CURRICULUM VITAE
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Citizenship	Germany
Date of Birth	22 May 1974
Languages	English, German

Education

2003 Dr.-Ing. (Ph.D.), *summa cum laude*
Technische Universität Darmstadt (Darmstadt University of Technology),
Fachbereich Informatik (Computer Science department).
Thesis: *"A Model-Independent Security Architecture for Distributed Heterogeneous Systems"*
(Advisor: Johannes Buchmann)

1993 – 1999 Diplom-Informatiker (TU) (approx. equiv. M.Sc.)
Technische Universität Darmstadt (Darmstadt University of Technology),
Fachbereich Informatik (Computer Science department).
(Advisor: José L. Encarnação)

Academic and Professional Interest

- Information assurance and security
- Applied combinatorics and graph theory
- Network and distributed systems security
- Models for critical infrastructure protection

Experience

Research

2007–present Full professor, Norwegian Information Security Laboratory, Gjøvik University College, Norway (part-time).

2006–present Lecturer, Information Security Group, Department of Mathematics, Royal Holloway, University of London, UK.

2005–2006 Associate professor, Norwegian Information Security Laboratory, Gjøvik University College, Norway. Part-time position from 2006 onward.

2005–present Senior scientist at the security technology department at Fraunhofer-IGD, a German national research laboratory. Responsible for the department's research in the areas of information assurance and critical infrastructure protection.

2002–2005 Deputy department head of the security technology department at Fraunhofer-IGD, a German national research laboratory. Principal scientist and head of information assurance group.

Supervision and direction of a research staff of four researchers plus one assistant. Supervision of research assistants and guest researchers. Supervision of Ph.D. and M.Sc. student research.

Grant and research project funding acquisition for department including advising junior research staff; external representation and conduct of administrative affairs for department.

Coordination of a joint Korean-German research program since 2004 with a total funded volum of 120 person-years for the first 4 years.

Research on modeling and simulation of critical information infrastructures (funded by the German Information Security Agency, BSI).

1998–2002 Research staff member in the security technology department at Fraunhofer-IGD.

Principal scientist and system architect for a sequence of research contracts with the Mitsubishi Corporation, Tokyo, Japan with approximately 6m US$ total contract volume and a peak staffing level of 18 researchers. The research yielded a near-product prototype providing a highly restricted security policy for exchanging sensitive corporate documents within a closed group.

This project encompassed modifications to several commercial operating systems for supporting mandatory and transparent access control, cryptographic ingress and egress management, and document auditing as well as a distributed, clustered server architecture based on a heterogeneous Microsoft Windows NT/2000 and Sun Solaris / Silicon Graphics IRIX environment.

The results of the research were commercialized by Mitsubishi Corporation.

Teaching

Fall Term 2006 – current Graduate course *"Network Security"* at Royal Holloway, University of London, UK.

Fall Semesters 2005 – current Graduate course *"Information Security and Security Architecture"* at Gjøvik University College, Norway. Created detailed syllabus and course materials.

Fall Semester 2005 Graduate course (with D. Schadt and B. Hämmerli) *"Schutz kritischer Infrastrukturen und Informationssicherheit"* at the University of Bochum, Germany.

Summer Semester 2005 Graduate seminar (with P. Ebinger, J. Likavec, U. Pinsdorf, and J. Peters) *"Sicherheit in mobilen Ad-Hoc-Netzen"* at Darmstadt University of Technology, Germany. Created detailed syllabus and course materials.

Fall Semesters 2001 — 2005 Graduate (*Hauptdiplom*) course *"Netzwerksicherheit"* at Darmstadt University of Technology. Created lecture notes and course materials (see *Courses Developed*), developed written and oral exams. Maximum class size: 120 students plus 6 continuing professional education students from the CAST continuing education certificate program in Information Security (see *Courses Developed*).

The 2005 course was given together with W. Böhmer, U. Pinsdorf, J. Peters, and P. Ebinger.

