

# Michael K. Reiter

Curriculum Vitae  
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## Education

Cornell University, Ithaca, New York, USA.

- Ph.D., Computer Science, August 23, 1993. Thesis: [252]
- M.S., Computer Science, August 26, 1991.

The University of North Carolina, Chapel Hill, North Carolina, USA.

- B.S., Mathematical Sciences with Highest Honors, May 14, 1989.  
Highest Distinction (class rank: 1 of 3476).

## Professional Experience

Duke University, Durham, North Carolina, USA

- Professor of Computer Science and Electrical & Computer Engineering (Jan 2021 – present)

VMware Research Group, Palo Alto, California, USA

- Affiliated Researcher (May 2017 – present)

The University of North Carolina, Chapel Hill, North Carolina, USA

- Lawrence M. Slifkin Distinguished Professor, Department of Computer Science (Jul 2007 – Dec 2020)
- Associate Chair for Diversity and Inclusion, Department of Computer Science (Aug 2016 – Dec 2020)

Carnegie Mellon University, Pittsburgh, Pennsylvania, USA

- Professor of Electrical & Computer Engineering and Computer Science (Oct 2001 – Jun 2007)
- Founding Technical Director, CyLab

Bell Laboratories, Lucent Technologies, Murray Hill, New Jersey, USA

- Director, Secure Systems Research (Sep 1998 – Sep 2001)

AT&T Labs – Research, Florham Park, New Jersey, USA (formerly AT&T Bell Laboratories)

- Principal Technical Staff Member (Jun 1996 – Sep 1998)
- Technical Staff Member (Aug 1993 – May 1996)

New York University, New York, New York, USA

- Adjunct Assistant Professor (spring semester, 1998)

# Awards and Honors

Named an **ACM Fellow** (2008) and **IEEE Fellow** (2014) for “contributions to computer security and fault-tolerant distributed computing.”

**ACM SIGSAC Outstanding Contributions Award** for “pioneering research contributions and leadership in computer and information security,” 2016.

[AI 2000 Security and Privacy Most Influential Scholar](#). The 2020 AI 2000 Most Influential Scholars in Security and Privacy are the top 10 most cited scholars from the top venues of this field over the past 10 years (2009–2019).

## Awards for scientific papers

- Outstanding Paper Award. 15<sup>th</sup> IEEE Symposium on Research in Security and Privacy (for [49]).
- Best Paper Award. 3<sup>rd</sup> USENIX Workshop on Electronic Commerce (for [65]).
- Best Paper Award & Best Student Paper Award. 8<sup>th</sup> USENIX Security Symposium (for [71]).
- Best Paper Award. 12<sup>th</sup> ISOC Network and Distributed System Security Symposium (for [108]).
- Best Paper Award. 17<sup>th</sup> ISOC Network and Distributed System Security Symposium (for [174]).
- Best Paper Award. 6<sup>th</sup> International Conference on Internet Monitoring and Protection (for [186]).
- Winner of the 4<sup>th</sup> Annual Best Scientific Cybersecurity Paper Competition (for [218]).
- Best Student Paper Award. 14<sup>th</sup> European Conference on Computer Systems (for [239]).
- Test of Time Award. 26<sup>th</sup> ACM Conference on Computer and Communications Security (for [170]).

## Papers invited from the following conferences to appear in journals

- 15<sup>th</sup> IEEE Symposium on Research in Security and Privacy ([49] invited, appears as [5])
- 16<sup>th</sup> IEEE Symposium on Security and Privacy ([51] invited, appears as [6])
- 3<sup>rd</sup> ACM Conference on Computer and Communications Security ([54] invited, appears as [7])
- 9<sup>th</sup> IEEE Computer Security Foundations Workshop ([56] invited, appears as [8])
- 17<sup>th</sup> IEEE Symposium on Reliable Distributed Systems ([67] invited, appears as [15])
- 13<sup>th</sup> ACM Conference on Computer and Communications Security ([130] invited, appears as [29])
- 13<sup>th</sup> ACM Symposium on Access Control Models and Technologies ([153] invited, appears as [34])

## Scholarships and fellowships

- John Motley Morehead Scholar. The University of North Carolina, 1985–89.
- United States National Science Foundation (NSF) Graduate Fellow. Cornell University, 1989–92.

