

Stephen Chong

Curriculum Vitae

Gordon McKay Professor of Computer Science
John A. Paulson School of Engineering and Applied Sciences
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Cambridge, MA 02138

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<https://people.seas.harvard.edu/~chong>

RESEARCH INTERESTS

- The goal of my research is to help programmers write trustworthy programs. My research interests include information security, language-based security, and programming languages.

EDUCATION

- Ph.D., Computer Science
Cornell University, Ithaca, NY, August 2008.
Dissertation title: *Expressive and Enforceable Information Security Policies*
Committee: Andrew C. Myers (chair), Fred B. Schneider, Dexter Kozen, David Easley.
- M.S., Computer Science
Cornell University, Ithaca, NY, May 2005.
- B.Sc.(Hons.), Computer Science
Victoria University of Wellington, New Zealand, December 1997.
- B.A., Mathematics and Science
Victoria University of Wellington, New Zealand, December 1996.

EMPLOYMENT/OCCUPATIONAL HISTORY

- Jul 2016 – Harvard University, Cambridge, MA.
Professor of Computer Science.
- Aug 2013 – Jun 2016 Harvard University, Cambridge, MA.
Associate Professor of Computer Science.
- Jul 2009 – Jul 2013 Harvard University, Cambridge, MA.
Assistant Professor of Computer Science.
- Sep 2008 – Jun 2009 Pomona College, Claremont, CA.
Visiting Scholar, Department of Computer Science.
- Sep 2008 – Dec 2008 University of New South Wales, Sydney, Australia.
Research Associate.
- Jan 2001 – Jul 2001 RHE and Associates, Sydney, Australia.
Associate.
- Mar 1998 – Dec 2000 Accenture, Wellington, New Zealand.
Analyst and Consultant.

HONORS AND AWARDS

- Google Faculty Research Award, 2014.
- Sloan Research Fellowship, 2014.
- AFOSR Young Investigator Program (YIP) Award, 2012.
- NSF CAREER Award, 2011.
- Best Paper Award, 2007 ACM Symposium on Operating Systems Principles.
- Lockheed Martin Fellowship, 2001.
- Commonwealth Scholar (declined), 2001.

TEACHING

- **CS 61: Systems Programming and Machine Organization**
Undergraduate class.
Fall 2010, Fall 2011
- **CS 152: Programming Languages**
Undergraduate class.
Spring 2010, Spring 2013, Spring 2014, Spring 2015, Spring 2016, Spring 2018
- **CS 153: Compilers**
Undergraduate class.
Fall 2018, Fall 2019
- **CS 252: Advanced Topics in Programming Languages**
Graduate Seminar
Fall 2009, Spring 2011, Spring 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2017

RESEARCH ADVISING

- Postdoctoral Fellows
 - ▶ Jeffrey Vaughan, 2009–2010
 - ▶ Aslan Askarov, 2012–2014
 - ▶ Christos Dimoulas, 2013–2017
 - ▶ Owen Arden, 2016–2017
 - ▶ Scott Moore 2016–2017
 - ▶ Pablo Buiras 2016–2018
 - ▶ Ming Kawaguchi 2016–
 - ▶ Jian Xiang 2017–
 - ▶ Shrutarshi Basu 2018–
 - ▶ Elisavet Kozyri 2019–
- PhD Thesis Advising
 - ▶ Scott Moore, 2010–2016
Dissertation: *Software Contracts for Security*
 - ▶ Andrew Johnson, 2011–2015
Dissertation: *Precise Scalable Static Analysis for Application-Specific Security Guarantees*
 - ▶ Lucas Waye, 2012–2017
Dissertation: *Composable Enhancements for Gradual Assurances*
 - ▶ Anitha Gollamudi, 2014–
 - ▶ Aaron Bembenek, 2016–

