

Iliano Cervesato

Carnegie Mellon University

iliano@cmu.edu

<http://cs.cmu.edu/~iliano>

(as of December 23, 2022)

Employment

Carnegie Mellon University Pittsburgh, PA, USA
Computer Science Department, *Professor* (September 2016 – present)

Carnegie Mellon University (Qatar campus)
Computer Science Department.

- *Professor* (July 2014 – August 2016)
- *Associate Professor* (July 2006 – June 2014)

Tulane University New Orleans, LA, USA
Mathematics Department, *Visiting Research Professor*
(November 2004 – November 2005)

Deductive Solutions Annandale, VA, USA
Founder and Chief Research Scientist (2004–present)

Naval Research Laboratory Washington, DC, USA
Senior Research Scientist through **ITT Industries**
(October 1999 – October 2004)

- **Princeton University** Princeton, NJ, USA
Department of Computer Science, *Visiting Research Collaborator* (August 2002 – August 2004)

Stanford University Stanford, CA, USA
Department of Computer Science, *Postdoctoral Research Affiliate* (September 1997 – September 1999)

Carnegie Mellon University Pittsburgh, PA, USA
Department of Computer Science, *Postdoctoral Research Affiliate* (November 1995 – August 1997)

Education

Carnegie Mellon University Pittsburgh, PA USA
Extended visit at the *Department of Computer Science*, where I developed my doctoral dissertation under the supervision of Prof. Frank Pfenning (April 1994 – November 1995).

University of Torino Torino, Italy
Ph.D. in Computer Science (*Dottorato di Ricerca in Informatica*) received on *October 16, 1996*.

University of Houston Houston, TX, USA
Master of Science in Computer Science received on *August 20, 1992*.

University of Udine Udine, Italy
Bachelor degree in Computer Science (*Laurea in Scienze dell'Informazione*) received on *March 7, 1991*.

At a glance

- 13 regular courses
 - 53 offerings
 - 2 new courses designed
- 6 invited tutorials and advanced courses
- 4 independent study supervised
- 18 student projects advised
- Thesis committees
 - 5 PhD
 - 2 Master's
 - 12 undergraduate

Invited Tutorials and Advanced Courses

Internet Security Protocols Department of Information and Software Engineering, George Mason University (Fairfax, VA), 2005.

Cryptography and Computer Security Department of Computer Science, Chiang Mai University (Chiang Mai, Thailand), 2003.

Linear Logic and Security Summer School on Foundations of Security (Eugene, OR), 2003.

Computer Security Dipartimento di Informatica e Matematica, Università di Udine (Udine, Italy), 2001.

Security Protocol Specification Languages 2nd International School on Foundations Of Security Analysis and Design — FOSAD'01 (Bertinoro, Italy), 2001.

An Introduction to Logical Frameworks Département d'Informatique, Université Laval (Québec, Canada), 1998.

PhD Thesis Committees

- Henry DeYoung, CMU, USA, 2020.
- Agata Murawska, IT University of Copenhagen, Denmark, 2017.
- Robert J. Simmons, CMU, USA, 2010.
- Ye Wu, Stevens Institute of Technology, USA, 2010.
- Vivek Nigam, École Polytechnique, France, 2009.

Master Thesis Committees

- Chuta Sano, CMU, USA, 2019.
- Anand Subramanian, CMU, USA, 2012.

Regular Courses

Principles of Imperative Computation 15-122
Carnegie Mellon University
S'23, F'22, S'22, F'21, S'21, F'20, M'20, S'20, F'19, S'19, F'18, S'18, F'17, S'17, F'16.

Principles of Functional Programming 15-150
Carnegie Mellon University
F'15, F'14, F'13, Summer 2013, F'12.

Discovering Logic 15-199
Carnegie Mellon University
F'15, F'14, S'14, S'13, S'11, S'10.

Principles of Programming 15-212
Carnegie Mellon University
S'12, S'11, S'10, S'09, S'08, S'07, F'06.

Technical Writing for Computer Scientists 15-221
Carnegie Mellon University
F'11.

Foundations of Programming Languages 15-312
Carnegie Mellon University
S'15, S'13, S'11, S'10, S'09, S'08, S'07.

Constructive Logic 15-317
Carnegie Mellon University
F'15, S'14, S'12.

Introduction to Computer and Network Security 15-349
Carnegie Mellon University
F'14, F'12, F'10, F'08.

Technology and Global Development 15-502
Carnegie Mellon University
F'07.

Logic and Mathematical Inquiry 80-211
Carnegie Mellon University
S'12.

Secure Electronic Commerce ISA 767/INFS 667
George Mason University
S'06.

Linear Logic and Applications CS 359
Stanford University
Winter 1999.

Linear Logic and Applications 15-850A
Carnegie Mellon University
S'95.

At a glance

- \$7,096,150 in grant funding
- 123 refereed publications
 - 1 book
 - 3 dissertations
 - 13 edited collections
 - 5 articles in a collection
 - 23 journal articles
 - 37 conference papers
 - 41 workshop papers
 - (+ 23 non refereed technical reports)
- 50 coauthors
- 4 postdocs
- over 96 invited presentations*

*I started keeping track only in 1996.

Major Research Interests**Computational logic**

Proof theory, type theory, logical frameworks, applications.

Programming languages

Theory, design, implementation and verification, logic programming.

Distributed computing

State transition systems, process algebra, foundations.

Computer security

Protocol verification, specification languages, foundations, automated tools.

Educational computing

Wikis, mobile learning.

Productivity tools

Deductive spreadsheets, web applications.

Publications

See <http://cs.cmu.edu/~iliano> for a complete list and links to most papers.

Books

- [1] Iliano Cervesato. *The Deductive Spreadsheet*. Springer, 2013. ISBN 978-3-642-37746-4.

Theses

- [2] Iliano Cervesato. *A Linear Logical Framework*. PhD thesis, Dipartimento di Informatica, Università di Torino, 1996.
- [3] Iliano Cervesato. *A WAM Implementation for the Meta-Logic Programming Language 'Log*. Master's thesis, Department of Computer Science, University of Houston, Houston, TX, 1992.
- [4] Iliano Cervesato. *Una Proposta per l'Introduzione di Capacità di Meta-Rappresentazione in un Linguaggio di Programmazione Logica (in Italian)*. Tesi di laurea in scienze dell'informazione, Università degli Studi di Udine, Italy, 1991.