Excellence in Teaching Award of the Computer Science Student Association, Department of Computer Science, University of North Carolina at Chapel Hill, 2009.

# Scientific Lectures

Dr. Reiter has delivered numerous scientific lectures at scientific symposia, leading universities, and industrial research institutions. Below is a sample of noteworthy, invited lectures.

- 6<sup>th</sup> Annual International Workshop on Selected Areas in Cryptography (Kingston, Ontario, Canada). August 10, 1999.
- 2<sup>nd</sup> Conference on Security in Communications Networks (Amalfi, Italy). September 17, 1999.
- 1999 Frontiers in Engineering Symposium, National Academy of Engineering (Irvine, CA, USA). October 14, 1999.
- Keynote address, 2002 Internet Society Symposium on Network and Distributed System Security (San Diego, CA, USA). February 8, 2002.
- Department colloquium, Department of Computer Science, Yale University (New Haven, CT, USA). April 3, 2003.
- Information Security Institute Seminar, Johns Hopkins University (Baltimore, MD, USA). April 8, 2003.
- 2<sup>nd</sup> NJITES Symposium on Cybersecurity and Trustworthy Software, Stevens Institute of Technology (Hoboken, NJ, USA). April 28, 2003.
- Triangle Computer Science Distinguished Lecture, hosted by Duke University, North Carolina State University, and the University of North Carolina (North Carolina, USA). March 1, 2004.
- Conference on Future Directions in Informatics, School of Informatics, Indiana University (Bloomington, IN, USA), September 11, 2004.
- Keynote address, 7<sup>th</sup> International Conference on Information Security and Cryptology (Seoul, Korea). December 2, 2004.
- Distinguished Lecture, Computer Science Department, Stony Brook University (Stony Brook, NY, USA), March 11, 2005.
- Department colloquium, Department of Computer Science, Columbia University (New York, NY, USA). April 6, 2005.
- Institute for Security Technology Studies, Dartmouth College (Hanover, NH, USA). May 19, 2005.
- Advanced Networks Colloquium, hosted by the Center for Satellite and Hybrid Communication Networks, the Department of Electrical and Computer Engineering, and the Institute for Systems Research at the University of Maryland (College Park, MD, USA). September 16, 2005.
- Cornell Computer Science 40<sup>th</sup> Anniversary Symposium, Cornell University (Ithaca, NY, USA). October 1, 2005.
- Distinguished Lecture, Information Trust Institute, University of Illinois at Urbana-Champaign (Urbana, IL, USA). January 18, 2006.
- Information Science & Technology Colloquium, NASA Goddard Space Flight Center (Greenbelt, MD, USA). February 8, 2006.
- ZISC Information Security Colloquium, ETH Zurich (Zurich, Switzerland). May 30, 2006.
- Information Security Institute Seminar, Johns Hopkins University (Baltimore, MD, USA). November 29, 2006.
- Department colloquium, Department of Computer Science, University of North Carolina (Chapel Hill, NC, USA). December 13, 2006.
- Second Workshop of the EU-US Summit Series on Cyber Trust: System Dependability and Security, hosted by the Information Trust Institute, University of Illinois at Urbana-Champaign (Monticello, IL, USA). April 26, 2007.
- Keynote address, 12<sup>th</sup> European Symposium on Research in Computer Security (Dresden, Germany). September 24, 2007.

