

Adam J. Lee, Ph.D.

Curriculum Vitæ

Last updated: Tuesday 28th March, 2017

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EDUCATION

Ph.D. in Computer Science (October 2008)
University of Illinois at Urbana-Champaign
Advisor: Professor Marianne Winslett
Dissertation: Towards Practical and Secure Decentralized Attribute-Based Authorization Systems

M.S. in Computer Science (August 2005)
University of Illinois at Urbana-Champaign
Advisor: Professor Marianne Winslett
Thesis: Traust: A Trust Negotiation Based Authorization Service for Open Systems

B.S. in Computer Science (May 2003)
Minor in Applied Mathematics
Cornell University
GPA: 3.89/4.0 Major (*Magna Cum Laude*)

APPOINTMENTS

Department of Computer Science, University of Pittsburgh
Associate Professor (September 2014–Present)
Assistant Professor (September 2008–August 2014)

Department of Computer Science, University of Illinois at Urbana-Champaign
Graduate Teaching/Research Assistant (August 2003–July 2008)

National Center for Supercomputing Applications; Urbana, IL
Research Assistant (Summer 2004, Summer 2005)

Sandia National Laboratories; Livermore, CA
Computer Security Intern (2001–2003, Summer 2006, Winter 2007, Summer 2007)

FUNDED RESEARCH

- CAREER: UCPriv: User-Centric Privacy Management
Adam J. Lee (PI)
National Science Foundation Award No. CNS-1253204
09/2013-08/2018; \$545,623 to Pitt
 - TWC: Medium: Collaborative: Foundations of Application-Sensitive Access Control Evaluation
Adam J. Lee (PI)
National Science Foundation Award No. CNS-1228697
09/2012-08/2015; \$254,525 to Pitt of \$1,109,562 total
Joint with Timothy Hinrichs and Lenore Zuck (University of Illinois at Chicago), and Von Welch (Indiana University at Bloomington)
 - Distributed, Verified, and Trustworthy Protocols for Mobile Spacecraft Coalitions
Daniel Mossé (PI) and Adam J. Lee (Co-PI)
DARPA Award No. NNA11AB36C
05/2011-11/2011; \$201,158
 - TC: Small: Collaborative Research: Improved Privacy Through Exposure Control
Adam J. Lee (PI)
National Science Foundation Award No. CNS-1017229
09/2010-08/2013; \$149,859 to Pitt of \$419,859 total
Joint with Apu Kapadia (Indiana University at Bloomington)
 - TC: Medium: Collaborative Research: Towards Formal, Risk-Aware Authorization
Adam J. Lee (PI)
National Science Foundation Award No. CNS-0964295
06/2010-05/2014; \$329,274 to Pitt of \$1,094,022 total
Joint with David K.Y. Yau (Purdue) and Marianne Winslett (Univ. Illinois at Urbana-Champaign)
 - TC: Small: Collaborative Research: Towards a Dynamic and Composable Model of Trust
Adam J. Lee (PI)
National Science Foundation Award No. CCF-0916015
09/2009-08/2012; \$231,248 to Pitt of \$465,582 total
Joint with Ting Yu (North Carolina State University)
-

FUNDED EDUCATIONAL RESEARCH

- A Feasibility Study on Transforming *Discrete Structures* from Small to Large Classroom Format
Adam J. Lee, Thumrongsak Kosiyatrakul, and Daniel Mossé
University of Pittsburgh Discipline-Based Science and Education Research Center (dB-SERC)
Course Transformation Award
06/2015-05/2016; \$15,000
- Source Code Version Control Repository Mining to Support Targeted Instructor Intervention
Adam J. Lee and William C. Garrison III
University of Pittsburgh Discipline-Based Science and Education Research Center (dB-SERC)
Mentor-Mentee Evidence-Based Teaching Award
06/2015-05/2016; \$2,000

RESEARCH & ACADEMIC AWARDS AND HONORS

Award Papers

- **Outstanding Paper Award:** William C. Garrison III, Yechen Qiao, Adam J. Lee, “On the Suitability of Dissemination-centric Access Control Systems for Group-centric Sharing,” in *Proceedings of the Fourth ACM Conference on Data and Application Security and Privacy (CODASPY)*, March 2014.
- **Outstanding Paper Nominee:** Eleanor Rieffel, Jacob Biehl, Bill van Melle, and Adam J. Lee, “Secured Histories for Collaboration-Supporting Awareness Applications,” in *Proceedings of the International Symposium on Security in Collaboration Technologies and Systems (SECOTS 2011)*, May 2011.
- 12th ACM Symposium on Access Control Models and Technologies (SACMAT 2007) paper [C08] invited to *ACM Transactions on Information and System Security* (appears as [J03]).
- 13th ACM Conference on Computer and Communications Security (CCS 2006) paper [C07] invited to *ACM Transactions on Information and System Security* (appears as [J02]).
- 11th ACM Symposium on Access Control Models and Technologies (SACMAT 2006) paper [C05] invited to *ACM Transactions on Information and System Security* (appears as [J01]).