Editor

- [5] Sandra Alves and Iliano Cervesato. Special issue on Linearity 2014. *Mathematical Structures in Computer Science — MSCS*, 28(5), July 2018.
- [6] Maribel Fernández and Iliano Cervesato, editors. *Linearity 2016*, volume 238 of *EPTCS*, Porto, Portugal, 25 June 2016. University of Porto.
- [7] Iliano Cervesato and Carsten Schürmann, editors. *WoF 2015*, volume 197 of *EPTCS*, Suva, Fiji, 23 November 2015. DOI: 10.4204/EPTCS.197, ISSN: 2075-2180.
- [8] Iliano Cervesato and Kaustuv Chaudhuri, editors. *LFMTP 2015*, volume 185 of *EPTCS*, Berlin, Germany, 1 August 2015.
- [9] Sandra Alves and Iliano Cervesato, editors. *Linearity 2014*, volume 176 of *EPTCS*, Vienna, Austria, 13 July 2014.
- [10] Iliano Cervesato, Helmut Veith, and Andrei Voronkov, editors. *Logic for Programming, Artificial Intelligence and Reasoning — Proceedings of LPAR 2008 (15th International conference on Logic for Programming, Artificial Intelligence and Reasoning)*, Doha, Qatar, 23–27 November 2008. Springer LNCS 5330.
- [11] Iliano Cervesato, editor. *Advances in Computer Science — Proceedings of ASIAN 2007 (12th Annual Asian Computing Conference, focusing on Computer and Network Security)*, Doha, Qatar, 9–11 December 2007. Springer LNCS 4846.
- [12] Serge Autexier, Iliano Cervesato, and Heiko Mantel, editors. *Special issue on FCS/VERIFY 2002*, volume 4. International Journal of Information Security, February 2005.
- [13] Iliano Cervesato, editor. *Foundations of Computer Security: proceedings of the LICS'03 workshop on Foundations of Computer Security*, Ottawa, Canada, 26–27 June 2003. Technical Report TR-2003-04, Department of Computer Science, University of Ottawa.
- [14] Iliano Cervesato, editor. *Foundations of Computer Security: proceedings of the FLoC'02 Workshop on Foundations of Computer Security — FCS'02*, Copenhagen, Denmark, 25–26 July 2002. Technical Report DIKU-02-12, Department of Computer Science, University of Copenhagen.
- [15] Jonathan Herzog and Iliano Cervesato, editors. *The Computer Security Foundations Workshop: 1988-2002*. CD-ROM, June 2002.
- [16] Iliano Cervesato and John C. Mitchell, editors. *Pleiades Project: Collected Work 1998-1999*, Stanford, CA, August 1999. Technical Report STAN-CS-TR-99-1625, Department of Computer Science, Stanford University.
- [17] Iliano Cervesato and John C. Mitchell, editors. *Pleiades Project: Collected Work 1997–1998*, Stanford, CA, September 1998. Technical Report STAN-CS-TR-98-1612, Department of Computer Science, Stanford University.

Grants

ProSEED/Simon Initiative **Hammock Support for Quality TEL Assessments: Customizing Learning Activities for Close Alignment with Learning Objectives in 15-122 Imperative Programming**, \$15,000 (PI), 2018.

QNRF NPRP EP X-063-1-014 **The Garbled Computer: Towards Computing Without Seeing**, \$1,758,209 (PI), 2015-16.

QNRF NPRP 7-988-1-178 **Automated verification of properties of concurrent, distributed and parallel specifications with applications to computer security**, \$898,420 (Lead PI), 2014-18.

QNRF NPRP 4-341-1-059 **Usable automated data inference for end-users**, \$1,017,624 (Lead PI), 2011-16.

QNRF NPRP 4-1593-1-260 **VirtuallySafe: A Framework for Hypervisor Code and Data Integrity**, \$1,049,572 (PI), 2011-15.

QNRF NPRP 09-667-1-100 **Effective Programming for Large Distributed Ensembles**, \$1,035,164 (Lead PI), 2010-15.

QNRF NPRP 09-1107-1-168 **Formal Reasoning about Languages for Distributed Computation**, \$1,002,161 (co-Lead PI), 2010-14.

CMU-Q QF 930107 **Automated Analysis of Large Cryptographic Protocols**, \$200,000 (Lead PI), 2006-09.

QNRF UREP 4-7-6 **Empirical Evaluation of the Cryptographic Protocol Specification Language MSR**, \$10,000 (PI), 2007.

QNRF UREP 4-31-6 **Implementation and Evaluation of a Innovative Encryption-Based Anti-Tamper Technology**, \$10,000 (PI), 2007.

DARPA W31P4Q-05-C-R0405 **A Deductive Spreadsheet**, \$100,000 (Lead PI), 2004-05.

(publications continued)

Collections

- [18] Frederic Butler, Iliano Cervesato, Aaron D. Jaggard, and Andre Scedrov. Verifying Confidentiality and Authentication in Kerberos 5. In K. Futatsugi, F. Mizoguchi, and N. Yonezaki, editors, *Software Security: Theories and Systems*, pages 1–24. Springer-Verlag LNCS 3233, Tokyo, Japan, 2003.
- [19] Iliano Cervesato, Nancy Durgin, Patrick D. Lincoln, John C. Mitchell, and Andre Scedrov. A Comparison between Strand Spaces and Multiset Rewriting for Security Protocol Analysis. In M. Okada, B. Pierce, Andre Scedrov, H. Tokuda, and A. Yonezawa, editors, *Software Security: Theories and Systems*, pages 356–383. Springer-Verlag LNCS 2609, Tokyo, Japan, 2002.
- [20] Iliano Cervesato. Data Access Specification and the Most Powerful Symbolic Attacker in MSR. In M. Okada, B. Pierce, Andre Scedrov, H. Tokuda, and A. Yonezawa, editors, *Software Security: Theories and Systems*, pages 384–416. Springer-Verlag LNCS 2609, Tokyo, Japan, 2002.
- [21] Paul Syverson and Iliano Cervesato. The logic of authentication protocols. In R. Focardi and R. Gorrieri, editors, *Foundations of Security Analysis and Design*, pages 63–136. Springer LNCS 2171, 2001.
- [22] Iliano Cervesato. Logical framework design: Why not just classical logic? In M. Faller, S. Kaufmann, and M. Pauly, editors, *Formalizing the Dynamics of Information*, pages 87–104. CSLI Publications, 2000.