- Distinguished Lecture, Department of Computer and Information Science, University of Pennsylvania (Philadelphia, PA, USA). October 9, 2007.
- A 30-Year Perspective on Replication (Monte Verita, Ascona, Switzerland). November 7, 2007.
- 3<sup>rd</sup> Bertinoro Ph.D. School on Security of Wireless Networking (Bertinoro, Italy). July 27 – August 1, 2008.
- Distinguished Lecturer Seminar Series, Computer Science Department, University of California at Irvine (Irvine, CA, USA). November 21, 2008.
- Keynote address, 10<sup>th</sup> International Symposium on Stabilization, Safety, and Security of Distributed Systems (Detroit, MI, USA). November 23, 2008.
- School of Electrical and Computer Engineering, Purdue University (West Lafayette, IN, USA). May 7, 2009.
- 7th International Conference on Applied Cryptography and Network Security (Paris-Rocquencourt, France). June 4, 2009.
- Keynote address, 29<sup>th</sup> International Conference on Distributed Computing Systems (Montreal, Canada). June 25, 2009.
- IFIP WG11.3 Conference on Data and Application Security (Montreal, Canada). July 12, 2009.
- Distinguished Speaker, Cray Colloquium Lecture Series, Department of Computer Science and Engineering, University of Minnesota (Minneapolis, MN, USA). October 19, 2009.
- Center for Applied Cybersecurity Research, Indiana University (Bloomington, IN, USA). December 3, 2009.
- Distinguished Colloquium, School of Informatics and Computing, Indiana University (Bloomington, IN, USA). December 4, 2009.
- Distinguished Lecture, Departments of Electrical & Computer Engineering and Computer Science, Iowa State University (Ames, IA, USA). March 12, 2010.
- IBM T.J. Watson Research Center (Hawthorne, NY, USA). March 16, 2010.
- Plenary lecture, MITACS International Focus Period: Advances in Network Analysis & its Applications – Network Security & Cryptography (Toronto, Ontario, Canada). June 24, 2010.
- MITACS Speaker Series on Privacy, University of Waterloo (Waterloo, Ontario, Canada). June 25, 2010.
- Distinguished Speaker Seminar, NEC Labs (Princeton, NJ, USA). August 13, 2010.
- Department of Electrical Engineering and Computer Science, University of Michigan (Ann Arbor, MI, USA). September 17, 2010.
- Distinguished Lecture, Department of Computer Science, University of Pittsburgh (Pittsburgh, PA, USA). January 21, 2011.
- Distinguished Lecture, Center for Advanced Security Research Darmstadt (Darmstadt, Germany). June 30, 2011.
- Distinguished Lecture, Department of Computer Science, University of Illinois at Urbana-Champaign (Urbana, IL, USA). October 24, 2011.
- Cyber Forum Speaker, Sandia National Labs (Albuquerque, NM, USA). June 5, 2012.
- CSE Colloquium and Distinguished Lecture, Department of Computer Science and Engineering, University of California at San Diego (San Diego, CA, USA). June 6, 2012.
- Keynote address, 3<sup>rd</sup> ACM Conference on Data and Application Security and Privacy (San Antonio, TX, USA). February 18, 2013.
- Distinguished Lecture, Department of Computing and Information Sciences, Kansas State University (Manhattan, KS, USA). March 6–7, 2013.
- Distinguished Lecture, Department of Computer Science, University of Texas at Dallas (Dallas, Texas, USA). March 8, 2013.
- Eminent Scholars Lecture Series, College of Engineering, University of South Florida (Tampa, FL, USA). March 22, 2013.