- ▶ Jingmei Hu, 2018–
- ▶ David Holland, 2018–
- PhD Committee Membership
 - ▶ Daniel Huang (Harvard University, Dissertation Committee, defense in August 2016)
 - ▶ Adam Petcher (Harvard University, Dissertation Committee, defense in May 2015)
 - ▶ Peter Macko (Harvard University, Dissertation Committee, defense in Dec 2014)
 - ▶ Gregory Malecha (Harvard University, Dissertation Committee, defense in Nov 2014)
 - ▶ Ryan Wisnesky (Harvard University, Dissertation Committee, defense in Nov 2013)
 - ▶ Uri Braun (Harvard University, Dissertation Committee, defense in September 2013)
 - ▶ Paul Govereau (Harvard University, Dissertation Committee, defense in Dec 2011)
 - ▶ Avi Shinnar (Harvard University, Dissertation Committee, defense in April 2011)
 - ▶ David Darais (Harvard University, Qualifying Exam Committee, September 2014)
 - ▶ Bo Waggoner (Harvard University, Qualifying Exam Committee, April 2013)
 - ▶ Adam Petcher (Harvard University, Qualifying Exam Committee, April 2013)
 - ▶ Chih-Ning Tseng (Harvard University, Qualifying Exam Committee, May 2012)
 - ▶ Amos Waterland (Harvard University, Qualifying Exam Committee, May 2012)
 - ▶ Daniel Huang (Harvard University, Qualifying Exam Committee, April 2012)
 - ▶ Elaine Angelino (Harvard University, Qualifying Exam Committee, April 2012)
 - ▶ Tsung-Han Lin (Harvard University, Qualifying Exam Committee, May 2010)
 - ▶ Alice Gao (Harvard University, Qualifying Exam Committee, May 2010)
 - ▶ Gregory Malecha (Harvard University, Qualifying Exam Committee, March 2010)
- Undergraduate Senior Thesis Projects Supervised
 - ▶ Brian Sapozhnikov,, “Practical Verification of Logic Program Termination”, 2019.
 - ▶ Ezra Zigmond, “Fine-grained, Language-based Access Control for Database-backed Applications”, 2018.
 - ▶ Ramya Rangan, “Matching Causality Hypotheses to Simulations of Biological Systems”, 2016. Hoopes Prize.
 - ▶ Hannah Blumberg, “Planting the Seed: An Elm-Based Introductory Computer Science Curriculum for High School Students”, 2016.
 - ▶ Jo Booth, “Not So Incognito: Exploiting Resource-Based Side Channels in JavaScript Engines”, 2015.
 - ▶ Ling-Ya Chao, “Strong Update for Object-Oriented Flow-Sensitive Points-To Analysis”, 2015. Hoopes Prize.
 - ▶ Louis Li, “Security Analysis of Java Web Applications Using String Constraint Analysis”, 2015. Honorable Mention in the CRA Outstanding Undergraduate Researcher Awards 2014 and 2015.
 - ▶ Dan Bradley, “Language Based Parsing and Writing for Formatted Data”, 2014.
 - ▶ Hannah Gommerstadt, “Securing Public-key Cryptography on the Android Platform” 2013. Blumberg Creative Science Prize.
 - ▶ Evan Czaplicki, “Elm: Concurrent FRP for Functional GUIs” 2012.

- ▶ Stefan Muller. “SX10: A Language for Parallel Programming with Information Security” 2012. Honorable Mention in the CRA Outstanding Undergraduate Researcher Awards 2012.

RESEARCH GRANTS

- Air Force Research Laboratory, “Merged Analysis To prevent Exploits (MATE).” PI: Stephen Chong. Subcontract from Galois. PI: Scott Moore. December 2018–April 2022, \$510,942.
- Air Force Research Laboratory, “*PRINCESS : Probabilistic Representation of Intent Commitments to Ensure Software Survival.*” PIs: Stephen Chong and Margo Seltzer. Subcontract from Charles River Analytics. PI: Avi Pfeffer. November 2015–November 2019. \$1,365,154.
- National Science Foundation “*TWC: Large: Collaborative: Computing Over Distributed Sensitive Data.*” PI: Stephen Chong, co-PIs: Kobbi Nissim, Marco Gaboardi, James Honaker, Salil Vadhan. May 2016 – April 2020, \$1,700,000.
- National Science Foundation “*Workshop on Formal Methods for Security.*” PI: Stephen Chong. August 2015 – January 2017, \$88,339.
- National Science Foundation “*Language-level Control of Authority.*” PI: Stephen Chong. September 2015 – August 2018, \$483,230.
- Google Faculty Research Award, “*Language-based Authority Control.*” PI: Stephen Chong. 2015. \$39,236.
- Alfred P. Sloan Foundation Career Fellowship Award. PI: Stephen Chong. September 2014 – September 2016. \$50,000.
- National Science Foundation “*Higher-order Contract for Distributed Applications.*” PI: Stephen Chong. August 2014 – July 2017, \$456,365.
- National Science Foundation “*Frontier: Privacy Tools for Sharing Research Data.*” PI: Salil Vadhan. Co-PIs and senior personnel: Latanya Sweeney, Gary King, Urs Gasser, Edo Airoldi, Stephen Chong, Merce Crosas. September 2012 - August 2016, \$4,863,840.
- Air Force Office of Scientific Research “*Integrating Programming Language and Operating System Information Security Mechanisms*” (Young Investigator Research Program). PI: Stephen Chong. June 2012 – May 2015, \$465,320.
- National Science Foundation “*CAREER: Practical, expressive, language-based information security.*” PI: Stephen Chong. February 2011 – January 2016, \$466,074.
- Air Force Research Laboratory “*Secure Virtual Architecture: A foundation for Integrating Analysis, Confinement, and Diversification.*” PIs: J. Gregory Morrisett and Stephen Chong. Subcontract from University of Illinois at Urbana-Champaign. PI: Vikram Adve. Co-PI: Andrew Myers (Cornell). August 2010 – August 2013, \$1,167,612.