Journals

- [23] Jesse Elwell, Ryan Riley, Nael Abu-Ghazaleh, Dmitry Ponomarev, and Iliano Cervesato. Rethinking Memory Permissions for Protection Against Cross-Layer Attacks. *ACM Transactions on Architecture and Code Optimization — TACO*, 12(4), 2016.
- [24] Yuxin Deng, Robert J. Simmons, and Iliano Cervesato. Relating reasoning methodologies in linear logic and process algebra. *Mathematical Structures in Computer Science — MSCS*, pages 1–39, 2014.
- [25] Shikar Kumar, Iliano Cervesato, and Coty Gonzalez. How people do relational reasoning? Role of problem complexity and domain familiarity. *Computers in Human Behavior*, 41:319–326, 2014.
- [26] Iliano Cervesato and Thierry Sans. Substructural Meta-Theory of a Type-Safe Language for Web Programming. *Fundamenta Informaticae*, 130:1–31, 2014.
- [27] Yuxin Deng, Iliano Cervesato, and Robert J. Simmons. Relating Reasoning Methodologies in Linear Logic and Process Algebra. *Electronic Proceedings in Theoretical Computer Science*, 101:50–60, 2012.
- [28] Iliano Cervesato. An Improved Proof-Theoretic Compilation of Logic Programs. *Theory and Practice of Logic Programming*, 12(4-5):639–657, 2012.
- [29] Michael Backes, Iliano Cervesato, Aaron D. Jaggard, Andre Scedrov, and Joe-Kai Tsay. Cryptographically Sound Security Proofs for Basic and Public-Key Kerberos. *International Journal of Information Security*, 10(2):107–134, 2011.
- [30] Iliano Cervesato and Andre Scedrov. Relating State-Based and Process-Based Concurrency through Linear Logic. *Information & Computation*, 207(10):1044–1077, 2009.
- [31] Iliano Cervesato, Aaron D. Jaggard, Joe-Kai Tsay, Andre Scedrov, and Christopher Walstad. Breaking and Fixing Public-Key Kerberos. *Information & Computation*, 206(2-4):402–424, 2008.
- [32] Iliano Cervesato and Mark-Oliver Stehr. Representing the MSR cryptoprotocol specification language in an extension of rewriting logic with dependent types. *Higher-Order and Symbolic Computation*, 20(1-2):3–35, 2007.
- [33] Catherine Meadows and Iliano Cervesato. One Picture is Worth a Dozen Connectives: A Fault-Tree Representation of NPATRL Security Requirements. *IEEE Transactions on Dependable and Secure Computing*, 4(3):216–227, 2007.
- [34] Iliano Cervesato. NEXCEL, a Deductive Spreadsheet. *The Knowledge Engineering Review*, 22(3):221–236, 2007.
- [35] Frederic Butler, Iliano Cervesato, Aaron D. Jaggard, Andre Scedrov, and Christopher Walstad. Formal Analysis of Kerberos 5. *Theoretical Computer Science*. 367(1-2):57–87. 2006.

Recent Projects

MetaCLF-2 (2016–present): Automated verification of properties of concurrent, distributed and parallel specifications with applications to computer security.

Some Older Projects

Ripple (2010–16): A programming language for massively distributed ensembles.

VirtuallySafe (2011–16): A Framework for Hypervisor Code and Data Integrity.

GC (2015–16): The Garbled Computer: Towards Computing Without Seeing.

NEXCEL (2005–16): A Deductive Spreadsheet for everyday symbolic reasoning.

MetaCLF (2010–15): A Logical Framework for reasoning about concurrency.

QWeSST (2009–16): A programming language model for web development.

Kerberos Verification (2002–07): A detailed specification and verification of a large commercial cryptographic protocol, Kerberos 5.

CLF (2001–07): A Logical Framework for specifying concurrency.

MSR (1998–2010): Analysis of cryptographic protocols in multiset rewriting.

NSF-JSPS Cooperative Science Program (1999–2004): Logical Methods for Formal Verification of Software, jointly supported by the NSF Japan Program and the Japan Society for the Promotion of Science.

Pleiades (1997–99): Assurance for modular and mobile code, Semantic Consistency in Information Exchange, ONR Multi-University Research Initiative.

LLF (1994–97): A Linear Logical Framework for reasoning about state.

(publications continued)

- [36] Iliano Cervesato, Nancy Durgin, Patrick D. Lincoln, John C. Mitchell, and Andre Scedrov. A Comparison between Strand Spaces and Multiset Rewriting for Security Protocol Analysis. *Journal of Computer Security*, 13(2):265–316, 2005.
- [37] Stefano Bistarelli, Iliano Cervesato, Gabriele Lenzini, and Fabio Martinelli. Relating Multiset Rewriting and Process Algebras for Security Protocol Analysis. *Journal of Computer Security*, 13(1):3–47, 2005.
- [38] Catherine Meadows, Paul Syverson, and Iliano Cervesato. Formal specification and analysis of the group domain of interpretation using NPATR and the NRL protocol analyzer. *Journal of Computer Security*, 12(6):893–932, 2004.
- [39] Iliano Cervesato and Frank Pfenning. A Linear Spine Calculus. *Journal of Logic and Computation*, 13(5):639–688, 2003.
- [40] Iliano Cervesato and Frank Pfenning. A Linear Logical Framework. *Information & Computation*, 179(1):19–75, 2002.
- [41] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. A guided tour through some extensions of the event calculus. *Computational Intelligence*, 16(2):307–347, 2000.
- [42] Iliano Cervesato, Joshua S. Hodas, and Frank Pfenning. Efficient resource management for linear logic proof search. *Theoretical Computer Science*, 232(1–2):133–163, 2000.
- [43] Iliano Cervesato and Angelo Montanari. A general modal framework for the event calculus and its skeptical and credulous variants. *Journal of Logic Programming*, 38(2):111–164, 1999.
- [44] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. The complexity of model checking in modal event calculi with quantifiers. *Electronic Transactions on Artificial Intelligence*, 2(1–2):1–24, 1998.
- [45] Iliano Cervesato, Angelo Montanari, and Alessandro Provetti. On the non-monotonic behavior of the event calculus for deriving maximal time intervals. *International Journal on Interval Computations*, 2:83–119, 1993.