- CrySP Speaker Series on Privacy, School of Computer Science, University of Waterloo (Waterloo, Ontario, Canada). April 16, 2013.
- Distinguished Lecture, Department of Computer and Information Science, University of Pennsylvania (Philadelphia, PA, USA). September 24, 2013.
- Keynote address, 6<sup>th</sup> Symposium on Security Analytics and Automation (Washington, DC, USA). October 16, 2013.
- Keynote address, 16<sup>th</sup> Information Security Conference (Dallas, TX, USA). November 13, 2013.
- CyLab Seminar, Carnegie Mellon University (Pittsburgh, PA, USA). October 10, 2014.
- Keynote address, 22<sup>nd</sup> IEEE International Conference on Network Protocols (The Research Triangle, NC, USA). October 22, 2014.
- Distinguished Lecture, Department of Computer Science, University of Calgary (Calgary, Alberta, Canada). November 20, 2014.
- Computer Science Colloquium, Viterbi School of Engineering, University of Southern California (Los Angeles, California, USA). January 20, 2015.
- Department Colloquium, Computer Science Department, Duke University (Durham, NC, USA). February 2, 2015.
- Keynote address, Symposium and Bootcamp on the Science of Security, University of Illinois at Urbana-Champaign (Urbana, IL, USA). April 21, 2015.
- Keynote address, 7<sup>th</sup> ACM Cloud Computing Security Workshop (Denver, CO, USA). October 16, 2015.
- Keynote address, 9<sup>th</sup> International Conference on Network and System Security (New York, NY, USA). November 4, 2015.
- Distinguished Lecture, Department of Computer and Information Science and Engineering, University of Florida (Gainesville, FL, USA). November 20, 2015.
- Distinguished Lecture, College of Information and Computer Sciences, University of Massachusetts Amherst (Amherst, MA, USA). December 2, 2015.
- Distinguished Lecture, Computer Science and Engineering Department, University of California – Riverside (Riverside, CA, USA). January 11, 2016.
- Keynote address, GENI Regional Workshop (Clemson, SC, USA). December 2, 2016.
- Distinguished Lecture, Texas A&M Cybersecurity Distinguished Lecture Series (College Station, TX, USA). December 6, 2016.
- VMware Research Group (Palo Alto, CA, USA). January 12, 2017.
- Distinguished Lecture, Department of Computer Science, University of Illinois at Chicago (Chicago, IL, USA). September 14, 2017.
- CyLab Distinguished Seminar, Carnegie Mellon University (Pittsburgh, PA, USA). November 27, 2017.
- Distinguished Speaker Series, Department of Computer Science, Colorado School of Mines (Denver, CO, USA). January 11, 2018.
- Washington Area Trustworthy Computing Hour (WATCH) seminar, National Science Foundation (Alexandria, VA, USA). January 18, 2018.
- Distinguished Lecture, Northeastern Cybersecurity and Privacy Institute, Northeastern University (Boston, MA, USA). September 18, 2018.
- Distinguished Lecture, Computer Science and Engineering Department, The Ohio State University (Columbus, OH, USA). April 18, 2019.
- Computer Science Laboratory, SRI International (Menlo Park, CA, USA). August 8, 2019.
- Distinguished Lecture, Great Lakes Security Day, Department of Computer Science and Engineering, University of Buffalo (Buffalo, NY, USA). September 6, 2019.
- Qatar Computing Research Institute (Doha, Qatar). March 1, 2020.
- Computer Science Colloquium, Worcester Polytechnic Institute (Worcester, MA, USA). September 11, 2020.

- CyLab Seminar, Carnegie Mellon University (Pittsburgh, PA, USA). November 2, 2021.
- IBM Back to School Seminar (Research Triangle Park, NC, USA). November 19, 2021.

## Professional Service

### Journal editorships

- *ACM Transactions on Information and System Security*  
**Associate Editor** (January 2000–July 2004)  
**Editor-in-Chief** (August 2004–December 2008)
- *Communications of the ACM*  
**Editorial Board member** (November 2007–November 2011)
- *IEEE Transactions on Software Engineering*  
**Associate Editor** (2000–2004)
- *International Journal on Information Security*  
**Associate Editor** (2001–2006)
- *IEEE Transactions on Dependable and Secure Computing*  
**Associate Editor** (2004)  
Note: Position resigned in 2005 due to other obligations.
- *IEEE Internet Computing*  
Guest Editor, special issue on Survivable Distributed Systems (November/December 1999 issue)  
Guest Editor, special issue on Homeland Security (November/December 2004 issue)

### Conference program committees

\* = *Program Chair or Co-Chair*; + = *Program Subcommittee Chair or Associate Chair*

