.  
CSI Computer Security Conference and Exhibition, Chicago, November 1998.

#### Electronic Commerce Security

Internet and Electronic Commerce (IEC) Conference and Exposition, New York, April 1998.  
Internet Commerce Expo (ICE), Los Angeles, September 1998.

What's the deal with COTS?

Universite' Laval, Quebec City, Canada. April 1998.

The Security Implications of Push

COMNET panel, Washington D.C., January 28, 1997.

Java Security Tutorial

USENIX Security Symposium, San Antonio, January 26, 1997.

Towards Secure Executable Content: Java Security

Cornell University, Ithaca, NY. November 1996.

University of Virginia, Charlottesville, VA. April 1997.

DARPA headquarters, Arlington, VA. March 1997.

NCSA Network Security and Firewalls conference, SanJose, CA, October 27-28.

CSI's 24th Annual Computer Security Conference, Washington, DC, Nov. 1997.

University of Massachusetts, Computer Science Department, December 4, 1997.

LASER workshop in Boston, December 5, 1997.

EuroSec '98, Paris, France. March 1998.

Universite' Laval, Quebec City, Canada. April 1998.

University of Arizona, Tuscon, AZ. November 11, 1998.

Two Classes of Hostile Applets in Java

NCSA infoWARcon, Washington, DC. September 1997.

Enabling Better Security in Java

Java Expo, New York, NY. June 1997.

Java Expo Europe, London, UK. July 1997.

Java Security: Hostile Applets, Holes, & Antidotes

Mid-Atlantic Java Users Group (MAJUG). April 1997.

Firewalls, Web, & Internet Security, NCSA, McLean, VA. April 1997

Triangle Area Java User's Group, Durham, NC, October 20, 1997.

Is Java Secure?

University of Arkansas, Fayetteville, AK. March 1997.

Java Security (two lecture series)

Java Expo, New York, NY, August 1996.

DevCon 96 Europe, Wiesbaden, Germany, September 1996.

Untangling the Woven Web: Testing Web-based Software

Thirteenth International Conference on Testing Computer Software, Washington, D.C., June 1996.

Letter Spirit (part one): Emergent High-Level Perception of Letters Using Fluid Concepts.

George Mason University – Krasnow Institute Lectures, Fairfax, VA, February 1996.

Letter Spirit: An Architecture for Creativity in a Microdomain.

Istituto per la Ricerca Scientifica e Tecnologica, Trento, Italy, May 1994.

Letter Spirit: Recognition and Creation of Letterforms Based on Fluid Concepts.

State University of New York – Binghamton, Cognitive Science Colloquium, Binghamton, NY, September 1992.

## FELLOWSHIPS AND AWARDS

**2006** IEEE Computer Society Golden Key

**1996** Reliable Software Technologies: Rookie of the Year

**1996** Indiana University Cognitive Science Distinguished Research Award

**1996** Nominated for the Association of Computing Machinery (ACM) Distinguished Dissertation Award by the Indiana University Department of Computer Science

**1995** Nominated for the 1995 Indiana University Distinguished Thesis Award (One of nine finalists.)

**1988-89** Indiana University Research and University Graduate School Fellowship

## PROFESSIONAL SERVICE

### Computer Security Community

**2008** *Invited Talks Chair*, ISOC Network and Distributed System Security Conference, San Diego, CA.

**2008** *Program Committee*, IEEE Security & Privacy Conference, May 2008, Oakland, CA.

**2007** *Invited Talks Chair*, USENIX Security Conference, August 2007, Boston, MA.

**2006** *Invited Talks Chair*, USENIX Security Conference, July 2006, Vancouver, BC, Canada.

**2005** *Invited Talks Chair*, USENIX Security Conference, July 2005, Baltimore, MD.

**2003** *Program Chair*, DIMACS Software Security Workshop, January 2003, Florham Park, NJ.

**2000** *General Chair*, ISACC 2000: The Software Risk Management Conference, September 2000, Washington, D.C.

**1999-2002** *Steering Committee*, ISOC Network and Distributed System Security Conference, San Diego, CA.

**2000-2001** *Steering Committee*, Embedded Internet Conference, September, San Jose, CA.

**2002** *Program Committee*, ISOC Network and Distributed System Security Conference 2002, February, San Diego, CA.

**2001** *Program Committee*, ISOC Network and Distributed System Security Conference 2001, February, San Diego, CA.

**2000** *Program Committee*, ISOC Network and Distributed System Security Conference 2000, February, San Diego, CA.

**2000** *Program Committee, Publicity Chair*, The First Workshop on Security and Privacy in E-Commerce, November 4, Athens, Greece.

**2000** *Program Committee*, 5th IEEE Enterprise Security Workshop, June 14-16, NIST, Gaithersburg, MD.

**2000** *Program Committee*, Information Survivability Workshop 2000, October 24-26, Boston, MA.

**1999** *Program Committee*, 4th IEEE Enterprise Security Workshop, July 17-19, Stanford University.

**1999** *Program Committee*, USENIX Technical Conference, June 6-11, Monterey, CA.

**1999** *Program Committee*, First International Software Assurance Certification Conference (ISACC '99), March 1-3, 1999, Washington, D.C.

**1998** *Program Committee*, Information Survivability Workshop 1998, October 28-30, Orlando, FL.

**1997** *Treasurer*, for the 12th Annual Conference on Computer Assurance (Compass 97), June 1997, Bethesda, Md.

### **Artificial Intelligence Community**

**1996-2007** JETAI: Editorial Board of the *Journal of Experimental and Theoretical Artificial Intelligence*

**1995** *Program Committee*, of RoboLearn 96 (held in conjunction with the 1996 Florida Artificial Intelligence Research Symposium)

### **Professional Affiliations**

- *Cognitive Science Society*
- *American Association of Artificial Intelligence (AAAI)*
- *IEEE Computer Society*

## **LANGUAGES**

Italian: read, write, speak well. (Lived for a year in Italy.)

French: read, speak at rudimentary level.

## **CLEARANCE**

Secret, Department of Defense

## **RESEARCH INTERESTS**

My research interests are in the areas of: 1) software security; 2) software exploit; 3) online game security; 4) mobile code security (especially Java and .NET); 5) malicious code and technologies to counter it; 6) creativity and artificial intelligence, especially as related to high-level perception and concepts; 7) genetic algorithms, emergent computation, and artificial life; 8) Connectionist models of cognition; and, 9) music cognition, especially the perception and production of rhythmic patterns.