PUBLICATIONS

JOURNAL PUBLICATIONS

- 1. A Progress-Sensitive Flow-Sensitive Inlined Information-Flow Control Monitor**
Computers & Security 71:114–131, November 2017.
Andrew Bedford, Stephen Chong, Josée Desharnais, Elisavet Kozyri, and Nadia Tawbia.
- 2. Using Architecture to Reason About Information Security**
ACM Transactions on Information and System Security 18(2), December 2015
Stephen Chong and Ron van der Meyden.
- 3. Self-Identifying Data for Fair Use**
Journal of Data and Information Quality, 5(3), December 2014
Stephen Chong, Christian Skalka, and Jeffrey A. Vaughan.
- 4. Required Information Release**
Journal of Computer Security, 20(6):637-676, 2012
Stephen Chong.
- 5. Secure Web Applications via Automatic Partitioning**
Communications of the ACM 52(2):79–87, February 2009
Stephen Chong, Jed Liu, Andrew C. Myers, Xin Qi, K. Vikram, Lantian Zheng, Xin Zheng

REFEREED CONFERENCE AND HIGHLY-SELECTIVE WORKSHOP PUBLICATIONS

- 6. Fine-Grained, Language-Based Access Control for Database-Backed Applications**
Conference Companion of the 4th International Conference on Art, Science, and Engineering of Programming, March 2020.
Ezra Zigmond, Stephen Chong, Christos Dimoulas, and Scott Moore.
- 7. Trials and Tribulations in Synthesizing Operating Systems**
Proceedings of the 10th Workshop on Programming Languages and Operating Systems (PLOS), October 2019.
Jingmei Hu, Eric Lu, David A. Holland, Ming Kawaguchi, Stephen Chong, and Margo I. Seltzer.
- 8. Relational Symbolic Execution**
Proceedings of the 21st International Symposium on Principles and Practice of Declarative Programming (PPDP), October 2019.
Gian Pietro Farina, Stephen Chong, and Marco Gaboardi.
- 9. Information Flow Control for Distributed Trusted Execution Environments**
Proceedings of the 32nd IEEE Computer Security Foundations Symposium (CSF), June 2019. Anitha Gollamudi, Stephen Chong, and Owen Arden.
- 10. Programming with Flow-Limited Authorization: Coarser is Better**
4th IEEE European Symposium on Security and Privacy (EuroS&P), June 2019.
Mathias V. Pedersen and Stephen Chong.
- 11. Cryptographically Secure Information Flow Control on Key-Value Stores**
Proceedings of the 24th ACM Conference on Computer and Communications Security (CCS), November 2017.
Lucas Wayne, Pablo Buiras, Owen Arden, Alejandro Russo, and Stephen Chong.

12. Whip: Higher-Order Contracts for Modern Services

Proceedings of the 22nd ACM SIGPLAN International Conference on Functional Programming (ICFP), September 2017.

Lucas Waye, Christos Dimoulas, and Stephen Chong.

13. Automatic Enforcement of Expressive Security Policies using Enclaves

Proceedings of the 29th Annual ACM SIGPLAN Conference on Object-Oriented Programming Languages, Systems, Languages, and Applications (OOPSLA), October 2016.