ACM Cloud Computing Security Workshop	2014, 2016*
ACM Conference on Computer and Communications Security (CCS)	1996, 1997, 1998*, 1999, 2001, 2002, 2003, 2008, 2011, 2012, 2013, 2014, 2019, 2020
ACM Conference on Data and Application Security and Privacy (CODASPY)	2013
ACM Conference on Electronic Commerce	1999, 2003, 2005*
ACM Conference on Principles of Distributed Computing (PODC)	1999, 2002, 2005
ACM SIGCOMM Conference	2008
ACM Symposium on Operating Systems Principles (SOSP)	2017
ACM Symposium on Information, Computer and Communications Security (ASIACCS)	2006, 2008, 2012*
CQRE—Secure Networking Conference	1999
Cryptographer's Track, RSA Conference	2001
DARPA Information Survivability Conference and Exposition	2003
European Symposium on Research in Computer Security (ESORICS)	2010, 2021
IEEE Computer Security Foundations (CSF)	1995, 1996, 2000, 2004
IEEE INFOCOM	2011
IEEE Symposium on Reliable Distributed Systems (SRDS)	2005

IEEE Symposium on Security and Privacy	1994, 1995, 1996, 1997, 1998, 1999*, 2000*, 2004, 2005, 2010, 2011, 2015, 2016, 2019
IEEE Workshop on Resource Sharing in Massively Distributed Systems	2002
IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)	2006, 2007, 2008, 2009, 2013, 2014*
IFIP International Working Conference on Dependable Computing for Critical Applications (DCCA)	1999
IFIP Working Conference on Communications and Multimedia Security	1999
Information Hiding Workshop	2001, 2002, 2004*
Information Security Conference (ISC)	2003, 2004
Information/System Survivability Workshop	2001
International Conference on Cryptology and Network Security (CANS)	2015*
International Conference on Distributed Computing Systems (ICDCS)	1999, 2001, 2002, 2005 <sup>+</sup> , 2008, 2010
International Conference on Information and Communications Security	2002
International Conference on Principles of Distributed Systems	2005
International Conference on Trust and Trustworthy Computing	2012*
International Symposium on Distributed Computing (DISC)	1999, 2004, 2007
International Workshop on Electronic Commerce	2001
International Workshop on Security	1999
International Workshop on Security and Privacy in Cloud Computing (SPCC)	2010
Network and Distributed System Security Symposium (NDSS)	2003*, 2004*, 2007, 2009, 2010, 2012, 2013, 2016, 2017, 2018, 2019
Privacy Enhancing Technologies Symposium (PETS)	2006, 2007, 2015, 2018, 2020
Symposium on Usable Privacy and Security (SOUPS)	2012, 2013, 2014, 2015, 2018
USENIX Annual Technical Conference	2019, 2021
USENIX Security Symposium	1998, 2002, 2006, 2008, 2009
USENIX Workshop on Hot Topics in Dependability (HotDep)	2012, 2013
USENIX Workshop on Hot Topics in Security (HotSec)	2009
Workshop on Intrusion Tolerant Systems	2002
Workshop on Privacy Enhancing Tools (PETools)	2013
Workshop on Secure Network Protocols	2008
World Wide Web Conference (WWW)	2006

#### Other conference service

- Publicity Chair, 4th ACM Conference on Computer and Communications Security (1997)
- Vice Chair, 1997 IEEE Symposium on Security and Privacy
- General Chair, 1998 IEEE Symposium on Security and Privacy

- General Chair, 8<sup>th</sup> ACM Conference on Computer and Communications Security (2001)
- Steering Committee, ACM Conference on Computer and Communications Security (1999–2002)
- Steering Committee, ACM Symposium on Information, Computer and Communications Security (2010–2013)
- Steering Committee, IEEE/IFIP International Conference on Dependable Systems and Networks (2011–2014)
- Steering Committee, Symposium on Usable Security and Privacy (2018–present)
- Steering Committee, IEEE Symposium on Security and Privacy (2021–present)