Research and Academic Honors

- National Science Foundation CAREER Award Recipient (2013)
- Motorola Center for Communications Graduate Fellowship: 2005–2006 Academic Year
- Cisco Systems Information Assurance Scholarship: Fall 2005
- Tau Beta Pi (TBII) – National Engineering Honor Society

Note: In my field, it is typical for faculty members to appear after their advisees in authorship lists. Below, my advisees are underlined for clarity. Citation counts were generated using Google Scholar (<http://scholar.google.com>) during January 2017.

Summary: 73 refereed publications, 1347 citations, h-index: 19

- 7 refereed journal articles
- 42 refereed conference papers
- 15 refereed workshop papers
- 9 refereed work-in-progress, poster, and demonstration abstracts
- 4 magazine articles and book chapters

PUBLICATIONS

Refereed Journal Articles

- [J07] Marian K. Iskander, Dave Wilkinson, Tucker Trainor, **Adam J. Lee**, and Panos Chrysanthis, “Balancing Performance, Accuracy, and Precision for Secure Cloud Transactions,” *IEEE Transactions on Parallel and Distributed Systems*, in press.
- [J06] Eleanor G Rieffel, Jacob Biehl, **Adam J Lee**, and William van Melle, “Private Aggregation for Presence Streams,” *Future Generation Computer Systems*, in press.

- [J05] Jacob T. Biehl, Eleanor Rieffel, and **Adam J. Lee**, “When Privacy and Utility are in Harmony: Towards Better Design of Presence Technologies,” *Personal and Ubiquitous Computing*, 17(3), March 2013.
- [J04] Mehmud Abliz, Taieb Znati, and **Adam J. Lee**, “Mitigating Distributed Service Flooding Attacks with Guided Tour Puzzles,” *International Journal on Advances in Security*, 5(3&4), December 2012.
- [J03] **Adam J. Lee**, Kazuhiro Minami, and Marianne Winslett, “On the Consistency of Distributed Proofs with Hidden Subtrees,” *ACM Transactions on Information and System Security*, 13(3), July 2010.
- [J02] **Adam J. Lee** and Marianne Winslett, “Enforcing Safety and Consistency Constraints in Policy-Based Authorization Systems,” *ACM Transactions on Information and System Security*, 12(2), December 2008.
- [J01] **Adam J. Lee**, Marianne Winslett, Jim Basney, and Von Welch, “The Traust Authorization Service,” *ACM Transactions on Information and System Security*, 11(1), February 2008.

Refereed Conference Papers

- [C42] Roberto Hoyle, Srijita Das, Apu Kapadia, **Adam J. Lee**, and Kami Vaniea, “Was my message read?: Privacy and Signaling on Facebook Messenger,” in Proceedings of the The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI 2017), May 2017
- [C41] Roberto Hoyle, Srijita Das, Apu Kapadia, **Adam J. Lee**, and Kami Vaniea, “Viewing the Viewers: Publishers’ Desires and Viewers’ Privacy Concerns in Social Networks,” in Proceedings of the 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2017), February 2017.
- [C40] Cory Thoma, **Adam J. Lee**, and Alexandros Labrinidis, “PolyStream: Cryptographically Enforced Access Controls for Outsourced Data Stream Processing,” in Proceedings of the 21st ACM Symposium on Access Control Models and Technologies (SACMAT 2016), June 2016.
- [C39] William C. Garrison III, Adam Shull, **Adam J. Lee**, and Steven Myers, “On the Practicality of Cryptographically Enforcing Dynamic Access Control Policies in the Cloud,” in Proceedings of the 37th IEEE Symposium on Security and Privacy (Oakland 2016), May 2016.
- [C38] Judicael-Briand Djoko-Takougue, Brandon Jennings, **Adam J. Lee**, “TPRIVEXEC: Private Execution In Virtual Memory,” *Proceedings of the Sixth ACM Conference on Data and Application Security and Privacy (CODASPY)*, March 2016.
- [C37] Jacob T. Biehl, **Adam J. Lee**, Gerry Filby, and Matthew Cooper, “You’re where? Prove it! — Towards trusted indoor location estimation of mobile devices,” *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)*, September 2015.
- [C36] William C. Garrison III and **Adam J. Lee**, “Decomposing, Comparing, and Synthesizing Access Control Expressiveness Simulations,” *Proceedings of the 28th IEEE Computer Security Foundations Symposium (CSF)*, July 2015.
- [C35] Sameer Patil, Roberto Hoyle, Roman Schlegel, Apu Kapadia, and **Adam J. Lee**, “Interrupt Now or Inform Later?: Comparing Immediate and Delayed Privacy Feedback,” *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI)*, April 2015.
- [C34] William C. Garrison III, **Adam J. Lee**, and Timothy L. Hinrichs, “An Actor-Based, Application-Aware Access Control Evaluation Framework,” in *Proceedings of the 19th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2014.