Professional Activities

- Member of the German national working group on IT security criteria at the German Information Security Agency (1999–present)
- Member of the executive committee of the IEEE Computer Society Task Force on Information Assurance (2001–present)
- Vice Chair for Europe, IEEE Information Assurance Standards Committee (2003–present)
- Member, steering board of the special interest group on critical infrastructure protection of the German Gesellschaft für Informatik, GI FG KRITIS (2006–present)
- Member, IFIP Working Group 11.10 on Critical Infrastructure Protection
- Senior Member, Institute of Electrical and Electronics Engineers (IEEE), IEEE Computer Society
- Member, American Association for the Advancement of Science (AAAS)
- Member, Association for Computing Machinery (ACM)
- Member, Gesellschaft für Informatik (GI)
- Member, American Mathematical Society (AMS)
- Member, United States Naval Institute (USNI)
- Member, Armed Forces Communications and Electronics Association (AFCEA)

Courses Developed

Information Security and Security Architecture Developed graduate course (4 hours/week, 1 semester, in English)

Sicherheit in mobilen Ad-hoc-Netzen Developed graduate (*Hauptdiplom*) seminar (2 hours/week, 1 semester, in German and English)

Netzwerksicherheit Developed graduate (*Hauptdiplom*) course (2 hours/week, 1 semester, in German) including lecture notes (475 pp.), viewgraphs, and written and oral exams.

The updated lecture notes were the basis for the textbook *"Netzwerksicherheit"* described below.

Books

- Principal co-author (with C. Busch) of the textbook *"Netzwerksicherheit"* (ISBN 3-8274-1373-7), Spektrum Akademischer Verlag, Heidelberg, Germany, September 2002.
- Principal co-author (with M. Arnold and M. Schmucker) of the monograph *"Techniques and Applications of Digital Watermarking and Content Protection"* (ISBN 1-58053-111-3), The Artech House Computer Security Series, Artech House, Norwood, MA, USA, July 2003.
- Monograph *"A Model-Independent Security Architecture for Distributed Heterogeneous Systems"* (ISBN 3-8325-0416-8), Logos Verlag, Berlin, Germany, December 2003 (Publication of dissertation).

Book Chapters

[1] WOLTHUSEN, S. D. *Electronic Business: Innovationen, Anwendungen und Technologien*. IRB Verlag, Stuttgart, Germany, Sept. 2004, ch. Netzwerksicherheit, pp. 222–233.

[2] WOLTHUSEN, S. D. *Telemedizinführer Deutschland*. Deutsches Medizin Forum, Ober Mörlen, Germany, Feb. 2004, ch. Grundschutz für Praxis-Systeme, pp. 225–229.

[3] BUSCH, C., AND WOLTHUSEN, S. D. *IT-Sicherheit für den Mittelstand: Leitfaden zum Thema IT-Sicherheit*. Hessisches Ministerium für Wirtschaft, Verkehr und Landesentwicklung, Wiesbaden, Germany, Sept. 2002, ch. IT-Sicherheit - wie geht das?, pp. 9–34.

Edited Volumes

[1] COLE, J. L., AND WOLTHUSEN, S. D., Eds. *Proceedings of the Fourth IEEE International Workshop on Information Assurance (IWIA 2006)* (Royal Holloway, UK, Apr. 2006), IEEE Press.

[2] HÄMMERLI, B. M., AND WOLTHUSEN, S. D., Eds. *Proceedings of CIP Europe: Critical Infrastructure Protection* (Bonn, Germany, Sep. 2005), Gesellschaft für Informatik.

[3] HÄMMERLI, B. M., AND WOLTHUSEN, S. D., Eds. *Proceedings of the First IEEE International Workshop on Critical Infrastructure Protection (IWCIP 2005)* (Darmstadt, Germany, Nov. 2005), IEEE Press.

[4] COLE, J. L., AND WOLTHUSEN, S. D., Eds. *Proceedings of the Third IEEE International Workshop on Information Assurance (IWIA 2005)* (Washington D.C., USA, Mar. 2005), IEEE Press.

[5] COLE, J. L., ZHENG, Y., AND WOLTHUSEN, S. D., Eds. *Proceedings of the Second IEEE International Workshop on Information Assurance (IWIA 2004)* (Charlotte, NC, USA, Apr. 2004), IEEE Press.

[6] COLE, J. L., AND WOLTHUSEN, S. D., Eds. *Proceedings of the First IEEE International Workshop on Information Assurance (IWIA 2003)* (Darmstadt, Germany, Mar. 2003), IEEE Press.

Refereed Publications

[1] WOLTHUSEN, S. Vertrauenswürdige Protokollierung mittels nicht-deterministischer nebenläufiger wechselseitiger Überwachung. *Datenschutz und Datensicherheit*, 10 (2007), pp. 740–743.