IEEE Technical Committee on Security and Privacy

- Chair, Subcommittee on Conferences (1998)
- **Vice Chair** (2000–2001)
- **Chair** (2002–2003)

Board of Visitors, Software Engineering Institute, Carnegie Mellon University (July 2003–Aug 2009)

External Review Committee, Information Security M.S. program of the College of Computing, Georgia Institute of Technology (April 2014)

External Review Committee, Cyber Security Group, Qatar Computing Research Institute (March 2020)

The Morehead-Cain Scholars Program

- Central Selection Committee (2009, 2011–14)
- Alumni Reader (2010)

U.S. Government service

- INFOSEC Science and Technology Study Group of the INFOSEC Research Council (1997–98)
- DARPA Study Panel on Self-Healing Systems (2001–02)
- Chair, DARPA Workshop on Self-Regenerative Systems (October 2002)
- Chair, National Science Foundation Principal Investigator Meeting (August 2004)
- Organizing Committee, National Science Foundation Study on Grand Challenges in Distributed Computing (July–September 2005)
- NSF Global Environment for Network Innovations (GENI)
  - Distributed Services Working Group (December 2005 – May 2007)
  - Planning Group (March 2006 – May 2007)
- IARPA NICAR Study on Safely Taking on New Executable Stuff of Uncertain Provenance (May 2008 – August 2008)
- Board of Visitors, Army Research Laboratory – Army Research Office Computing Sciences Division Review (May 5–6, 2010)
- Department of Commerce Emerging Technology and Research Advisory Committee (September 2008 – September 2012)
- Steering Committee, NSF Cyberspace 2025 Workshop (November 2013 – April 2014)



# Scientific Publications

## Publications in refereed journals

- [1] M. K. Reiter and K. P. Birman. [How to securely replicate services](#). *ACM Transactions on Programming Languages and Systems* 16(3):986–1009, May 1994.
- [2] M. Blaze, J. Lacy, T. London, and M. Reiter. **Issues and mechanisms for trustworthy systems: Creating transparent mistrust**. *AT&T Technical Journal* 73(5):30–39, September 1994.
- [3] M. K. Reiter, K. P. Birman, and R. van Renesse. [A security architecture for fault-tolerant systems](#). *ACM Transactions on Computer Systems* 12(4):340–371, November 1994.
- [4] M. K. Reiter and L. Gong. [Securing causal relationships in distributed systems](#). *The Computer Journal* 38(8):633–642, Oxford University Press, 1995. Preliminary version appears as [48].
- [5] M. K. Reiter. [A secure group membership protocol](#). *IEEE Transactions on Software Engineering* 22(1):31–42, January 1996. Preliminary version appears as [49].
- [6] M. K. Franklin and M. K. Reiter. [The design and implementation of a secure auction service](#). *IEEE Transactions on Software Engineering* 22(5):302–312, May 1996. Preliminary version appears as [51].
- [7] M. K. Reiter, M. K. Franklin, J. B. Lacy, and R. N. Wright. **The  $\Omega$  key management service**. *Journal of Computer Security* 4(4):267–287, IOS Press, 1996. Preliminary version appears as [54].
- [8] D. Malkhi and M. Reiter. **A high-throughput secure reliable multicast protocol**. *Journal of Computer Security* 5:113–127, IOS Press, 1997. Preliminary version appears as [56].
- [9] D. Malkhi and M. Reiter. [Byzantine quorum systems](#). *Distributed Computing* 11(4):203–213, 1998. Preliminary version appears as [59].
- [10] M. K. Reiter and A. D. Rubin. [Crowds: Anonymity for web transactions](#). *ACM Transactions on Information and System Security* 1(1):66–92, November 1998.
- [11] M. K. Reiter and S. G. Stubblebine. [Resilient authentication using path independence](#). *IEEE Transactions on Computers* 47(12):1351–1362, December 1998. Preliminary version appears as [58].
- [12] V. Anupam, A. Mayer, K. Nissim, B. Pinkas, and M. K. Reiter. [On the security of pay-per-click and other web advertising schemes](#). *Computer Networks* 31:1091–1100, 1999. Also appears as [70].
- [13] M. K. Reiter and S. G. Stubblebine. [Authentication metric analysis and design](#). *ACM Transactions on Information and System Security* 2(2):138–158, May 1999. Preliminary version appears as [60].
- [14] D. Malkhi, M. K. Reiter, and A. Wool. [The load and availability of Byzantine quorum systems](#). *SIAM Journal of Computing* 29(6):1889–1906, 2000. Preliminary version appears as [62].
- [15] D. Malkhi and M. K. Reiter. [An architecture for survivable coordination in large distributed systems](#). *IEEE Transactions on Knowledge and Data Engineering* 12(2):187–202, March/April 2000. Combines and extends [66][67].
- [16] D. Malkhi and M. K. Reiter. [Secure execution of Java applets using a remote playground](#). *IEEE Transactions on Software Engineering* 26(12):1197–1209, December 2000. Preliminary version appears as [64].
- [17] R. De Prisco, D. Malkhi, and M. K. Reiter. [On  \$k\$ -set consensus problems in asynchronous systems](#). *IEEE Transactions on Parallel and Distributed Systems* 12(1):7–21, January 2001. Preliminary version appears as [69].
- [18] L. Alvisi, D. Malkhi, E. Pierce, and M. K. Reiter. [Fault detection for Byzantine quorum systems](#). *IEEE Transactions on Parallel and Distributed Systems* 12(9):996–1007, September 2001. Preliminary version appears as [68].
- [19] D. Malkhi, M. K. Reiter, A. Wool, and R. N. Wright. [Probabilistic quorum systems](#). *Information and Computation* 170(2): 184–206, November 1, 2001. Preliminary version appears as [63].