- [C33] Sameer Patil, Apu Kapadia, **Adam J. Lee**, and Roman Schlegel, "Reflection or Action?: How Feedback and Control Affect Location Sharing Decisions," in *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI)*, April 2014.
- [C32] William C. Garrison III, Yechen Qiao, **Adam J. Lee**, "On the Suitability of Dissemination-centric Access Control Systems for Group-centric Sharing," in *Proceedings of the Fourth ACM Conference on Data and Application Security and Privacy (CODASPY)*, March 2014. [**Outstanding Paper Award**]
- [C31] Nicholas L. Farnan, **Adam J. Lee**, Panos K. Chrysanthis, and Ting Yu, "PAQO: Preference-Aware Query Optimization for Decentralized Database Systems," in *Proceedings of the 30th International Conference on Data Engineering (ICDE)*, April 2014.
- [C30] Timothy Hinrichs, Diego Martinoia, William C. Garrison III, **Adam J. Lee**, Alessandro Panebianco, and Lenore Zuck, "Application-Sensitive Access Control Evaluation using Parameterized Expressiveness," in *Proceedings of the 26th IEEE Computer Security Foundations Symposium (CSF)*, June 2013.
- [C29] Andrew K. Adams and **Adam J. Lee**, "Combining Social Authentication and Untrusted Clouds for Private Location Sharing," in *Proceedings of the 18th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2013.
- [C27] Naoki Tanaka, Marianne Winslett, **Adam J. Lee**, David K. Y. Yau, and Feng Bao, "Insured Access: An Approach to Ad-hoc Information Sharing for Virtual Organizations," in *Proceedings of the Third ACM Conference on Data and Application Security and Privacy (CODASPY)*, February 2013.
- [C26] Marian K. Iskander, **Adam J. Lee**, and Daniel Mossé, "Confidentiality-Preserving and Fault-Tolerant In-Network Aggregation for Collaborative WSNs," in *Proceedings of the 8th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom)*, October 2012.
- [C25] Sandro Etalle, Timothy L. Hinrichs, **Adam J. Lee**, Daniel Trivellato, and Nicola Zannone, "Policy Administration in Tag-Based Authorization," in *Proceedings of the Fifth International Symposium on Foundations & Practice of Security (FPS)*, October 2012.
- [C24] Sameer Patil, Greg Norcie, Apu Kapadia, and **Adam J. Lee**, "Reasons, Rewards, Regrets: Privacy Considerations in Location Sharing as an Interactive Practice," in *Proceedings of the Eighth Symposium on Usable Privacy and Security (SOUPS)*, July 2012.
- [C23] Yann Le Gall, **Adam J. Lee**, and Apu Kapadia, "PlexC: A Policy Language for Exposure Control," in *Proceedings of the 17th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2012.
- [C22] Xi Gong, Ting Yu, and **Adam J. Lee**, "Bounding Trust in Reputation Systems with Incomplete Information," in *Proceedings of the Second ACM Conference on Data and Application Security and Privacy (CODASPY)*, February 2012.
- [C21] Nicholas L. Farnan, **Adam J. Lee**, Panos K. Chrysanthis, and Ting Yu, "Don't Reveal My Intention: Protecting User Privacy using Declarative Preferences during Distributed Query Processing," in *Proceedings of the 16th European Symposium on Research in Computer Security (ESORICS)*, September 2011.
- [C20] Roman Schlegel, Apu Kapadia, and **Adam J. Lee**, "Eyeing your Exposure: Quantifying and Controlling Information Sharing for Improved Privacy," in *Proceedings of the Seventh Symposium on Usable Privacy and Security (SOUPS)*, July 2011.

- [C19] Eleanor Rieffel, Jacob Biehl, Bill van Melle, and **Adam J. Lee**, “Secured Histories for Presence Systems,” in *Proceedings of the International Symposium on Security in Collaboration Technologies and Systems (SECOTS)*, May 2011.
- [C18] Kazuhiro Minami, Nikita Borisov, Marianne Winslett, and **Adam J. Lee**, “Confidentiality-Preserving Proof Theories for Distributed Proof Systems,” in *Proceedings of the Sixth ACM Symposium on Information, Computer, and Communication Security (ASIACCS)*, March 2011.
- [C17] Andrew K. Adams, **Adam J. Lee**, and Daniel Mossé, “Receipt-Mode Trust Negotiation: Efficient Authorization Through Outsourced Interactions,” in *Proceedings of the Sixth ACM Symposium on Information, Computer, and Communication Security (ASIACCS)*, March 2011.
- [C16] **Adam J. Lee** and Ting Yu, “On the Quantitative Analysis of Proofs of Authorization: Applications, Framework, and Techniques,” *Proceedings of the 23rd IEEE Computer Security Foundations Symposium (CSF)*, July 2010.
- [C15] Brian Wongchaowart and **Adam J. Lee**, “Oblivious Enforcement of Hidden Information Release Policies,” in *Proceedings of the Fifth ACM Symposium on Information, Computer, and Communication Security (ASIACCS)*, April 2010.
- [C14] **Adam J. Lee**, Ting Yu, and Yann G. Le Gall, “Effective Trust Management Through a Hybrid Logical and Relational Approach,” in *Proceedings of the Fifth ACM Symposium on Information, Computer, and Communication Security (ASIACCS)*, April 2010.
- [C13] **Adam J. Lee** and Ting Yu, “Towards a Dynamic and Composite Model of Trust,” in *Proceedings of the 14th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2009.
- [C12] **Adam J. Lee**, Marianne Winslett, and Kenneth J. Perano, “TrustBuilder2: A Reconfigurable Framework for Trust Negotiation,” in *Proceedings of the Third IFIP WG 11.11 International Conference on Trust Management (IFIPTM)*, June 2009.
- [C11] **Adam J. Lee**, Kazuhiro Minami, and Nikita Borisov, “Confidentiality-Preserving Distributed Proofs of Conjunctive Queries,” in *Proceedings of the Fourth ACM Symposium on Information, Computer, and Communication Security (ASIACCS)*, March 2009.
- [C10] **Adam J. Lee** and Marianne Winslett, “Towards Standards-Compliant Trust Negotiation for Web Services,” in *Proceedings of the Second IFIP WG 11.11 Conference on Trust Management (IFIPTM)*, June 2008.
- [C09] **Adam J. Lee** and Marianne Winslett, “Towards an Efficient and Language-Agnostic Compliance Checker for Trust Negotiation Systems,” in *Proceedings of the Third ACM Symposium on Information, Computer and Communications Security (ASIACCS)*, March 2008.
- [C08] **Adam J. Lee**, Kazuhiro Minami, and Marianne Winslett, “Lightweight Consistency Enforcement Schemes for Distributed Proofs with Hidden Subtrees,” in *Proceedings of the 12th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2007.
- [C07] **Adam J. Lee** and Marianne Winslett, “Safety and Consistency in Policy-Based Authorization Systems,” in *Proceedings of the 13th ACM Conference on Computer and Communications Security (CCS)*, October/November 2006.
- [C06] Mehran Ahsant, Jim Basney, Olle Mulmo, **Adam J. Lee**, and Lennart Johnsson, “Toward an On-Demand Restricted Delegation Mechanism for Grids,” in *Proceedings of the Seventh IEEE/ACM International Conference on Grid Computing (Grid)*, September 2006.