[2] SVENDSEN, N. K. AND WOLTHUSEN, S. An Analysis of Cyclical Interdependencies in Critical Infrastructures. In *Proceedings of the 2nd International Workshop on Critical Information Infrastructures Security* (Malaga, Spain, Oct. 2007) (*in press*).

[3] SVENDSEN, N. K. AND WOLTHUSEN, S. A Framework for 3D Geospatial Buffering of Events of Interest in Critical Infrastructures. In *Proceedings of the 2nd International Workshop on Critical Information Infrastructures Security* (Malaga, Spain, Oct. 2007) (*in press*).

[4] REIDT, S. AND WOLTHUSEN, S. Efficient Trust Authority Distribution in Tactical MANET Environments. In *Proceedings of the IEEE Military Communications Conference 2007 (MILCOM 2007)* (Orlando, FL, USA, Oct. 2007).

[5] SVENDSEN, N. K. AND WOLTHUSEN, S. A Framework for Modelling Logical, Physical, and Geographic Dependencies between Critical Infrastructures. In *Proceedings of the Lund Energy Security Conference* (Lund, Sweden, Sep. 2007) (*in press*).

[6] REIDT, S. AND WOLTHUSEN, S. An Evaluation of Cluster Head TA Distribution Mechanisms in Tactical MANET Environments. In *Proceedings of the First Annual Conference of ITA* (College Park, MD, USA, Sep. 2007).

[7] WU, M.-D. AND WOLTHUSEN, S. Network Forensics of SSL/TLS Encrypted Channels. In *Proceedings of the Sixth European Conference on Information Warfare and Security* (Defence Academy of the United Kingdom, Shrivenham, UK, July 2007), ACI, pp. 303–312.

[8] SVENDSEN, N. K. AND WOLTHUSEN, S. Analysis and Statistical Properties of Critical Infrastructure Interdependency Multiflow Models. In *Proceedings from the Eighth Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2007), IEEE Press, pp. 247–254.

[9] REIDT, S. AND WOLTHUSEN, S. Efficient Distribution of Trust Authority Functions in Tactical Networks. In *Proceedings from the Eighth Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2007), IEEE Press, pp. 84–91.

[10] SVENDSEN, N. K. AND WOLTHUSEN, S. Graph Models of Critical Infrastructure Interdependencies. In *Inter-Domain Management, Proceedings of the First International Conference on Autonomous Infrastructure, Management and Security (AIMS 2007)* (Oslo, Norway, Jun. 2007), A.K. Bandara and M. Burgess, Eds., vol. 4543 of Lecture Notes in Computer Science, Springer-Verlag, pp. 208-211.

[11] WOLTHUSEN, S. The Role of Mathematics in Information Security Education. In *Proceedings of the 5th IFIP TC11.8 World Conference on Information Security Education (WISE 5)* (West Point, NY, USA, Jun. 2007), Springer-Verlag, pp. 129–136.

[12] SVENDSEN, N. K. AND WOLTHUSEN, S. Connectivity Models of Interdependency in Mixed-Type Critical Infrastructure Networks. *Information Security Technical Report* 12, 1 (2007), pp. 44–55.

[13] SVENDSEN, N. K. AND WOLTHUSEN, S. Multigraph Dependency Models for Heterogeneous Critical Infrastructures. In *Proceedings of the First Annual IFIP WG 11.10 International Conference on Critical Infrastructure Protection* (Hanover, NH, USA, Mar. 2007), Springer-Verlag, pp. 337–350.

[14] WOLTHUSEN, S. Automated Extraction of Behavioral Profiles from Document Usage. *BT Technology Journal*, 25,1 (2007), pp. 192–200.

[15] WOLTHUSEN, S. Windows Device Interface Security. *Information Security Technical Report*, 11 (2006), pp. 160–165.

[16] HJELMÅS, E. AND WOLTHUSEN, S. Full-Spectrum Information Security Education: Integrating B.Sc., M.Sc., and Ph.D. Programs. In *Proceedings of the 3rd Annual Conference on Information Security Curriculum Development* (Kennesaw, GA, USA, Sep. 2006), ACM Press, pp. 9–16.

[17] WOLTHUSEN, S. Secure Visualization of GIS Data. In *Proceedings from the Seventh Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2006), IEEE Press, pp. 200–207.

[18] WIEHE, A., HJELMÅS, E., AND WOLTHUSEN, S. Quantitative Analysis of Efficient Antispam Techniques. In *Proceedings from the Seventh Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2006), IEEE Press, pp. 163–169.