Anitha Gollamudi and Stephen Chong.

14. Extensible Access Control with Authorization Contracts

Proceedings of the 29th Annual ACM SIGPLAN Conference on Object-Oriented Programming Languages, Systems, Languages, and Applications (OOPSLA), October 2016.

Scott Moore, Christos Dimoulas, Matthew Flatt, Robert Bruce Findler, and Stephen Chong.

15. A Progress-Sensitive Flow-Sensitive Inlined Information-Flow Control Monitor

Proceedings of the 31st IFIP TC 11 International Information Security and Privacy Conference (IFIP SEC), pages 352–366, May 2016.

Andrew Bedford, Stephen Chong, Josée Desharnais, and Nadia Tawbi.

16. Precise, Dynamic Information Flow for Database-Backed Applications

Proceedings of the 37th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), June 2016.

Jean Yang, Travis Hance, Thomas H. Austin, Armando Solar-Lezama, Cormac Flanagan, and Stephen Chong.

17. Correct Audit Logging: Theory and Practice

5th International Conference on Principles of Security and Trust (POST), April 2016.

Sepehr Amir-Mohammadian, Stephen Chong, and Christian Skalka.

18. It's My Privilege: Controlling Downgrading in DC-Labels

Proceedings of the 11th International Workshop on Security and Trust Management (STM), September 2015.

Lucas Waye, Pablo Buiras, Dan King, Stephen Chong, and Alejandro Russo.

19. Hybrid Monitors for Concurrent Noninterference

Proceedings of the 28th IEEE Computer Security Foundations Symposium (CSF), July 2015.

Aslan Askarov, Stephen Chong, and Heiko Mantel

20. Cryptographic Enforcement of Language-Based Erasure

Proceedings of the 28th IEEE Computer Security Foundations Symposium (CSF), July 2015.

Aslan Askarov, Scott Moore, Christos Dimoulas, and Stephen Chong

21. Exploring and Enforcing Security Guarantees via Program Dependence Graphs

Proceedings of the 36th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), June 2015.

Andrew Johnson, Lucas Waye, Scott Moore, and Stephen Chong

22. Skill: A Secure Shell Scripting Language

11th USENIX Symposium on Operating Systems Design and Implementation (OSDI), October 2014.

Scott Moore, Christos Dimoulas, Dan King, and Stephen Chong.

23. Declarative Policies for Capability Control

Proceedings of the 27th IEEE Computer Security Foundations Symposium (CSF), June 2014.

Christos Dimoulas, Scott Moore, Aslan Askarov, and Stephen Chong.

24. Truthful Mechanisms for Agents that Value Privacy

Proceedings of the 14th ACM Conference on Electronic Commerce (EC), June 2013.

Yiling Chen, Stephen Chong, Ian Kash, Tal Moran, and Salil Vadhan.

25. Asynchronous Functional Reactive Programming for GUIs

Proceedings of the 34th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), June 2013.

Evan Czaplicki and Stephen Chong.

26. Towards Fully Automatic Placement of Security Sanitizers and Declassifiers

Proceedings of the 40th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL), January 2013.

Benjamin Livshits and Stephen Chong

27. Precise Enforcement of Progress-Sensitive Security

Proceedings of the 19th ACM Conference on Computer and Communications Security (CCS), October 2012.

Scott Moore, Aslan Askarov, and Stephen Chong.

28. Towards a Practical Secure Concurrent Language

Proceedings of the 25th Annual ACM SIGPLAN Conference on Object-Oriented Programming Languages, Systems, Languages, and Applications (OOPSLA), October 2012.

Stefan Muller and Stephen Chong.

29. Learning is Change in Knowledge: Knowledge-based Security for Dynamic Policies

Proceedings of the 25th IEEE Computer Security Foundations Symposium (CSF), pp. 308–322, June 2012.

Aslan Askarov and Stephen Chong.

30. Static Analysis for Efficient Hybrid Information-Flow Control

Proceedings of the 24th IEEE Computer Security Foundations Symposium (CSF), pp. 146–160, June 2011.

Scott Moore and Stephen Chong.

31. Inference of Expressive Declassification Policies

Proceedings of the 2011 IEEE Symposium on Security and Privacy (Oakland), pp. 180–195, May 2011.