- [C05] **Adam J. Lee**, Marianne Winslett, Jim Basney, and Von Welch, "Traust: A Trust Negotiation-Based Authorization Service for Open Systems," in *Proceedings of the 11th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2006.
- [C04] **Adam J. Lee** and Marianne Winslett, "Virtual Fingerprinting as a Foundation for Reputation in Open Systems," in *Proceedings of the Fourth International Conference on Trust Management (iTrust)*, May 2006.
- [C03] **Adam J. Lee**, Gregory A. Koenig, and William Yurcik, "Cluster Security with NVisionCC: The Forseti Distributed File Integrity Checker," in *Proceedings of the Los Alamos Computer Science Institute Symposium (LACSI)*, October 2005.
- [C02] Suvda Myagmar, **Adam J. Lee**, and William Yurcik, "Threat Modeling as a Basis for Security Requirements," in *Proceedings of the IEEE Symposium on Requirements Engineering for Information Security (SREIS)*, August 2005.
- [C01] **Adam J. Lee**, Jodie P. Boyer, Chris Drexelius, Prasad Naldurg, Raquel L. Hill, and Roy H. Campbell, "Supporting Dynamically Changing Authorizations in Pervasive Communication Systems," in *Proceedings of the Second International Conference on Security in Pervasive Computing*, April 2005.

Refereed Workshop Papers

- [W15] Apu Kapadia and **Adam J. Lee**, "Improving Privacy through Exposure Awareness and Reactive Mechanisms," in CHI 2016 Workshop on Bridging the Gap between Privacy by Design and Privacy in Practice, May 2016.
- [W14] Cory Thoma, Alexandros Labrinidis, and **Adam J. Lee**, "Automated Operator Placement in Distributed Data Stream Management Systems Subject to User Constraints," in *Proceedings of the 9th International Workshop on Self-Managing Database Systems (SMDB)*, April 2014.
- [W13] William C. Garrison III, **Adam J. Lee**, and Timothy L. Hinrichs, "The Need for Application-Aware Access Control Evaluation," in *Proceedings of the New Security Paradigms Workshop (NSPW)*, September 2012.
- [W12] Sameer Patil, Yann Le Gall, **Adam J. Lee**, and Apu Kapadia, "My Privacy Policy: Exploring End-user Specification of Freeform Location Access Rules," in *Proceedings of the 2012 Workshop on Usable Security (USEC)*, February 2012.
- [W11] Timothy L. Hinrichs, William C. Garrison III, **Adam J. Lee**, Skip Saunders, and John C. Mitchell, "TBA: A Hybrid of Logic and Extensional Access Control Systems," in *Proceedings of the 8th International Workshop on Formal Aspects of Security & Trust (FAST)*, September 2011.
- [W10] Marian K. Iskander, Dave W. Wilkinson, **Adam J. Lee**, and Panos K. Chrysanthis, "Enforcing Policy and Data Consistency of Cloud Transactions," in *Proceedings of the Second International Workshop on Security and Privacy in Cloud Computing (ICDCS-SPCC)*, June 2011.
- [W09] Nicholas Farnan, **Adam J. Lee**, and Ting Yu, "Investigating Privacy-Aware Distributed Query Evaluation," *Proceedings of the Ninth ACM Workshop on Privacy in the Electronic Society (WPES 2010)*, October 2010.
- [W08] Kazuhiro Minami, **Adam J. Lee**, Marianne Winslett, and Nikita Borisov, "Secure Aggregation in a Publish-Subscribe System," in *Proceedings of the Seventh ACM Workshop on Privacy in the Electronic Society (WPES)*, October 2008.