[19] WOLTHUSEN, S. Revisionssichere Protokollierung in Standardbetriebssystemen. *Datenschutz und Datensicherheit*, 5 (2006), pp. 281–284.

[20] WOLTHUSEN, S. Risikomanagement, Sicherheitspolitiken und technische Verfahren zur Durchsetzung von Sicherheitspolitiken (II). *IT-Sicherheit & Datenschutz*, 4 (2006), pp. 349–352

[21] WOLTHUSEN, S. Risikomanagement, Sicherheitspolitiken und technische Verfahren zur Durchsetzung von Sicherheitspolitiken (I). *IT-Sicherheit & Datenschutz*, 3 (2006), pp. 319–321

[22] DAHL, O. M. AND WOLTHUSEN, S. D. Modeling and Execution of Complex Attack Scenarios using Interval Timed Colored Petri Nets. In *Proceedings of the Fourth IEEE International Workshop on Information Assurance (IWIA 2006)* (Royal Holloway, UK, Apr. 2006), pp. 157–168.

[23] GRAF, F., AND WOLTHUSEN, S. A Capability-Based Transparent Cryptographic File System. In *Proceedings of CYBERWORLDS 2005* (Singapore, Nov. 2005), pp. 101–108.

[24] WOLTHUSEN, S. GIS-based Command and Control Infrastructure for Critical Infrastructure Protection. In *Proceedings of the First IEEE International Workshop on Critical Infrastructure Protection (IWCIP 2005)* (Darmstadt, Germany, Nov. 2005), pp. 40–47. IEEE Press.

[25] WOLTHUSEN, S. Molehunt: Near-line Semantic Activity Tracing. In *Proceedings from the Sixth Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2005), IEEE Press, pp. 410–418.

[26] WOLTHUSEN, S. Trustworthiness in Security Policy Mechanisms for Network-Centric Warfare Environments. In *Proceedings of the NATO RTO Workshop on Information Security for Network Enabled Capabilities* (The Hague, The Netherlands, April 2005), NATO Research and Technology Organization.

[27] LIKAVEC, J., AND WOLTHUSEN, S. D. Enforcing Messaging Security Policies. In *Proceedings of the Third IEEE International Workshop on Information Assurance (IWIA 2005)* (Washington D.C., USA, Mar. 2005), pp. 131–138.

[28] WOLTHUSEN, S. D. Defensive Information Warfare and the Protection of Critical Infrastructures. *Accademia Nazionale dei Lincei, Atti dei Convegni Lincei*, 230 (2007), pp. 93–106.

[29] WOLTHUSEN, S. Modeling Critical Infrastructure Requirements. In *Proceedings from the Fifth Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2004), IEEE Press, pp. 101–108.

[30] WOLTHUSEN, S. Self-Inflicted Vulnerabilities. *Naval War College Review LVII*, 3/4 (2004), pp. 102–113

[31] WOLTHUSEN, S. Tempering Network Stacks. In *Proceedings of the NATO RTO Symposium on Adaptive Defence in Unclassified Networks* (Toulouse, France, April 2004), NATO Research and Technology Organization.

[32] BUSCH, C., AND WOLTHUSEN, S. D. Information Warfare: Threats to Critical Infrastructures. In *Proceedings of the XV International Amaldi Conference of Academies of Science and National Scientific Societies on Problems of Global Security* (Helsinki, Finland, Sept. 2003), pp. 147–156.

[33] WOLTHUSEN, S. D. Goalkeeper: Close-In Interface Protection. In *Proceedings 19th Annual Computer Security Applications Conference (ACSAC'03)* (Las Vegas, NV, USA, December 2003), IEEE Computer Society Press, pp. 334–341.

[34] WOLTHUSEN, S. A Distributed Multipurpose Mail Guard. In *Proceedings from the Fourth Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2003), IEEE Press, pp. 258–265.

[35] WOLTHUSEN, S. D., AND PREDIGER, F. ReEncryption — Das Konzept für den umfassenden Dokumentenschutz. In *D-A-CH Security: Bestandsaufnahme und Perspektiven. Gemeinsame Arbeitskonferenz GI · OCG · BITKOM · SI · TeleTrusT* (Erfurt, Germany, Mar. 2003), Kluwer Academic Publishers, pp. 273–284

[36] WOLTHUSEN, S. Distributed Intrusion Detection for Policy-Controlled Heterogeneous Environments. In *Proceedings from the Third Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2002), IEEE Press, pp. 255–262.