- [20] P. Samarati, M. K. Reiter and S. Jajodia. [An authorization model for a public key management service](#). *ACM Transactions on Information and System Security* 4(4):453–482, November 2001.
- [21] F. Monrose, M. K. Reiter, and S. G. Wetzel. [Password hardening based on keystroke dynamics](#). *International Journal of Information Security* 1(2):69–83, February 2002. Preliminary version appears as [73].
- [22] P. Felber and M. K. Reiter. [Advanced concurrency control in Java](#). *Concurrency and Computation: Practice and Experience* 14(4):261–285, Wiley, 2002.
- [23] D. Malkhi, Y. Mansour and M. K. Reiter. [Diffusion without false rumors: On propagating updates in a Byzantine environment](#). *Theoretical Computer Science* 299:289–306, 2003. Preliminary version appears as [72].
- [24] D. Malkhi, M. Merritt, M. K. Reiter, and G. Taubenfeld. [Objects shared by Byzantine processes](#). *Distributed Computing* 16(1):37–48, 2003. Preliminary version appears as [75].
- [25] P. MacKenzie and M. K. Reiter. [Networked cryptographic devices resilient to capture](#). *International Journal of Information Security* 2(1):1–20, November 2003. Preliminary version appears as [78].
- [26] P. MacKenzie and M. K. Reiter. [Delegation of cryptographic servers for capture-resilient devices](#). *Distributed Computing* 16(4):307–327, December 2003. Preliminary version appears as [85].
- [27] P. MacKenzie and M. K. Reiter. [Two-party generation of DSA signatures](#). *International Journal of Information Security* 2(3–4):218–239, August 2004. Preliminary version appears as [83].
- [28] M. K. Reiter and A. Samar. [Quiver: Consistent object sharing for edge services](#). *IEEE Transactions on Parallel and Distributed Systems* 19(7):878–889, July 2008.
- [29] X. Wang and M. K. Reiter. [A multi-layer framework for puzzle-based denial-of-service defense](#). *International Journal of Information Security* 7(4):243–263, August 2008. Combines and extends [89][105].
- [30] X. Wang, Z. Li, J. Y. Choi, J. Xu, M. K. Reiter, and C. Kil. [Fast and black-box exploit detection and signature generation for commodity software](#). *ACM Transactions on Information and System Security* 12(2), December 2008. Preliminary version appears as [130].
- [31] J. M. McCune, A. Perrig and M. K. Reiter. [Seeing-is-believing: Using camera-phones for human-verifiable authentication](#). *International Journal on Security and Networks* 4(1–2):43–56, 2009. Preliminary version appears as [111].
- [32] D. Gao, M. K. Reiter and D. Song. [Beyond output voting: Detecting compromised replicas using HMM-based behavioral distance](#). *IEEE Transactions on Dependable and Secure Computing* 6(2):96–110, April–June 2009. Preliminary version appears as [128].
- [33] X. Wang and M. K. Reiter. [Using web-referral architectures to mitigate denial-of-service threats](#). *IEEE Transactions on Dependable and Secure Computing* 7(2):203–216, April–June 2010. Preliminary version appears as [129].
- [34] L. Bauer, S. Garriss and M. K. Reiter. [Detecting and resolving policy misconfigurations in access-control systems](#). *ACM Transactions on Information and System Security* 14(1), May 2011. Preliminary version appears as [153].
- [35] Y. Liu, P. Ning and M. K. Reiter. [False data injection attacks against state estimation in electric power grids](#). *ACM Transactions on Information and System Security* 14(1), May 2011. Preliminary version appears as [170].
- [36] D. Bethea, R. A. Cochran and M. K. Reiter. [Server-side verification of client behavior in online games](#). *ACM Transactions on Information and System Security* 14(4), December 2011. Preliminary version appears as [174].
- [37] A. A. Yavuz, P. Ning and M. K. Reiter. [BAF and FI-BAF: Efficient and publicly verifiable cryptographic schemes for secure logging in resource-constrained systems](#). *ACM Transactions on Information and System Security* 15(2), July 2012.