- [W07] **Adam J. Lee**, Jodie P. Boyer, Lars E. Olson, and Carl A. Gunter, "Defeasible Security Policy Composition for Web Services," in *Proceedings of the Fourth ACM Workshop on Formal Methods in Security Engineering (FMSE)* held in conjunction with the *13th ACM Conference on Computer and Communications Security (CCS)*, November 2006.
- [W06] **Adam J. Lee**, Parisa Tabriz, and Nikita Borisov, "A Privacy-Preserving Interdomain Audit Framework," in *Proceedings of the Fifth ACM Workshop on Privacy in the Electronic Society (WPES)* held in conjunction with the *13th ACM Conference on Computer and Communications Security (CCS)*, October 2006.
- [W05] **Adam J. Lee** and Marianne Winslett, "Open Problems for Usable and Secure Open Systems," *ACM CHI 2006 Workshop on Usability Research Challenges for Cyberinfrastructure and Tools*, April 2006.
- [W04] Ragib Hasan, Suvda Myagmar, **Adam J. Lee**, and William Yurcik, "Toward a Threat Model for Storage Systems," in *Proceedings of the International Workshop on Storage Security and Survivability (StorageSS)* in conjunction with the *12th ACM Conference on Computer and Communications Security (CCS)*, November 2005.
- [W03] **Adam J. Lee**, Gregory A. Koenig, Xin Meng, and William Yurcik, "Searching for Open Windows and Unlocked Doors: Port Scanning in Large-Scale Commodity Clusters," in *Proceedings of the First International Workshop on Cluster Security* held in conjunction with the *Fifth IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid)*, May 2005.
- [W02] Gregory A. Koenig, Xin Meng, **Adam J. Lee**, Michael Treaster, Nadir Kiyancilar, and William Yurcik, "Cluster Security with NVisionCC: Process Monitoring by Leveraging Emergent Properties," in *Proceedings of the First International Workshop on Cluster Security* held in conjunction with the *Fifth IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid)*, May 2005.
- [W01] Kiran Lakkaraju, William Yurcik, **Adam J. Lee**, Ratna Bearavolu, Yifan Li, and Xiaoxin Yin, "NVisionIP: NetFlow Visualizations of System State for Security Situational Awareness," in *Proceedings of the Workshop on Visualization and Data Mining for Computer Security (VizSEC/DMSEC)* held in conjunction with the *11th ACM Conference on Computer and Communications Security*, October 2004.

Refereed Work-in-Progress, Demonstration, or Poster Abstracts

- [WDP09] Nick R. Katsipoulakis, Cory Thoma, Eric A. Gratta, Alexandros Labrinidis, **Adam J. Lee**, Panos K. Chrysanthis, "CE-Storm: Confidential Elastic Processing of Data Streams," *Proceedings of the 2015 ACM SIGMOD/PODS Conference* June 2015.
- [WDP08] Nathan Ong, Stephen Rojcewicz, Nicholas L. Farnan, **Adam J. Lee**, Panos K. Chrysanthis, and Ting Yu, "Interactive Preference-Aware Query Optimization," *Proceedings of the 31st IEEE International Conference on Data Engineering (ICDE)*, April 2015.
- [WDP07] Cory Thoma, **Adam J. Lee**, and Alexandros Labrinidis, "CryptStream: Cryptographic Access Controls for Streaming Data," *Proceedings of the Fifth ACM Conference on Data and Application Security and Privacy (CODASPY)*, March 2015.
- [WDP06] Nicholas L. Farnan, **Adam J. Lee**, Panos K. Chrysanthis, and Ting Yu, "PAQO: A Preference-Aware Query Optimizer for PostgreSQL," *Proceedings of the 39th International Conference on Very Large Databases (VLDB)*, August 2013.

- [WDP05] Nicholas L. Farnan, **Adam J. Lee**, Panos K. Chrysanthis, and Ting Yu, "Enabling Intensional Access Control via Preference-aware Query Optimization," in *Proceedings of the 18th ACM Symposium on Access Control Models and Technologies (SACMAT)*, June 2013.
- [WDP04] Sameer Patil, Greg Norcie, Apu Kapadia, and **Adam J. Lee**, "Check out where I am!: Location-Sharing Motivations, Preferences, and Practices," in *Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)*, May 2012.
- [WDP03] Xi Gong, Ting Yu, and **Adam J. Lee**, "Poster: on trust evaluation with missing information in reputation systems," in *Proceedings of the ACM Conference on Computer and Communications Security (CCS)*, pages 773-776, October 2011.
- [WDP02] Marian Kamal Iskander, **Adam J. Lee**, and Daniel Mossé, "Privacy and robustness for data aggregation in wireless sensor networks," in *Proceedings of the ACM Conference on Computer and Communications Security (CCS)*," pages 699-701, October 2010.
- [WDP01] **Adam J. Lee**, Marianne Winslett, Jim Basney, and Von Welch, "Traust: A Trust Negotiation Based Authorization Service," Demonstration Short Paper, in *Proceedings of the Fourth International Conference on Trust Management (iTrust)*, May 2006.

Volumes Edited

- [VE01] Edgar R. Weippl, Florian Kerschbaum, and **Adam J. Lee**, *Proceedings of the 20th ACM Symposium on Access Control Models and Technologies (SACMAT)*, Vienna, Austria, June 1-3, 2015.