[37] WOLTHUSEN, S. Embedding Policy-Controlled ID Sensors within Host Operating System Security Enforcement Components for Real Time Monitoring. In *Proceedings of the NATO RTO Symposium on Real Time Intrusion Detection Symposium (RTID)* (Estoril, Portugal, May 2002), NATO Research and Technology Organization, pp. 4.1–4.11. Publication RTO-MP-101, published June 2003.

[38] BUSCH, C., AND WOLTHUSEN, S. Sensitivity Labels and Invisible Identification Markings in Human-Readable Output. In *Proceedings of Electronic Imaging 2002* (San Jose, CA, USA, Jan. 2002), The International Society for Optical Engineering (SPIE), pp. 149–157.

[39] WOLTHUSEN, S. Access and Use Control using Externally Controlled Reference Monitors. *ACM Operating Systems Review 36*, 1 (2002), 58–69.

[40] WOLTHUSEN, S. Security Policy Enforcement at the File System Level in the Windows NT Operating System Family. In *Proceedings 17th Annual Computer Security Applications Conference (ACSAC'01)* (New Orleans, LA, USA, Dec. 2001), IEEE Computer Society Press, pp. 55–63.

[41] BUSCH, C., AND WOLTHUSEN, S. Tracing Data Diffusion in Industrial Research with Robust Watermarking. In *Proceedings of the 2001 Fourth Workshop on Multimedia Signal Processing (MMSP'01)* (Cannes, France, Oct. 2001), J.-L. Dugelay and K. Rose, Eds., IEEE Press, pp. 207–212.

[42] WOLTHUSEN, S. Layered Multipoint Network Defense and Security Policy Enforcement. In *Proceedings from the Second Annual IEEE SMC Information Assurance Workshop, United States Military Academy* (West Point, NY, USA, June 2001), IEEE Press, pp. 100–108.

[43] RADEMER, E., AND WOLTHUSEN, S. Transparent Access To Encrypted Data Using Operating System Network Stack Extensions. In *Communications and Multimedia Security Issues of the New Century: Proceedings of the IFIP TC6/TC11 Fifth Joint Working Conference on Communications and Multimedia Security (CMS'01)* (Darmstadt, Germany, May 2001), R. Steinmetz, J. Dittman, and M. Steinebach, Eds., IFIP, Kluwer Academic Publishers, pp. 213–226.

[44] BUSCH, C., RADEMER, E., SCHMUCKER, M., AND WOLTHUSEN, S. Concepts for a watermarking technique for music scores. In *Proceedings of the Visual 2000 / 3rd International Conference on Visual Computing* (Mexico City, Mexico, Sept. 2000).

[45] BUSCH, C., GRAF, F., WOLTHUSEN, S., AND ZEIDLER, A. A system for intellectual property protection. In *Proceedings of the World Multiconference on Systemics, Cybernetics, and Informatics (SCI 2000) /Int'l Conf. on Information Systems Analysis and Synthesis (ISAS 2000)* (Orlando, FL, USA, July 2000), pp. 225–230.

[46] BUSCH, C., GRAF, F., AND WOLTHUSEN, S. Courseware needs security. In *Proceedings of ICCE, 7th International Conference on Computers in Education* (Chiba, Japan, Nov. 1999).

[47] BUSCH, C., FUNK, W., AND WOLTHUSEN, S. Digital watermarking: From concepts to real-time video applications. *IEEE Computer Graphics and Applications 19*, 1 (Jan./Feb. 1999), 25–35.

[48] WOLTHUSEN, S. On the limitations of digital watermarks. In *Proceedings of the World Multiconference on Systemics, Cybernetics, and Informatics (SCI 98) /Int'l Conf. on Information Systems Analysis and Synthesis (ISAS 98)* (Orlando, FL, USA, July 1998).

[49] WOLTHUSEN, S. Digital Watermarking: Ready for the Real World? In *Proceedings of IT '98* (Moscow, Russia, Feb. 1998), pp. 73–75.

Other Publications

[1] WOLTHUSEN, S. Sichere Geo-Webdienste. *Business Geomatics*, 2 (2006), p. 3.

[2] WOLTHUSEN, S. First IEEE International Workshop on Critical Infrastructure Protection. *European CIIP Newsletter*, 1,2 (2005), p. 35.