Jeffrey A. Vaughan and Stephen Chong.

32. Required Information Release

Proceedings of the 23rd IEEE Computer Security Foundations Symposium (CSF), pp. 215–227, July 2010.

Stephen Chong.

33. A More Precise Security Type System for Dynamic Security Tests

Proceedings of the ACM SIGPLAN Fifth Workshop on Programming Languages and Analysis for Security (PLAS), June 2010.

Gregory Malecha and Stephen Chong.

34. Self-Identifying Sensor Data

Proceedings of the Ninth International Conference on Information Processing in Sensor Networks (IPSN), April 2010.

Stephen Chong, Christian Skalka, and Jeffrey A. Vaughan.

35. Deriving Epistemic Conclusions from Agent Architecture

Proceedings of the Twelfth Conference on Theoretical Aspects of Rationality and Knowledge (TARK), pp. 61–70, July 2009.

Stephen Chong and Ron van der Meyden.

36. End-to-End Enforcement of Erasure and Declassification

Proceedings of the 21st IEEE Computer Security Foundations Symposium (CSF), pp. 98–111, June 2008

Stephen Chong, Andrew C. Myers

37. Civitas: Toward a Secure Voting System

Proceedings of the 2008 IEEE Symposium on Security and Privacy (Oakland), pp. 354–368, May 2008

Michael R. Clarkson, Stephen Chong, Andrew C. Myers

38. Secure Web Applications via Automatic Partitioning

Proceedings of the 21st ACM Symposium on Operating Systems Principles (SOSP), pp. 31–44, October 2007

Stephen Chong, Jed Liu, Andrew C. Myers, Xin Qi, K. Vikram, Lantian Zheng, Xin Zheng

39. SIF: Enforcing Confidentiality and Integrity in Web Applications

Proceedings of the 16th USENIX Security Symposium, pp. 1–16, August 2007

Stephen Chong, K. Vikram, Andrew C. Myers

40. Decentralized Robustness

Proceedings of the 19th IEEE Computer Security Foundations Workshop (CSFW), pp. 242–253, July 2006

Stephen Chong, Andrew C. Myers

41. Information-Flow Security for Interactive Programs

Proceedings of the 19th IEEE Computer Security Foundations Workshop (CSFW), pp. 190–201, July 2006

Kevin R. O'Neill, Michael R. Clarkson, Stephen Chong

42. Language-Based Information Erasure

Proceedings of the 18th IEEE Computer Security Foundations Workshop (CSFW), pp. 241–254, June 2005

Stephen Chong, Andrew C. Myers

43. Security Policies for Downgrading

Proceedings of the 11th ACM Conference on Computer and Communications Security (CCS), pp. 189–209, October 2004

Stephen Chong, Andrew C. Myers

44. Scalable Extensibility via Nested Inheritance

Proceedings of the 19th Annual ACM SIGPLAN Conference on Object-Oriented Programming Languages, Systems, Languages, and Applications (OOPSLA), pp. 99–115, October 2004

Nathaniel Nystrom, Stephen Chong, Andrew C. Myers

45. Owned Policies for Information Security

Proceedings of the 17th IEEE Computer Security Foundations Workshop (CSFW), pp. 126–138, June 2004

Hubie Chen, Stephen Chong

46. Static Analysis of Accessed Regions in Recursive Data Structures

Proceedings of the 10th International Static Analysis Symposium (SAS), June 2003

Stephen Chong, Radu Rugina

47. Using Replication and Partitioning to Build Secure Distributed Systems

Proceedings of the 2003 IEEE Symposium on Security and Privacy (Oakland), pp. 236–250, May 2003

Lantian Zheng, Stephen Chong, Andrew C. Myers, Steve Zdancewic

REFEREED WORKSHOP PUBLICATIONS

48. Trials and Tribulations in Synthesizing Operating Systems

Proceedings of the 10th Workshop on Programming Languages and Operating Systems (PLOS), October 2019.

Jingmei Hu, Eric Lu, David A. Holland, Ming Kawaguchi, Stephen Chong, and Margo I. Seltzer.

49. It's My Privilege: Controlling Downgrading in DC-Labels

Proceedings of the 11th International Workshop on Security and Trust Management (STM), September 2015.