Magazine Articles and Book Chapters

- [MB04] Adam J. Lee, "Credential-Based Access Control," *Encyclopedia of Cryptography and Security* (2nd Ed.), pages 271-272, 2011.
- [MB03] Brian Wongchaowart and **Adam J. Lee**, "Trust Management," *Encyclopedia of Cryptography and Security* (2nd Ed.), pages 1320-1323, 2011.
- [MB02] **Adam J. Lee** and Ting Yu, "Report on the Sixth ACM Workshop on Privacy in the Electronic Society (WPES 2007)," in *The SIGMOD Record*, 37(1):56-58, March 2008.
- [MB01] **Adam J. Lee**, Kent E. Seamons, Marianne Winslett, and Ting Yu, "Automated Trust Negotiation in Open Systems," in *Secure Data Management in Decentralized Systems*, Ting Yu and Sushil Jajodia (Editors), Springer, Berlin, 2007.

Theses

- [T02] **Adam J. Lee**, "Towards Practical and Secure Decentralized Attribute-Based Authorization Systems," Ph.D. Dissertation, University of Illinois at Urbana-Champaign Department of Computer Science Technical Report No. UIUCDCS-R-2008-2985, July 2008.
- [T01] **Adam J. Lee**, "Traust: A Trust Negotiation Based Authorization Service for Open Systems." Master's Thesis, University of Illinois at Urbana-Champaign, August 2005.

Other Publications

- [NR09] William C. Garrison III, **Adam J. Lee**, and Timothy L. Hinrichs, “The Design and Demonstration of an Actor-Based, Application-Aware Access Control Evaluation Framework,” Technical Report arXiv:1302.1134 (<http://arxiv.org/abs/1302.1134>), February 2013.
- [NR08] Timothy L. Hinrichs, William C. Garrison III, **Adam J. Lee**, Skip Saunders, and John C. Mitchell, “TBA: A Hybrid of Logic and Extensional Access Control Systems (Extended Version),” University of Pittsburgh Department of Computer Science Technical Report No. TR-11-182, October 2011.
- [NR07] Nicholas L. Farnan, **Adam J. Lee**, Panos K. Chrysanthis, and Ting Yu, “Don’t Reveal My Intension: Protecting User Privacy using Declarative Preferences during Distributed Query Processing (Extended Version),” University of Pittsburgh Department of Computer Science Technical Report No. TR-11-179, October 2011.
- [NR06] **Adam J. Lee**, Kazuhiro Minami, and Nikita Borisov, “Confidentiality-Preserving Distributed Proofs of Conjunctive Queries (Extended Version),” University of Pittsburgh Department of Computer Science Technical Report No. TR-08-161, December 2008.
- [NR05] **Adam J. Lee** and Marianne Winslett, “Towards Standards-Compliant Trust Negotiation for Web Services (Extended Version),” University of Illinois at Urbana-Champaign Department of Computer Science Technical Report No. UIUCDCS-R-2008-2944, March 2008.
- [NR04] **Adam J. Lee** and Marianne Winslett, “Towards an Efficient and Language-Agnostic Compliance Checker for Trust Negotiation Systems,” University of Illinois at Urbana-Champaign Department of Computer Science Technical Report No. UIUCDCS-R-2007-2903, October 2007.
- [NR03] **Adam J. Lee**, Kazuhiro Minami, and Marianne Winslett, “Lightweight Consistency Enforcement Schemes for Distributed Proofs with Hidden Subtrees (Extended Version),” University of Illinois at Urbana-Champaign Department of Computer Science Technical Report No. UIUCDCS-R-2007-2839, April 2007.
- [NR02] **Adam J. Lee** and Marianne Winslett, “Virtual Fingerprinting as a Foundation for Reputation in Open Systems,” University of Illinois at Urbana-Champaign Department of Computer Science Technical Report No. UIUCDCS-R-2006-2691, February 2006.
- [NR01] William Yurcik, **Adam J. Lee**, Gregory A. Koenig, Nadir Kiyancilar, Dmitry Mogilevsky, and Michael Treaster, “Cluster Security Research Challenges,” NSF Infrastructure Experience 2005, NSF/CISE/CNS Cluster Computing Infrastructure Experience Workshop, Siebel Center for Computing Science, University of Illinois at Urbana-Champaign, July 27, 2005.

TEACHING EXPERIENCE

Awards and Honors

- *Nominee*: Tina and David Bellet Teaching Excellence Award, Dietrich School of Arts and Sciences (2015–2016 Academic Year)
- *Finalist*: Tina and David Bellet Teaching Excellence Award, Dietrich School of Arts and Sciences (2014–2015 Academic Year)
- *Finalist*: Tina and David Bellet Teaching Excellence Award, Dietrich School of Arts and Sciences (2013–2014 Academic Year)

- *Nominee*: Tina and David Bellet Teaching Excellence Award, Dietrich School of Arts and Sciences (2012–2013 Academic Year)
- University of Pittsburgh Department of Computer Science Teaching Awards
 - Award for Highest Student Evaluation in Graduate 3000-level courses (AY 2013–2014)
 - Award for Highest Student Evaluation in Undergraduate Core courses (AY 2013–2014)
 - Award for Highest Student Evaluation in Upper-level Undergraduate courses (AY 2012–2013)
 - Award for Highest Student Evaluation in Graduate 3000-level courses (AY 2011–2012)
 - Award for Highest Student Evaluation in Undergraduate Core courses (AY 2010–2011)
 - Award for Highest Student Evaluation in Graduate 3000-level courses (AY 2009–2010)
- University of Illinois at Urbana-Champaign Teaching Awards
 - Computer Science Department Teaching Excellence Award (Fall 2003, Spring 2004)
 - Center for Teaching Excellence List of Teachers Ranked as Excellent (Fall 2003, Spring 2004)