[3] WOLTHUSEN, S. Information Sharing and Decision Support for C(I)IP. In *Proceedings of CIP Europe: Critical Infrastructure Protection* (Bonn, Germany, Sep. 2005), B. M. Hämmerli and S. D. Wolthusen, Eds., Gesellschaft für Informatik, pp. 7–12.

[4] WOLTHUSEN, S. Von der Patienten-Chip-Karte zur Health Professional Card. *Der Deutsche Dermatologe*, 10 (Oct. 1999), 788–789.

[5] WOLTHUSEN, S. Sicherheitsfragen in der Informationstechnik. *Zeitschrift für Dermatologie*, 188 (1999), 188–192.

[6] WOLTHUSEN, S. Sicherheit von Praxis-Systemen. *Der Deutsche Dermatologe*, 9 (Sept. 1999), 687–692.

[7] ENCARNAÇÃO, J. L., AND WOLTHUSEN, S. Sicherheit in der Informationstechnik. In *Digitale Signaturen — ihre Rolle im Rechts- und Geschäftsverkehr* (1998), Deutsch-Japanischer Rat, pp. 74–96.

Selected Other Presentations and Public Appearances

- Working session on nonproliferation of weapons of mass destruction and sensitive technologies of the Deutsche Gesellschaft für Auswärtige Politik (German Council on Foreign Relations). Invited talk "Technologiekontrolle jenseits der Nichtverbreitungspolitik: Gefährdung und Sicherung kritischer Infrastrukturen im Informationszeitalter". Berlin, Germany, September 12, 2005.
- Conference "Corporate Digital Security", organized by Marcus Evans Corporation. Invited presentation "Sicherheitspolitiken und ihre Umsetzung" (Security Policies and their Implementation). Cologne, Germany, November 3rd-4th, 2004.
- Workshop "GeoSec – Sicherheit für Geodaten – Geodaten für die Sicherheit" (GIS for Security) of the CAST-Forum, Darmstadt, Germany. Invited presentation "Techische Schutzmaßnahmen für Infomationssysteme" (Technical Protection Controls for GIS). April 1st, 2004.
- IEEE Information Assurance Standards Workshop 2003. Invited presentation "Software Engineering Issues", NIST, Gaithersburg, MD, USA, December 4th, 2003.
- Workshop "Medizin und IT-Sicherheit" (Health Care and IT Security) of the CAST-Forum, Darmstadt, Germany. Invited presentation "Grundschutz für Praxis-Systeme" (Baseline Security for Private Practice). June 26th, 2003.
- Workshop "Netzwerksicherheit" (Network Security) of the CAST-Forum, Darmstadt, Germany. Invited presentation "Tagungsbericht IWIA 2003, IEEE-Aktivitäten im Bereich Information Assurance" (Conference Report IWIA 2003, IEEE Information Assurance Activities). April 24th, 2003.
- First IEEE International Workshop on Information Assurance. Invited presentation "IEEE Activities in Information Assurance", Darmstadt, Germany, March 24th, 2003.
- First IEEE International Workshop on Information Assurance. Closing panel presentation "Challenges in Information Assurance", Darmstadt, Germany, March 24th, 2003.
- Workshop "IT Sicherheits-Engineering" (IT Security Engineering) of the CAST-Forum, Darmstadt, Germany. Invited presentation "Information Assurance". September 20th, 2001.
- Workshop Web-Security of the CAST-Forum, Darmstadt, Germany. Invited presentation "Gefahren bei Webangeboten" (Threats for Web Services). August 16th, 2001.