Conferences

- [46] Baljit Singh, Dmitry Evtushkin, Jesse Elwell, Ryan Riley, and Iliano Cervesato. On the Detection of Kernel-Level Rootkits Using Hardware Performance Counters. In *12th ACM Asia Conference on Computer and Communications Security — ASIACCS’17*, Abu Dhabi, UAE, 2017.
- [47] Iliano Cervesato, Edmund S.L. Lam, and Ali Elgazar. Choreographic Compilation of Decentralized Comprehension Patterns. In Jose Julio Alferes, Leopoldo Bertossi, and Guido Governatori, editors, *10th International Web Rule Symposium — RuleML’16*, Stony Brook, NY, 2016. Stony Brook University, Springer LNCS 9718. best paper award.
- [48] Iliano Cervesato and Edmund S.L. Lam. Modular Multiset Rewriting. In Martin Davis, Andrei Voronkov, Annabelle McIver, and Ansgar Fehnker, editors, *20th International Conferences on Logic for Programming, Artificial Intelligence and Reasoning — LPAR’15*, Suva, Fiji, 2015. Springer LNCS 9450.
- [49] Edmund S.L. Lam, Iliano Cervesato, and Ali Elgazar. Programmable Orchestration of Time-Synchronized Events Across Decentralized Android Ensembles. In *11th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications — WiMob’15*, Abu Dhabi, UAE, 2015. IEEE Xplore Digital Library.
- [50] Edmund S.L. Lam, Iliano Cervesato, and Nabeeha Fatima Haque. Comingle: Distributed Logic Programming for Decentralized Mobile Ensembles. In T. Holvoet and M. Viroli, editors, *17th IFIP International Conference on Coordination Models and Languages — COORDINATION’15*, pages 51–66, Grenoble, France, 2015. Inria, Springer LNCS 9037.
- [51] Edmund S.L. Lam and Iliano Cervesato. Optimized Compilation of Multiset Rewriting with Comprehensions. In J. Garrigue, editor, *12th Asian Symposium on Programming Languages and Systems — APLAS’14*, pages 19–38, Singapore, 2014. Springer LNCS 8858.
- [52] Edmund S.L. Lam and Iliano Cervesato. Constraint Handling Rules with Multiset Comprehension Patterns. In R. Haemmerlé and J. Sneyers, editors, *11th International Workshop on Constraint Handling Rules — CHR’14*, Vienna, Austria, 2014.

Postdocs

- *Dragiša Žunić*, CMU, 2016–present.
- *Edmund Soon Lee Lam*, CMU, 2012–16.
- *Jorge Luis Sacchini*, CMU, 2011–14.
- *Thierry Sans*, CMU, 2007–10.

Sans, Sacchini and Lam were awarded a competitive JSREP grant by the Qatar National Research Fund (\$300,000 over 3 years).

Technical Staff

- *Mihir Khare*, CMU, 2022.
- *Yutian Chen*, CMU, 2022.
- *Ali Elgazar*, CMU, 2016.
- *Arun Pandian*, CMU, 2016.
- *Afrozul Haq Aziz*, CMU, 2015–16.
- *Lamana Mulaffer*, CMU, 2015.
- *Baljit Singh*, CMU, 2014–16.
- *Askerali Maruthullathil*, CMU, 2013–present.
- *Ian Voysey*, CMU, 2012–13.
- *Vanitha Prabhu*, CMU, 2011.
- *Rashi Dhing*, CMU, 2008–12.

(publications continued)

- [53] Edmund S.L. Lam and Iliano Cervesato. Reasoning About Set Comprehensions. In P. Rümmer and C. Wintersteiger, editors, *12th International Workshop on Satisfiability Modulo Theories — SMT'14*, volume 1163 of *CEUR Workshop Proceedings*, pages 27–37, Vienna, Austria, 2014.
- [54] Iliano Cervesato. Proof-Theoretic Foundations of Indexing in Logic Programming. In A. Felty and B. Pientka, editors, *9th International Workshop on Logical Frameworks and Meta-languages: Theory and Practice — LFMT'14*, Vienna, Austria, 2014.
- [55] Thierry Sans, Iliano Cervesato, and Soha Hussein. Controlling Data Flow with a Policy-Based Programming Language for the Web. In D. Gollmann and H. Riis Nielson, editors, *8th Nordic Conference on Secure IT Systems — NordSec'13*, pages 215–230, Ilulissat, Greenland, 2013. Springer LNCS 8208.
- [56] Edmund S.L. Lam and Iliano Cervesato. Decentralized Execution of Constraint Handling Rules for Ensembles. In T. Schrijvers, editor, *15th International ACM Symposium on Principles and Practice of Declarative Programming — PPDP'13*, pages 205–216, Madrid, Spain, 2013.
- [57] Edmund S.L. Lam and Iliano Cervesato. Modeling Datalog Fact Assertion and Retraction in Linear Logic. In A. King, editor, *14th International ACM Symposium on Principles and Practice of Declarative Programming — PPDP'12*, pages 67–78, Leuven, Belgium, 2012.
- [58] Iliano Cervesato. Discovering logic through comics. In G. Röbling, T. Naps, and C. Spannagel, editors, *16th Annual AMC Conference on Innovation and Technology in Computer Science Education — ITiCSE'11*, pages 103–107, Darmstadt, Germany, 2011.
- [59] Andreas Karatsolis, Iliano Cervesato, Nael Abu-Ghazaleh, Yonina Cooper, Khaled Harras, Kemal Oflazer, and Thierry Sans. Getting CS Undergraduates to Communicate Effectively. In G. Röbling, T. Naps, and C. Spannagel, editors, *16th Annual AMC Conference on Innovation and Technology in Computer Science Education — ITiCSE'11*, pages 283–287, Darmstadt, Germany, 2011.
- [60] Andreas Karatsolis, Iliano Cervesato, Nael Abu-Ghazaleh, Yonina Cooper, Khaled Harras, Kemal Oflazer, and Thierry Sans. A Framework to Support the Communication Needs of CS Undergraduates. In T. Cortina, E. Walker, L. Smith King, and D. Musicant, editors, *42nd ACM Technical Symposium on Computer Science Education — SIGCSE'11*, page 713, Dallas, TX, 2011.
- [61] Iliano Cervesato, Aaron D. Jaggard, Joe-Kai Tsay, Andre Scedrov, and Christopher Walstad. Breaking and Fixing Public-Key Kerberos. In M. Okada and I. Satoh, editors, *Eleventh Annual Asian Computing Science Conference — ASIAN'06*, pages 164–178, Tokyo, Japan, 2006.
- [62] Iliano Cervesato. A Spreadsheet for Everyday Symbolic Reasoning. In M. Kassoff, H. Stuckenschmidt, A. Valente, and M. Witbrock, editors, *AAAI 2006 Fall Symposium on Integrating Reasoning into Everyday Applications — EVERYDAY'06*, pages 1–8, Arlington, VA, 2006. Technical Report FS-06-05 (AAAI Press).
- [63] Michael Backes, Iliano Cervesato, Aaron D. Jaggard, Andre Scedrov, and Joe-Kai Tsay. Cryptographically Sound Security Proofs for Basic and Public-Key Kerberos. In D. Gollmann and A. Sabelfeld, editors, *11th European Symposium On Research In Computer Security — ESORICS'06*, Hamburg, Germany, 2006.
- [64] Kevin Watkins, Iliano Cervesato, Frank Pfenning, and David Walker. A Concurrent Logical Framework: The Propositional Fragment. In S. Berardi, M. Coppo, and F. Damiani, editors, *TYPES Conference (selected papers) — TYPES'03*, pages 355–377, Torino, Italy, 2003. Springer LNCS 3085.
- [65] Catherine Meadows, Paul Syverson, and Iliano Cervesato. Formalizing GDOI group key management requirements in NPATRL. In P. Samarati, editor, *Proceedings of the Eighth ACM Conference on Computer and Communication Security — CCS'01*, pages 235–244, Philadelphia, PA, 2001.
- [66] Iliano Cervesato. The Dolev-Yao intruder is the most powerful attacker. In J. Halpern, editor, *Proceedings of the Sixteenth Annual Symposium on Logic in Computer Science — LICS'01*, Boston, MA, 2001.