Lucas Wayne, Pablo Buiras, Dan King, Stephen Chong, and Alejandro Russo

50. Using architecture to reason about information security

Proceedings of the 6th Layered Assurance Workshop (LAW), pages 1–11, 2012.
Stephen Chong and Ron van der Meyden.

51. Provenance: A Future History

Companion to the 24th Annual ACM SIGPLAN Conference on Object-Oriented Programming Languages, Systems, Languages, and Applications: Onward! Session (OOPSLA Onward!), pp. 957–964, October 2009.

James Cheney, Stephen Chong, Nate Foster, Margo Seltzer, and Stijn Vansummeren.

52. Towards Semantics for Provenance Security

Proceedings of the 1st Workshop on the Theory and Practice of Provenance (TaPP), February 2009

Stephen Chong

53. A Framework for Creating Natural Language User Interfaces for Action-Based Applications

Proceedings of the Third International AMAST Workshop on Algebraic Methods in

Language Processing (AMiLP-3), TWLT Report 21, August 2003
Stephen Chong, Riccardo Pucella

EDITED BOOKS

54. Proceedings of the 2009 Workshop on Programming Languages and Analysis for Security

ACM, June 2009. ISBN 978-1-60558-645-8.
Stephen Chong and David A. Naumann, editors.

TECHNICAL REPORTS AND MANUSCRIPTS

55. Automatic Enforcement of Expressive Security Policies using Enclaves

Harvard University Technical Report TR-02-16, 2016.
Anitha Gollamudi and Stephen Chong.

56. Extensible Access Control with Authorization Contracts

Harvard University Technical Report TR-03-16, 2016.
Scott Moore, Christos Dimoulas, Matthew Flatt, Robert Bruce Findler, and Stephen Chong.

57. Report on the NSF Workshop on Formal Methods for Security

August 2016.
Stephen Chong, Joshua Guttman, Anupam Datta, Andrew Myers, Benjamin Pierce, Patrick Schaumont, Tim Sherwood, and Nickolai Zeldovich.

58. Higher-order Behavioral Contracts for Distributed Components

Harvard University Technical Report TR-03-15, 2015.
Lucas Waye, Christos Dimoulas, and Stephen Chong.

59. Global and Local Monitors to Enforce Noninterference in Concurrent Programs

Harvard University Technical Report TR-02-15, 2015.
Aslan Askarov, Stephen Chong, and Heiko Mantel.

60. Exploring and Enforcing Application Security Guarantees via Program Dependence Graphs

Harvard University Technical Report TR-04-14, 2014.
Andrew Johnson, Lucas Waye, Scott Moore, and Stephen Chong.

61. Towards a Practical Secure Concurrent Language

Harvard University Technical Report TR-05-12, August 2012.
Stefan Muller and Stephen Chong.

62. Precise Enforcement of Progress-Sensitive Security

Harvard University Technical Report TR-04-12, July 2012.
Scott Moore, Aslan Askarov, and Stephen Chong.

63. Towards Fully Automatic Placement of Security Sanitizers and Declassifiers

Harvard University Technical Report TR-03-12, July 2012.
Benjamin Livshits and Stephen Chong.

64. Learning is Change in Knowledge: Knowledge-based Security for Dynamic Policies

Harvard University Technical Report TR-02-12, 2012.
Aslan Askarov and Stephen Chong.

- 65. Static Analysis for Efficient Hybrid Information-Flow Control**
Harvard University Technical Report TR-05-11, May 2011.
Scott Moore and Stephen Chong.
- 66. A More Precise Security Type System for Dynamic Security Tests**
Harvard University Technical Report TR-05-10, June 2010.
Gregory Malecha and Stephen Chong.
- 67. Required Information Release**
Harvard University Technical Report TR-04-10, April 2010.
Stephen Chong.
- 68. End-to-End Enforcement of Erasure and Declassification**
Cornell University Computing and Information Science Technical Report <http://hdl.handle.net/1813/10504>, April 2008
Stephen Chong, Andrew C. Myers
- 69. Civitas: Toward a Secure Voting System**
Cornell University Computing and Information Science Technical Report 2007-2081, April 2008
Michael R. Clarkson, Stephen Chong, Andrew C. Myers
- 70. Information-Flow Security for Interactive Programs**
Cornell University Computing and Information Science Technical Report 2006-2022, April 2006
Kevin R. O'Neill, Michael R. Clarkson, Stephen Chong
- 71. Scalable Extensibility via Nested Inheritance**
Cornell University Computing and Information Science Technical Report 2004-1940, 2004
Nathaniel Nystrom, Stephen Chong, Andrew C. Myers
- 72. Expressive and Enforceable Information Security Policies**
Ph.D. thesis, Cornell University, August 2008
Stephen Chong
- 73. Word Alignment of Proof Verbalizations Using Generative Statistical Models**
Cornell University Computer Science Department Technical Report 2002-1864, May 2002
Stephen Chong