- [38] M. Abd-El-Malek, M. Wachs, J. Cipar, K. Sanghi, G. R. Ganger, G. A. Gibson, and M. K. Reiter. [File system virtual appliances: Portable file system implementations](#). *ACM Transactions on Storage* 8(3), September 2012.
- [39] S. E. Coull, A. M. White, T.-F. Yen, F. Monroe and M. K. Reiter. [Understanding domain registration abuses](#). *Computers & Security* 31(7):806–815, October 2012. Preliminary version appears as [178].
- [40] H.-C. Kum, A. Krishnamurthy, A. Machanavajjhala, M. K. Reiter, and S. Ahalt. [Privacy preserving interactive record linkage \(PIRL\)](#). *Journal of the American Medical Informatics Association*, November 2013.
- [41] P. Li, D. Gao, and M. K. Reiter. [StopWatch: A cloud architecture for timing channel mitigation](#). *ACM Transactions on Information and System Security* 17(2), November 2014. Preliminary version appears as [202].
- [42] L. Wei and M. K. Reiter. [Toward practical encrypted email that supports private, regular-expression searches](#). *International Journal on Information Security* 14(5):397–416, October 2015.
- [43] Q. Xiao, M. K. Reiter, and Y. Zhang. [Persistent pseudonyms for servers in the cloud](#). *Proceedings on Privacy Enhancing Technologies* 4:271–289, 2017.
- [44] Q. Ismail, T. Ahmed, K. Caine, A. Kapadia, and M. Reiter. [To permit or not to permit, that is the usability question: Crowdsourcing mobile apps’ privacy permission settings](#). *Proceedings on Privacy Enhancing Technologies* 4:119–137, 2017.
- [45] Z. Mi, H. Chen, Y. Zhang, S. Peng, X. Wang, and M. Reiter. [CPU elasticity to mitigate cross-VM runtime monitoring](#). *IEEE Transactions on Dependable and Secure Computing*, June 2018.
- [46] M. Sharif, S. Bhagavatula, L. Bauer, and M. K. Reiter. [A general framework for adversarial examples with objectives](#). *ACM Transactions on Privacy and Security* 22(3), June 2019.

#### Symposium, conference, and workshop publications

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