Software and Web Applications

Nexcel

A spreadsheet application with native support for relational and deductive reasoning.

MSR(e)

A rule-based programming language with multiset comprehension patterns for distributed applications.

LLF

An interpreter and type checker for LLF, a logical framework based on a linear type theory.

SML autograding support for Autolab

A didactic methodology and programming support to get students immediate feedback on code written in Standard ML using Autolab.

Grade forecaster

A web application for students to graph their grades, observe trends, and make predictions. It also allows the instructor to monitor the performance of every single student as well as of the class as a whole.

Course planner

A web application for students and advisers to create and maintain a course plan, understand course dependencies and loads, and get information about courses.

Job posting and evaluation

A web application to advertise positions and automate the tasks involved in processing job applications.

Class scheduler

A web application that allows building the schedule of classes for a whole university and to search for information about courses and for empty slots for meetings.

General publication manager

A web application to manage centrally the research publications of a group or an entire campus. One can search for publications, embed a query in his/her web site, and import or export entries in BibTeX format.

Community Web Sites

CS web site The web site of the CS program at CMU Qatar.

CS Forum wiki A collaborative scrapbook for the administrative activities of the CS group and the institutional memory of how CS at CMU-Q has evolved over the years.

Research wiki A collection of information needed to do research at CMU-Q, from policies to guidelines to informal advice to historical records.

(publications continued)

- [67] Iliano Cervesato. Typed multiset rewriting specifications of security protocols. In A. Seda, editor, *Proceedings of the First Irish Conference on the Mathematical Foundations of Computer Science and Information Technology — MFCSIT'00*, pages 1–43, Cork, Ireland, 2001. Elsevier ENTCS 40.
- [68] Iliano Cervesato. Proof-theoretic foundation of compilation in logic programming languages. In J. Jaffar, editor, *Proceedings of the 1998 Joint International Conference and Symposium on Logic Programming — JICSLP'98*, pages 115–129, Manchester, UK, 1998.
- [69] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. The complexity of model checking in modal event calculi with quantifiers. In A.G. Cohn, L.K. Schubert, and S.C. Shapiro, editors, *Proceedings of the Sixth International Conference on Principle of Knowledge Representation and Reasoning — KR'98*, pages 368–379, Trento, Italy, 1998.
- [70] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. A hierarchy of modal event calculi: Expressiveness and complexity. In H. Barringer, M. Fisher, D. Gabbay, and G. Gough, editors, *Proceedings of the Second International Conference on Temporal Logic — ICTL'97*, pages 1–17, Manchester, UK, 1997.
- [71] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. The complexity of model checking in modal event calculi. In L. Naish, editor, *Fourteenth International Conference on Logic Programming — ICLP'97*, page 419, Leuven, Belgium, 1997.
- [72] Iliano Cervesato and Frank Pfenning. Linear higher-order pre-unification. In G. Winskel, editor, *Twelfth Annual Symposium on Logic in Computer Science — LICS'97*, pages 422–433, Warsaw, Poland, 1997.
- [73] Iliano Cervesato, Luca Chittaro, and Angelo Montanari. A general modal framework for the event calculus and its skeptical and credulous variants. In W. Wahlster, editor, *Proceedings of the Twelfth European Conference on Artificial Intelligence — ECAI'96*, pages 33–37, Budapest, Hungary, 1996.
- [74] Iliano Cervesato and Frank Pfenning. A linear logical framework. In E. Clarke, editor, *Proceedings of the Eleventh Annual Symposium on Logic in Computer Science — LICS'96*, pages 264–275, New Brunswick, NJ, 1996.
- [75] Iliano Cervesato. Petri nets and linear logic: a case study for logic programming. In M. Alpuente and M. I. Sessa, editors, *Proceedings of the 1995 Joint Conference on Declarative Programming — GULP-PRODE'95*, pages 313–318, Marina di Vietri, Italy, 1995.
- [76] Iliano Cervesato, Luca Chittaro, and Angelo Montanari. A modal calculus of partially ordered events in a logic programming framework. In L. Sterling, editor, *Proceedings of the Twelfth International Conference on Logic Programming — ICLP'95*, pages 299–313, Kanagawa, Japan, 1995.
- [77] Iliano Cervesato, Luca Chittaro, and Angelo Montanari. Modal event calculus. In M. Bruynooghe, editor, *Proceedings of the International Logic Programming Symposium 1994 — ILPS'94*, page 675, Ithaca, NY, 1994.
- [78] Iliano Cervesato, Luca Chittaro, and Angelo Montanari. What the event calculus does and how to do it efficiently. In M. Alpuente, R. Barbuti, and I. Ramos, editors, *Proceedings of the 1994 Joint Conference on Declarative Programming — GULP-PRODE'94*, pages 336–350, Peñíscola, Spain, 1994.
- [79] Iliano Cervesato and Gianfranco Rossi. A WAM implementation for the logic meta-programming language 'Log. In D. Saccà, editor, *Proceedings of the Eighth Italian Conference on Logic Programming — GULP'93*, pages 203–214, Gizzeria Lido, Italy, 1993.
- [80] Iliano Cervesato and Christoph F. Eick. Expression and enforcement of dynamic integrity constraints. In D. Saccà, editor, *Proceedings of the First Italian Conference on Advanced Database Systems — SEBD'93*, pages 203–214, Gizzeria Lido, Italy, 1993.
- [81] Iliano Cervesato and Christoph F. Eick. Specification and enforcement of dynamic integrity constraints. In Y. Yesha, editor, *Proceedings of the International Conference on Information and Knowledge Management — CIKM'92*, pages 193–200, Baltimore, MD, 1992.
- [82] Iliano Cervesato and Gianfranco Rossi. Meta-programmazione logica in 'Log (in Italian). In P. Asirelli, editor, *Proceedings of the Sixth Italian Conference on Logic Programming — GULP'91*, pages 275–288, Pisa, Italy, 1991.