- Workshop “Sicherheit von Betriebssystemen / Firewalls” (Operating System and Firewall Security) of the CAST-Forum, Darmstadt, Germany. Invited presentation “Politikbasierte Sicherungsmechanismen für verteilte Systeme” (Policy-based security mechanisms for distributed systems). July 12th, 2001.
- Online-Tag des Hessischen Wirtschaftsministeriums (IT forum of the Hessian state ministry of economy), Wiesbaden, Germany. Invited presentation “Firewalls: Einordnung und Grenzen” (Firewalls: Their role and limitations). November 15th, 2000.
- Seminar Sicherheit im Electronic Business (Security in electronic business), Stuttgart, Germany. Invited presentation “TCP/IP Firewalling: Stand der Technik, Herausforderungen, und Entwicklungen” (TCP/IP Firewalling: State of the art, challenges, and recent developments). October 12th, 2000.
- IBM Crypto Council, Poughkeepsie, NY, USA. Lecture “CIPRESS: Cryptographic Intellectual Property Rights Enforcement System”. September 19th, 2000.
- n-tv Finanzplatz (n-tv Finance, a national/European satelite news network). Initially broadcast July 7th, 2000: Panel discussion “Chancen und Risiken im Internet-Wertpapierhandel” (Opportunities and risks in Internet-based financial trading)
  Participants: Matthias Kröner, member of the board, Direktanlage-Bank; Patrick Zeigerer, member of the board, net.IPO; Stephen Wolthusen, Fraunhofer-IGD.
- Workshop Web Security of the CAST-Forum, Darmstadt, Germany. Invited presentation “Gefahren bei WWW-Angeboten” (Threats for Web Services). June 29th, 2000.
- hamburger dialog – Effizienz der Kommunikation: Neue Vielfalt – Neue Chancen (Efficiency in communication: Diversity and Opportunities). May 8th, 2000, Congress Centrum Hamburg, Germany. Panel discussion: “Neue Techniken und Datensicherheit. Geht das?” (New Technology and Data Security).
  Participants: Ulrich Kühn, Hamburgischer Datenschutzbeauftragter (Data privacy controller for the state of Hamburg, Germany); Wau Holland, Chaos Computer Club, Germany; Stephen Wolthusen, Fraunhofer-IGD.
- Workshop Firewalls of the CAST-Forum, Darmstadt, Germany. Invited presentation “Firewalls: Elemente einer Sicherheitsarchitektur” (Firewalls: Elements of a security architecture). March 17th, 2000.
- Workshop Firewalls of the CAST-Forum, Darmstadt, Germany. Invited presentation “Anwendungsorientierte Evaluierung von Firewalls” (Application-oriented evaluation of firewalls). March 17th, 2000.
- CeBIT 2000, Hannover, Germany. Lecture “Firewalls in der Praxis” (Firewalls in practice) February 28th, 2000.
- Institut für Maritime Systeme und Strömungstechnik (Institute for Naval Systems and Hydrodynamics), Rostock, Germany. Invited presentation “Sicherheitsaspekte bei der Kommunikation sensibler Daten über das Internet” (Security aspects in communicating classified data over the Internet). February 24th, 2000.
- Industrie- und Handelskammer (Darmstadt chamber of commerce) Darmstadt, Germany. Invited presentation “Understanding & Implementing Internet Security”. September 3rd, 1998.

- Various lectures on IT security aspects in the medical sector in cooperation with the ZGDV e.V., Darmstadt, Germany und der Deutschen Dermatologischen Gesellschaft (German Association of Dermatologists).
- Various interviews on national TV on IT security issues.
- Various interviews on national and local radio on IT security issues.
- Various interviews by national and European print media on IT security issues.

Patents

- International Patent (with E. Rademer and C. Busch) PCT/DE01/01333: *"Method for Integrating Hidden Information in a Set of Notes"*. Priority: May 15th, 2001. Granted: November 22nd, 2001.
- German Patent (with C. Busch) DE 100 58 175: *"Verfahren und Einrichtung zur automatischen Markierung von Ausdrucken einer Datenverarbeitungsanlage"*. Priority: November 22nd, 2000. Granted: August 8th, 2002
- German Patent 10146361.8-53: "Vorrichtung und Verfahren zur Etablierung einer Sicherheitspolitik in einem verteilten System". Priority: September 20th, 2001. Granted: September 20th, 2006.

Program Committees

- Co-chair, Third International Workshop on Critical Information Infrastructure Security. Rome, Italy (CRITIS '08)
- Co-chair, Second International Workshop on Critical Information Infrastructure Security. Malaga, Spain (CRITIS '07)
- Program committee chair, Fourth IEEE International Workshop on Information Assurance. Royal Holloway, UK (IWIA 2006)
- Program committee chair, First IEEE International Workshop on Critical Infrastructure Protection. Darmstadt, Germany (IWCIP 2005)
- Program committee chair, Symposium on Critical Infrastructure Protection. Bonn, Germany (CIP Europe 2005)
- Convener, Session "Dual Use Technologies in Information Warfare", XVI International Amaldi Conference of Academies of Science and National Scientific Societies on Problems of Global Security. Trieste, Italy (2004).
- Program committee chair, Third IEEE International Workshop on Information Assurance. Washington D.C., USA (IWIA 2005)
- Program committee chair, Second IEEE International Workshop on Information Assurance. Charlotte, North Carolina, USA (IWIA 2004)
- Co-chair, First IEEE International Workshop on Information Assurance. Darmstadt, Germany (IWIA 2003)