Courses Taught

- CS/COE 0441: Discrete Structures for Computer Science (Fall 2008, Spring 2011, Fall 2012, Spring 2016)
- CS 1653: Applied Cryptography and Network Security (Spring 2010, 2011, 2012, 2013, 2014)
- CS 2001: Research Topics in Computer Science (Fall 2011, 2012, 2013)
- CS 2530: Computer and Network Security (Spring 2009, Fall 2010, Spring 2013)
- CS 3525: Advanced Topics in Security and Privacy (Fall 2009, Spring 2012, Spring 2014)
- CS 101: Introduction to Computing for Engineers and Applied Scientists (2003–2004; *at UIUC*)

Courses Organized

- Major curriculum revision for CS 2001: Research Topics in Computer Science (Fall 2011)
- Complete curriculum revision for CS 1653: Applied Cryptography and Network Security (Spring 2010)
- CS 3525: Advanced Topics in Security and Privacy (Fall 2009, Spring 2012)
- Complete curriculum revision for CS 2530: Computer and Network Security (Spring 2009)
- University of Pittsburgh Security Reading Group (Weekly, Spring 2009–Present)
- CS 591RHC: Security Reading Group (Weekly, Fall 2005–Spring 2008; *at UIUC*)

STUDENTS ADVISED

Current Advisees

- Marian K. Iskander (PhD), *Passed Proposal*
- Judicael-Briand Djoko-Takougue, *Passed Comprehensive Examination*
- Cory Thoma (PhD), *Passed Proposal*
 - co-advised with Alexandros Labrinidis

PhD Students Graduated

As Primary Advisor:

- William C. Garrison III, PhD 2015
Thesis: Techniques for Application-Aware Suitability Analysis of Access Control Systems
- Nicholas L. Farnan, PhD 2014
Thesis: Efficient, Locally-Enforceable Querier Privacy for Distributed Database Systems

Note: The following two students were originally advised by Dr. José Brustoloni. I supervised the completion of their dissertations after Dr. Brustoloni left the University of Pittsburgh in early 2009.

- Peter Djalaliev, PhD 2013
Thesis: Mitigating Botnet-Based DDoS Attacks Against Web Servers
- Ricardo Villamarin-Solomon, PhD 2009
Thesis: Improving Computer Systems' Security with Warning Polymorphism and Security-Conditioning Applications

MS Students Graduated

- Andrew K. Adams, MS 2015
Thesis: Combining Social Authentication and Untrusted Clouds for Private Location Sharing
- Stephen Rojcewicz, MS 2014 (*co-advised with Panos K. Chrysanthis*)
- Zhipeng Zhang, MS 2013
- Yann G. Le Gall, MS 2013
Thesis: PlexC: A Policy Language for Exposure Control
- Brian Wongchaowart, MS 2010
Thesis: Oblivious Enforcement of Hidden Information Release Policies Using Online Certification Authorities

Undergraduate Students Advised

- Lauren Thompson (Capstone, 2017)
- Reed Armstrong (2016)
- Brittany Regrut (2015–2016)
- Dustin Martin (Capstone, 2015)
- Jordan Britton (First Experiences in Research, 2014)
- Conor Curry (First Experiences in Research & Student Researcher, 2014–*present*)
- Jarrett Gustovich (Capstone, 2014)
- Yuriy Koziy (Capstone, 2013)
- Kelley Ricker (Capstone, 2013)
- Scott Whipkey (2013)
- Kevin Jeffries (Capstone, 2012)

- Aaron Robertson (Capstone, 2012)
- Nicholas Tate (2012)
- Tucker Trainor (Capstone & REU, 2012)
- Kristy Caster (REU, 2011)
- Kevin O'Leary (Capstone, 2011)
- Nathaniel Buck (Capstone, 2010)
- Keith Carlson (Capstone, 2010)
- Yann G. Le Gall (2009–2010)

PhD Committee Service

- Adam Shull, Passed Proposal
Primary Advisor: Steven A. Myers, Indiana University at Bloomington
- Daniel Ricardo dos Santos, PhD 2017
Primary Advisor: Silvio Ranise, Fondazione Bruno Kessler
- Xiao Xiang, PhD 2016
Primary Advisor: Jingtao Wang
- Mehmud Abliz, PhD 2015
Primary Advisor: Taieb Znati
- Cem Akkaya, PhD 2013
Primary Advisor: Janyce Wiebe
- Neal Barcelo, PhD 2015
Primary Advisor: Kirk Pruhs
- Roxana Gheorghiu, PhD 2014
Primary Advisors: Panos Chrysanthis and Alexandros Labrinidis
- Xuelian Long, PhD 2015
Primary Advisor: James B. D. Joshi, University of Pittsburgh School of Information Science
- Michael Nugent, PhD 2015
Primary Advisor: Kirk Pruhs
- Thao Pham, PhD 2016
Primary Advisors: Panos Chrysanthis and Alexandros Labrinidis
- Yue Zhang, PhD 2011
Primary Advisor: James B. D. Joshi, University of Pittsburgh School of Information Science