Visibility

Newsweek (10 July 2012): *Prominent US universities expanding abroad.*

QF Radio (6 June 2012): *Discussion of the Flame virus.*

ASEE Prism (December 2010 issue): *Under attack* (cover story), published by the American Society for Engineering Education.

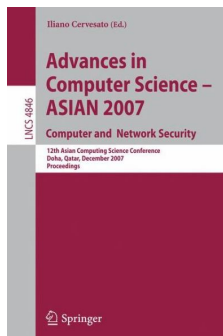
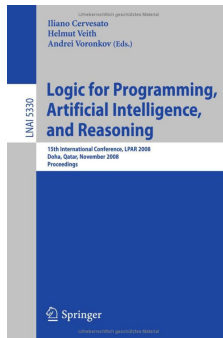
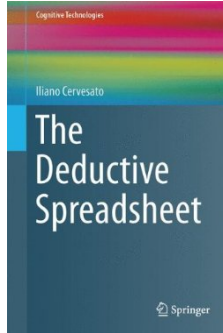
The Piper (12/10 issue): *Classes Find Success with Book-Length Comics.*

Akhbar Magazine (Summer/Fall 2010 issue): *Discovering Logic with Comics: a new approach to teaching first-year computer science majors.*

(publications continued)

Workshops

- [83] Iliano Cervesato, Sharjeel Khan, Giselle Reis, and Dragiša Žunić. Formalization of Automated Trading Systems in a Concurrent Linear Framework. In *2018 Joint Workshop on Linearity and Trends in Linear Logic and Applications — LINEARITY'18*, Oxford, UK, 2018.
- [84] Iliano Cervesato and Edmund S.L. Lam. Concurrent Logic Programming: Met and Unmet Promises. In David Warren and Annie Liu, editors, *First Workshop on Applications of Logic Programming — AppLP'16*, New York City, USA, 2016.
- [85] Iliano Cervesato and Edmund S.L. Lam. Overlap and Independence in Multi-set Comprehension Patterns. In Silvio Ghilardi and Manfred Schmidt-Schauß, editors, *30th International Workshop on Unification — UNIF'16*, 2016.
- [86] Edmund S.L. Lam and Iliano Cervesato. Let's Unify Like Scala Pattern Matching! In Silvio Ghilardi and Manfred Schmidt-Schauß, editors, *30th International Workshop on Unification — UNIF'16*, Porto, Portugal, 2016.
- [87] Iliano Cervesato and Jorge Sacchini. Towards Reasoning About Specifications in the Concurrent Logical Framework. In J. Borgström and B. Luttik, editors, *Combined 20th International Workshop on Expressiveness in Concurrency and 10th Workshop on Structural Operational Semantics — EX-PRESS/SOS 2013*, Buenos Aires, Argentina, 2013.
- [88] Iliano Cervesato, Frank Pfenning, Jorge Luis Sacchini, Carsten Schürmann, and Robert J. Simmons. Trace Matching in a Concurrent Logical Framework. In A. Chlipala and C. Schürmann, editors, *7th International Workshop on Logical Frameworks and Meta-languages: Theory and Practice — LFMT'12*, Copenhagen, Denmark, 2012.
- [89] Iliano Cervesato, Frank Pfenning, Jorge Luis Sacchini, Carsten Schürmann, and Robert J. Simmons. On Matching Concurrent Traces. In S. Escobar, K. Korovin, and V. Rybakov, editors, *26th International Workshop on Unification — UNIF'12*, Manchester, UK, 2012.
- [90] Yuxin Deng, Iliano Cervesato, and Robert J. Simmons. Relating Reasoning Methodologies in Linear Logic and Process Algebra. In S. Alves and I. Mackie, editors, *Second International Workshop on Linearity — LINEARITY'12*, Tallinn, Estonia, 2012.
- [91] Thierry Sans and Iliano Cervesato. QWeS²T for Type-Safe Web Programming. In B. Farwer, editor, *Third International Workshop on Logics, Agents, and Mobility — LAM'10*, Edinburgh, Scotland, UK, 2010.
- [92] Iliano Cervesato. On Teaching Programming Languages Using a Wiki. In D. Wetzel, editor, *The 2008 Communication Symposium at Carnegie Mellon University: Developing Disciplinary Literacy — CS'08*, pages 1–3, Pittsburgh, PA, 2008.
- [93] Iliano Cervesato and Andre Scedrov. Relating State-Based and Process-Based Concurrency through Linear Logic. In R. de Queiroz, editor, *Thirteenth Workshop on Logic, Language, Information and Computation — WoLLIC'06*, Stanford, CA, 2006.
- [94] Iliano Cervesato, Aaron D. Jaggard, Andre Scedrov, Joe-Kai Tsay, and Christopher Walstad. Breaking and Fixing Public-Key Kerberos. In D. Gollmann and J. Jürjens, editors, *Sixth Workshop on Issues in the Theory of Security — WITS'06*, pages 55–70, Vienna, Austria, 2006.
- [95] Iliano Cervesato. Towards a Notion of Quantitative Security Analysis. In D. Gollmann, F. Massacci, and A. Yautsiukhin, editors, *Quality of Protection: Security Measurements and Metrics*, pages 131–144. Springer Advances in Information Security 23, 2006.
- [96] Iliano Cervesato, Catherine Meadows, and Dusko Pavlovic. An encapsulated authentication logic for reasoning about key distribution protocol. In *18th IEEE Computer Security Foundations Workshop — CSFW-05*, pages 48–61, Aix-en-Provence, France, 2005.
- [97] Iliano Cervesato, Aaron D. Jaggard, Andre Scedrov, and Christopher Walstad. Specifying Kerberos 5 Cross-Realm Authentication. In C. Meadows and J. Jürjens, editors, *Fifth Workshop on Issues in the Theory of Security — WITS'05*, Long Beach, CA, 2005.