- Program committee, IEEE ICC 2009 Ad-Hoc and Sensor Networking Symposium. Dresden, Germany.
- Program committee, Workshop on Security and Dependability of the Electric Power Infrastructure at the 38th Annual IEEE/IFIP International Conference on Dependable Systems and Networks. Anchorage, AK, USA (DSN 2008).
- Program committee, Second IEEE Workshop on Mission-Critical Networking. Phoenix, AZ, USA (MCN 2008)
- Program committee, GI Sicherheit 2008. Saarbrücken, Germany (SICHERHEIT 2008).
- Program committee, Second International ARES Workshop on Secure Software Engineering. Barcelona, Spain (SecSE 2008)
- Program committee, Workshop on Authentication and Identification techniques. Oslo, Norway (WAIT 2007)
- Program committee, 3rd GI Incident Management and IT-Forensics Conference. Stuttgart, Germany (IMF 2007)
- Program committee, 8th Annual IEEE SMC Information Assurance Workshop. United States Military Academy, West Point, New York, USA (IAW 2007)
- Program committee, International Conference on Security and Cryptography. Barcelona, Spain (SECRYPT 2007)
- Program committee, 10th Information Security Conference. Valparaiso, Chile (ISC 2007)

- Program committee, First International Workshop on Next Generation Networks for First Responders and Critical Infrastructures 2007. New Orleans, LA, USA (IPCCC 2007).
- Program committee, ARES Workshop on Secure Software Engineering. Vienna, Austria (SecSE 2007)
- Program committee, 4th GI/IEEE Workshop on Detection of Intrusions and Viruses & Vulnerability Assessment. Lucerne, Switzerland (DIMVA 2007)
- Program committee, 3rd Information Security Practice and Experience Conference, Hong Kong, China (ISPEC 2007)
- Program committee, 1st International Workshop on Critical Information Infrastructure Security, Samos, Greece (CRITIS '06)
- Program committee, 7th Annual IEEE SMC Information Assurance Workshop. United States Military Academy, West Point, New York, USA (IAW 2006)
- Program committee, 2nd GI Incident Management and IT-Forensics Conference. Stuttgart, Germany (IMF 2006)
- Program committee, 3rd GI/IEEE Workshop on Detection of Intrusions and Viruses & Vulnerability Assessment. Berlin, Germany (DIMVA 2006)
- Program committee, 2nd IEEE Workshop on Dependability and Security in Sensor Networks and Systems, Columbia, Maryland, USA (DSSNS 2006)
- Program committee, 3rd International Security Conference, Düsseldorf, Germany (2005).
- Program committee, GI Workshop Sicherheit in komplexen, vernetzten Umgebungen. Bonn, Germany (2005)
- Program committee, 6th Annual IEEE SMC Information Assurance Workshop. United States Military Academy, West Point, New York, USA (IAW 2005)
- Program committee, 2nd GI/IEEE Workshop on Detection of Intrusions and Viruses & Vulnerability Assessment. Vienna, Austria (DIMVA 2005)
- Program committee, 2nd International Security Conference, Berlin, Germany (2004).
- Program committee, 5th Annual IEEE SMC Information Assurance Workshop. United States Military Academy, West Point, New York, USA (IAW 2004)
- Program committee, GI/IEEE Workshop on Detection of Intrusions and Viruses & Vulnerability Assessment. Dortmund, Germany (DIMVA 2004)
- Program committee, 4th Annual IEEE SMC Information Assurance Workshop. United States Military Academy, West Point, New York, USA (IAW 2003)

- Review committees Annual Computer Security Applications Conferences (ACSAC), 2002–2005.

Editorial and Review Service

- Editor-in-Chief, Computers & Security (Elsevier Science)

- Member, Editorial Board of Information Security Technical Report (Elsevier Science)
- Member, Steering Committee IEEE International Security in Storage Workshops

- Reviewer for ACM Computing Reviews
- Reviewer for computers & graphics journal (Elsevier Science)
- Reviewer for IEEE Wireless Communications Magazine
- Reviewer for Computer Communications journal (Elsevier Science)

Other Service

- Balloter, IEEE Standards Association
- Institute Coordinator, German Academic Exchange Service IAESTE Program (2003-2005)
- External Ph.D. examiner, Strathclyde University, Glasgow, UK (Swee Keow Goo, Department of Electronic and Electrical Engineering).