SELECTED TALKS

- *Programming Languages for Security*
 - UC Riverside CRESF, Apr 2018.
- *Authorization Contracts*
 - Programming Languages and Analysis for Security, keynote talk, Oct 2017.
- *Language-level Capabilities*
 - Privacy and Security in Programming Workshop, keynote talk, Oct 2014.
 - Modeling and Analysis of Information Systems Seminar, Technische Universität Darmstadt, Dec 2014.
- *Enforcing Language Semantics Using Proof-Carrying Data*, Dagstuhl Seminar 14492 on the Synergy between Programming Languages and Cryptography, Dec 2014.

- *Skill: A Secure Shell Scripting Language*
 - ▶ Cornell University Programming Languages Discussion Group, May 2015.
 - ▶ Chalmers-Harvard Security Workshop, April 2015.
 - ▶ NII Shonan Meeting on Software Contracts for Communication, Monitoring, and Security, May 2014.
 - ▶ MIT Security Seminar, Nov 2013.
- *Exploring Security Guarantees via Program Dependence Graphs*
 - ▶ IBM Research, Apr 2014.
 - ▶ OOPSLA Program Committee Workshop, May 2014.
- *Towards a Practical Secure Concurrent Language*
 - ▶ Brown University, October 2012; Boston University, March 2013; UMass Amherst, April 2013; University of Pennsylvania, November 2013 (Distinguished Lecture Series).
- *Knowledge-based Security for Dynamic Security Policies*
 - ▶ Chalmers and KTH Security Workshop in Åre, January 2012.
- *Inference of Expressive Information Security Policies*
 - ▶ Colloquium, Computer Science Department, Pomona College, October 2011; Raytheon BBN Technologies, November 2011; MIT Programming Languages and Systems Seminar, November 2011.
- *Inference of Usable Declassification Policies*
 - ▶ Colloquium, Computer Science Department, Williams College, April 2010.
- *Information Flow and Secure Web Applications*
 - ▶ Colloquium, Computer Science Department, Harvey Mudd College, November 2008.
- *Secure Web Applications and Expressive Security Policies*
 - ▶ CENS Technical Seminar Series, UCLA, Feb 2009; Hughes Research Lab, Jan 2009.
- *Making Distributed Systems Secure by Construction*
 - ▶ School of Information Technology and Computer Science, University of Wollongong, Australia, December 2004.
- *Owned Policies for Information Security*
 - ▶ PL Club, Department of Computer and Information Science, University of Pennsylvania, July 2004.

PROFESSIONAL ACTIVITIES

- Program Co-Chair: IEEE Secure Development Conference (SecDev) 2018, 2019
- Program Co-Chair: Computer Security Foundations Symposium (CSF) 2017, 2018.
- Co-Chair NSF Workshop on Formal Methods for Security, November 2015.
- Artifact Evaluation Committee Co-Chair: Principles of Programming Languages (POPL) 2016.
- General Chair: Computer Security Foundations Symposium (CSF) 2012, 2013.
- Program Co-chair: Analysis and Programming Languages for Web Application and Cloud Applications (APLWACA) 2010. Co-located with PLDI 2010.