(publications continued)

- [98] Kevin Watkins, Iliano Cervesato, Frank Pfenning, and David Walker. Specifying Properties of Concurrent Computations in CLF. In C. Schürmann, editor, *Fourth Workshop on Logical Frameworks and Meta-languages — LFM'04*, pages 67–87, Cork, Ireland, 2004. Elsevier ENTCS 199.
- [99] Iliano Cervesato. Fine-Grained MSR Specifications for Quantitative Security Analysis. In P. Ryan, editor, *Fourth Workshop on Issues in the Theory of Security — WITS'04*, pages 111–127, Barcelona, Spain, 2004.
- [100] Iliano Cervesato and Mark-Oliver Stehr. Representing the MSR Cryptoprotocol Specification Language in an Extension of Rewriting Logic with Dependent Types. In N. Martí-Oliet, editor, *Fifth International Workshop on Rewriting Logic and its Applications — WRLA'04*, pages 175–197, Barcelona, Spain, 2004. Elsevier ENTCS 117.
- [101] Stefano Bistarelli, Iliano Cervesato, Gabriele Lenzini, Roberto Marangoni, and Fabio Martinelli. On Representing Biological Systems through Multiset Rewriting. In R. Moreno-Díaz and F. Pichler, editors, *Ninth International Workshop on Computer Aided System Theory — EUROCAST'03*, pages 415–426, Las Palmas de Gran Canaria, Spain, 2003. Springer LNCS 2809.
- [102] Stefano Bistarelli, Iliano Cervesato, Gabriele Lenzini, and Fabio Martinelli. Relating Process Algebras and Multiset Rewriting for Immediate Decryption Protocols. In V.I. Gorodetski, V.A. Skormin, and L.J. Popyack, editors, *Second International Workshop on Mathematical Methods, Models and Architectures for Computer Networks Security — MMM'03*, pages 86–99, St. Petersburg, Russia, 2003. Springer LNAI 2776.
- [103] Stefano Bistarelli, Iliano Cervesato, Gabriele Lenzini, and Fabio Martinelli. Relating Process Algebras and Multiset Rewriting for Security Protocol Analysis. In R. Gorrieri, editor, *Third Workshop on Issues in the Theory of Security — WITS'03*, pages 21–31, Warsaw, Poland, 2003.
- [104] Iliano Cervesato and Catherine Meadows. A Fault-Tree Representation of NPATRL Security Requirements. In R. Gorrieri, editor, *Third Workshop on Issues in the Theory of Security — WITS'03*, pages 1–10, Warsaw, Poland, 2003.
- [105] Fabio Martinelli, Stefano Bistarelli, Iliano Cervesato, Gabriele Lenzini, and Roberto Marangoni. Representing Biological Systems through Multiset Rewriting. In *Workshop on Computational Methods in Biomathematics — CMB'03*, Las Palmas de Gran Canaria, Spain, 2003.
- [106] Iliano Cervesato. Solution count for multiset unification with trailing multiset variables. In *16th International Workshop on Unification — UNIF'02*, pages 64–68, Copenhagen, Denmark, 2002. Technical Report 02-05 (Department of Computer Science, University of Iowa).
- [107] Frederick Butler, Iliano Cervesato, Aaron D. Jaggard, and Andre Scedrov. A formal analysis of some properties of kerberos 5 using MSR. In *15th IEEE Computer Security Foundations Workshop — CSFW-02*, pages 175–190, Cape Breton, NS, Canada, 2002.
- [108] Iliano Cervesato. The wolf within. In J. Guttman, editor, *Second Workshop on Issues in the Theory of Security — WITS'02*, Portland, OR, 2002.
- [109] Iliano Cervesato. A specification language for crypto-protocol based on multiset rewriting, dependent types and subsorting. In G. Delzanno, S. Etalle, and M. Gabbriellini, editors, *Proceedings of the Workshop on Specification, Analysis and Validation for Emerging Technologies — SAVE'01*, pages 1–22, Paphos, Cyprus, 2001.
- [110] Iliano Cervesato. Typed MSR: Syntax and examples. In V.I. Gorodetski, V.A. Skormin, and L.J. Popyack, editors, *Proceedings of the First International Workshop on Mathematical Methods, Models and Architectures for Computer Network Security — MMM'01*, pages 159–177, St. Petersburg, Russia, 2001. Springer LNCS 2052.
- [111] Iliano Cervesato, Nancy A. Durgin, Max Kanovich, and Andre Scedrov. Interpreting strands in linear logic. In *2000 Workshop on Formal Methods and Computer Security — FMCS'00*, Chigaco, IL, 2000.
- [112] Paul Syverson, Catherine Meadows, and Iliano Cervesato. Dolev-Yao is no better than Machiavelli. In P. Degano, editor, *First Workshop on Issues in the Theory of Security — WITS'00*, pages 87–92. Geneva, Switzerland, 2000.

(publications continued)

- [113] Iliano Cervesato and Angelo Montanari. A calculus of macro-events: Progress report. In A. Trudel and S. Goodwin, editors, *Seventh International Workshop on Temporal Representation and Reasoning — TIME'00*, pages 47–58, Cape Breton, Nova Scotia, Canada, 2000.
- [114] Iliano Cervesato, Nancy A. Durgin, Patrick D. Lincoln, John C. Mitchell, and Andre Scedrov. Relating strands and multiset rewriting for security protocol analysis. In P. Syverson, editor, *13th IEEE Computer Security Foundations Workshop — CSFW'00*, pages 35–51, Cambridge, UK, 2000.
- [115] Iliano Cervesato, Valeria de Paiva, and Eike Ritter. Explicit substitutions for linear logical frameworks: Preliminary results. In A. Felty, editor, *Proceedings of the Workshop on Logical Frameworks and Meta-Languages — LFM'99*, Paris, France, 1999.
- [116] Iliano Cervesato, Nancy A. Durgin, Patrick D. Lincoln, John C. Mitchell, and Andre Scedrov. A meta-notation for protocol analysis. In R. Gorrieri, editor, *Proceedings of the 12th IEEE Computer Security Foundations Workshop — CSFW'99*, pages 55–69, Mordano, Italy, 1999.
- [117] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. Event calculus with explicit quantifiers. In R. Morris and L. Khatib, editors, *Proceedings of the Fifth International Workshop on Temporal Representation and Reasoning — TIME'98*, pages 81–88, Sanibel Island, FL, 1998.
- [118] Iliano Cervesato, Massimo Franceschet, and Angelo Montanari. Modal event calculi with preconditions. In R. Morris and L. Khatib, editors, *Fourth International Workshop on Temporal Representation and Reasoning — TIME'97*, pages 38–45, Daytona Beach, FL, 1997.
- [119] Iliano Cervesato and Frank Pfenning. Linear higher-order pre-unification. In D. Galmiche, editor, *Proceedings of the International Workshop on Proof-Search in Type-Theoretic Languages*, pages 41–50, New Brunswick, NJ, 1996.
- [120] Iliano Cervesato, Joshua S. Hodos, and Frank Pfenning. Efficient resource management for linear logic proof search. In R. Dyckhoff, H. Herre, and P. Schroeder-Heister, editors, *Proceedings of the Fifth International Workshop on Extensions of Logic Programming — ELP'96*, pages 67–81, Leipzig, Germany, 1996. Springer LNAI 1050.
- [121] Iliano Cervesato, Luca Chittaro, and Angelo Montanari. Speeding up temporal reasoning by exploiting the notion of kernel of an ordering relation. In S.D. Goodwin and H.J. Hamilton, editors, *Proceedings of the Second International Workshop on Temporal Representation and Reasoning — TIME'95*, pages 73–80, Melbourne Beach, FL, 1995.
- [122] Iliano Cervesato. Lollipops taste of vanilla too. In M. Ornaghi and A. Momigliano, editors, *Proceedings of the workshop on Proof-Theoretical Extensions of Logic Programming — ELP'94*, pages 60–66, Santa Margherita Ligure, Italy, 1994.
- [123] Iliano Cervesato and Gianfranco Rossi. Logic meta-programming facilities in 'Log. In A. Pettorossi, editor, *Proceedings of the Third International Workshop on Meta-Programming in Logic Programming — META'92*, pages 148–161, Uppsala, Sweden, 1992. Springer LNCS 649.

Technical Reports

Most papers submitted to conferences are backed up by a technical report. A full list can be found at <http://cs.cmu.edu/~iliano>.

At a glance

- Conferences and workshops
 - 5 times general chair
 - 8 times program chair
 - 78 PC participations
- Committees
 - 2 international
 - 8 institutional
 - 9 departmental

Conferences and Workshops**Steering Committee Member**

LFMTP *International Workshop on Logical Frameworks and Meta Languages: Theory and Practice*, 2015–present.

LINEARITY *International Workshop on Linearity*, 2015–present.

CSF *Symposium (previously Workshop) on Computer Security Foundations*, 2001–16.

ASIAN *Asian Computing Science Conference*, 2007–2009.

AMCS *Annual Doha Conference on Applied Mathematics and Computational Sciences*, 2007–2008.

DISC *Doha Information Security Conference*, 2008.

General Chair

LPAR'08 *15th International Conference on Logic Programming and Automated Reasoning*, Doha, Qatar, November 22–27, 2008.

AMCS'08 *2nd Annual Doha Conference on Applied Mathematics and Computational Science*, Doha, Qatar, March 30 – April 1, 2008. Co-organized with Michael Pilant and Goong Chen.

WOLS'05 *1st Workshop on Logical Spreadsheets*, Stanford, CA, September 22–23, 2005. Co-organized with Michael Kassoff and Michael Genesereth.

CSFW-15 *15th IEEE Computer Security Foundations Workshop*, Cape Breton, NS, Canada, June 24–26, 2002.

CSFW-14 *14th IEEE Computer Security Foundations Workshop*, Cape Breton, NS, Canada, June 11–13, 2001.

Program Chair

LINEARITY'16 *4th International Workshop on Linearity*, Porto, Portugal, June 26, 2016.

WoF'15 *2015 International Workshop on Focusing*, Suva, Fiji, November 23, 2015.

LFMTP'15 *2015 International Workshop on Logical Frameworks and Meta-Languages: Theory and Practice*, Berlin, Germany, August 1, 2015.

LINEARITY'14 *3rd International Workshop on Linearity*, Vienna, Austria, July 13, 2014.

AICCSA'08 *6th ACS/IEEE International Conference on Computer Systems and Applications*, Doha, Qatar, April 1–4, 2008. Chair of the Security and Information Assurance track.

ASIAN'07 *12th Annual Asian Computing Science Conference*, Doha, Qatar, 9–11 December, 2007.

FCS'03 *LICS Workshop on Foundations of Computer Security*, Ottawa, Canada, June 26–27, 2003.

FCS'02 *FLoC Workshop on Foundations of Computer Security*, Copenhagen, Denmark, July 25–26, 2002.

Program Committees Member

2020: RuleML+RR 2020,

2019: RuleML+RR 2019,

2018: RuleML+RR 2018, UNIF'18,

2017: MeMo'17, UNIF'17, SEC'17, LPAR-21,

2016: APLAS'16, PPDP'16, SEC'16,

2015: CICL'15, SETS'15, MeMo'15, TLL'15, SEC'15,

2014: VERIFY'14, ICLP'14, SEC'14, SAC'14,

2013: PPDP'13, SETOP'13, PST'13, SCSS'13, SAC'13,

2012: SCSS'12, QASA'12, SETOP'12, PST'12, SVARM/VERIFY'12, SAC'12,

2011: DPM'11, SETOP'11, PST'12,

2010: CIS'10, STM'10, DPM'10, CSL'10, VERIFY'10, AMAST'10, LPAR-16, SAC'10,

2009: CIS'09, CCS'09, WISG'09, ASIAN'09, STM'09, DPM'09, SAC'09,

2008: CIS'08, CCS'08, CSF'08, SAC'08,

2007: CIS'07, FSTTCS'07, CSFW'07,

2006: ASIAN'06, MFCS'06, SecReT'06,

2005: FCS'05,

2004: SecCo'04, LCMAS'04, FCS'04, WISP'04, HASE'04,

2003: TPHOLs'03, TIME-ICLP'03,

2002: VERIFY'02, TIME'02,

2001: RULE'01, TIME'01,

2000: RULE'2000, TIME'2000,

1999: LFM'99, WAAAPL'99, PPDP'99, TIME'99,

1998: TIME'98,

Committees**International Committees**

- ACM SIGLOG Education Committee: *Spring'17–present (member)*.
- ACM SIGLOG Education Committee: *Fall'14–Spring'16 (chair)*.

Institutional Committees

At Carnegie Mellon University:

- Faculty Senate: *Fall'17–Fall'19*.
- International Strategy Working Group: *Spring'15*.

At Carnegie Mellon University in Qatar:

- Audiovisual infrastructure: *Fall'14*.
- Marhaba Tartans: *Spring'13*.
- Building allocation board: *Fall'10–Fall'12*.
- Summer communication symposium: *Spring'12–Fall'12*.
- Research: *Spring'09–Fall'10 (chair)*.
- Building use: *Fall'09–Spring'10*.

Departmental Committees

In the Computer Science group at Carnegie Mellon University in Qatar:

- Faculty recruitment: *Spring'07; Fall'07–Fall'08 (chair); Spring'09–Spring'10; Fall'10–Spring'16 (chair)*.
- New programs: *Fall'07–Spring'10*.
- Undergraduate theses: *Fall'07–Spring'16*.
- Website: *Fall'09–Fall'15 (chair)*.
- Research: *Spring'08; Fall'08 (chair)*.
- Curriculum and assessment: *Fall'07*.
- CS Forum: *Fall'06–Spring'07 (organizer)*.
- Regional activities: *Spring'07*.
- Faculty-student interactions: *Spring'07*.