- Program Co-chair: Programming Languages and Analysis for Security (PLAS) 2009. Co-located with PLDI 2009.
- Steering Committees:
 - ▶ IEEE Secure Development Conference 2019–
 - ▶ Computer Security Foundations Symposium (CSF) 2011–
 - ▶ Programming Languages and Analysis for Security (PLAS) 2011–
- Program Committees:
 - ▶ PriSC 2020
 - ▶ PLAS 2019
 - ▶ PLDI 2019 (ERC)
 - ▶ HILT 2018,
 - ▶ IEEE Security & Privacy 2018
 - ▶ International Conference on Principles of Security and Trust POST 2018
 - ▶ APLAS 2017
 - ▶ SecDev 2017
 - ▶ PLMW @ PLDI 2017
 - ▶ International Conference on Principles of Security and Trust (POST) 2017
 - ▶ Architectural Support for Programming Languages and Operating Systems 2017 External Review Committee
 - ▶ Programming Languages and Analysis for Security (PLAS) 2016
 - ▶ AAI Fall Symposium on Privacy and Language Technologies
 - ▶ HILT 2016 Workshop on Model-Based Development and Contract-Based Programming
 - ▶ SecDev 2016
 - ▶ Object-Oriented Programming Languages, Systems, Languages, and Applications (OOPSLA) 2016.
 - ▶ European Conference on Object-Oriented Programming (ECOOP) 2016.
 - ▶ Workshop on Foundations of Computer Security (FCS) 2016.
 - ▶ IEEE European Symposium on Security and Privacy (Euro S&P) 2016.
 - ▶ Principles of Programming Languages (POPL) 2016 External Review Committee.
 - ▶ International Conference on Principles of Security and Trust (POST) 2015.
 - ▶ Programming Languages and Analysis for Security (PLAS) 2015.
 - ▶ Principles of Programming Languages (POPL) 2015 External Review Committee.
 - ▶ High Integrity Language Technology (HILT) 2014.
 - ▶ Object-Oriented Programming Languages, Systems, Languages, and Applications (OOPSLA) 2014
 - ▶ Computer Security Foundations Symposium (CSF) 2014.
 - ▶ Programming Language Design and Implementation (PLDI) 2014 External Review Committee.
 - ▶ Workshop on Formal Methods for Security (FMS) 2014.
 - ▶ SEC@SAC: The Security Track at the ACM Symposium on Applied Computing 2014.
 - ▶ Architectural Support for Programming Languages and Operating Systems (ASP-LOS 2014) External Review Committee.
 - ▶ High Integrity Language Technology (HILT) 2013.

- ▶ Foundations of Object Oriented Languages (FOOL) 2013.
- ▶ Computer and Communication Security (CCS) 2013.
- ▶ SEC@SAC: The Security Track at the ACM Symposium on Applied Computing 2013.
- ▶ Programming Languages and Analysis for Security (PLAS) 2012.
- ▶ Privacy and Provenance in the Cloud (PPCloud) 2011.
- ▶ Workshop on Formal Aspects in Security and Trust (FAST) 2011.
- ▶ Computer and Communication Security (CCS) 2010.
- ▶ Computer Security Foundations Symposium (CSF) 2010.
- ▶ USENIX Conference on Web Application Development (WebApps) 2010.
- ▶ Bytecode Semantics, Verification, Analysis and Transformation (Bytecode) 2010.
- ▶ Hot Topics in Security (HotSec) 2009.
- ▶ Workshop on Foundations of Computer Security (FCS) 2009.
- ▶ Asian Computing Science Conferences (ASIAN) 2009.
- ▶ Computer Security Foundations Symposium (CSF) 2008.
- ▶ Programming Languages and Analysis for Security (PLAS) 2007.
- Grant panels: NSF (2009, 2010, 2013, 2016, 2017).
- Journal reviewing: ACM Transactions on Programming Languages and Systems (TOPLAS), Journal of Computer Security (JCS), ACM Computer Surveys, IEEE Transactions on Knowledge and Data Engineering (TKDE), ACM Transactions on Computer Systems (TOCS), ACM Transactions on Information and System Security (TISSEC) , International Journal of Information Security (IJIS), ACM Transactions on the Web (TWeb).

UNIVERSITY AND DEPARTMENTAL SERVICE

- Co-Director of Undergraduate Studies, Computer Science, Fall 2017 onwards.
- Co-Organizer Computer Science Colloquium Series, Fall 2013 – Fall 2015.
- Computer Science Faculty Search Committee, Fall 2011 – Spring 2012.
- Computer Science Graduate Admissions and Scholarship, SEAS, Harvard University. 2011–
- Computer Science Committee on Higher Degrees, SEAS, Harvard University. 2011–2013
- Data Security and Privacy Planning, SEAS, Harvard University. 2010–2011
- Computer Science Committee on Undergraduate Studies, SEAS, Harvard University. 2010–2012
- Non-resident tutor, Adams House. 2009–2011.