PROFESSIONAL SERVICE

Grant Proposal Panelist/Reviewer

- Panelist, National Science Foundation (2009, 2010, 2012, 2013, 2014, 2015)
- Expert Reviewer, Katholieke Universiteit Leuven (2012)

Journal Editorial Boards

- Associate Editor, Computer and Network Security focus, Frontiers in ICT
- Associate Editor, IEEE Transactions on Dependable and Secure Computing

Conference and Workshop Organizing Committees

- Poster Co-Chair, 21st ACM Symposium on Access Control Models and Technologies (SACMAT 2016)
- Poster Chair, 6th ACM Conference on Data and Application Security and Privacy (CODASPY 2016)
- Program Committee Co-Chair, The 3rd International Workshop On Human Mobility Computing And Privacy (HuMoComp 2015)
- Program Committee Co-Chair, 20th ACM Symposium on Access Control Models and Technologies (SACMAT 2015)
- Demonstration Co-Chair, 16th IEEE International Conference on Mobile Data Management (MDM 2015)
- Poster Chair, 5th ACM Conference on Data and Application Security and Privacy (CODASPY 2015)
- Tutorial Co-Chair, 21st ACM Conference on Computer and Communications Security (CCS 2014)
- Demonstration Chair, 19th ACM Symposium on Access Control Models and Technologies (SACMAT 2014)
- Organizing Committee, Privacy Enhancing Tools Workshop (PETools 2013)
- Award Committee, 2012 Award for Outstanding Research in Privacy Enhancing Technologies (PET Award)
- Tutorial Co-Chair, 19th ACM Conference on Computer and Communications Security (CCS 2012)
- Poster Co-Chair, 18th ACM Conference on Computer and Communications Security (CCS 2011)
- Publicity Chair, 25th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSec 2011)
- Poster Co-Chair, 17th ACM Conference on Computer and Communications Security (CCS 2010)

Conference and Workshop Program Committees

- ACM Conference on Data and Application Security and Privacy (CODASPY 2013, 2014, 2015, 2016)
- ACM Symposium on Information, Computer, and Communications Security (ASIACCS 2011, 2015, 2016)
- ACM Symposium on Access Control Models and Technologies (SACMAT 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016)
- European Symposium on Research in Computer Security (ESORICS 2011, 2012, 2013, 2014, 2015, 2016)
- IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSec 2011, 2012, 2013, 2014, 2015, 2016)
- International World Wide Web Conference (WWW 2010, 2016)
- ACM Cloud Computing Security Workshop (CCSW 2015)
- Privacy Enhancing Technologies Symposium (PETS 2013, 2014, 2015)
- Workshop on Social Network Security (SocialSec 2014, 2015)
- Annual Computer Security Applications Conference (ACSAC 2013, 2014)
- International Conference on Network and System Security (NSS 2011, 2012, 2013, 2014)

- Fourth International Symposium on Security in Collaboration Technologies and Systems (SECOTS 2014)
- International Conference on Security and Cryptography (SECRYPT 2012, 2013, 2014)
- ACM Workshop on Privacy in the Electronic Society (WPES 2008, 2010, 2011, 2013, 2014)
- IEEE International Conference on Data Engineering (ICDE 2013)
- ERCIM Workshop on Security and Trust Management (STM 2013)
- IEEE International Workshop on Trusted Collaboration (TrustCol 2012, 2013)
- International Conference on Applied Cryptography and Network Security (ACNS 2012)
- Workshop on Collaborative Communities for Social Computing (CCSocialComp 2012)
- IEEE International Conference on Privacy, Security, Risk, and Trust (PASSAT 2010, 2011, 2012)
- International Conference on Very Large Data Bases PhD Workshop (VLDB 2012)
- IFIP WG 11.11 International Conference on Trust Management (IFIPTM 2009, 2010, 2011)
- International Conference on Mobile Data Management (MDM 2011)
- IEEE International Symposium on Policies for Distributed Systems and Networks (POLICY 2010, 2011)
- International ICST Conference on Security and Privacy in Communication Networks (SecureComm 2011)
- Symposium on Identity and Trust on the Internet (IDtrust 2009, 2010)
- Information Security Conference (ISC 2009)
- International Workshop on Cluster Security (Cluster-Sec '06)
- International Workshop on Storage Security and Survivability (StorageSS '05)

Journal Reviewer

- ACM Transactions on Information and System Security
- ACM Transactions on the Web
- Computers and Security (Elsevier)
- Future Generation Computer Systems (Elsevier)
- IEEE Communications Letters
- IEEE Journal on Selected Areas in Communications
- IEEE Security and Privacy
- IEEE Transactions on Computers
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Information Forensics and Security
- IEEE Transactions on Knowledge and Data Engineering
- IEEE Transactions on Parallel and Distributed Systems
- IEEE Transactions on Services Computing
- International Journal of Information Security (Springer)
- Journal of Computer Security
- Security and Communication Networks (Wiley)
- Theory and Practice of Logic Programming
- The VLDB Journal
- The SIGMOD Record

External Reviewer for Conferences

- ACM Conference on Computer and Communications Security (CCS)
- ACM SIGMOD Conference
- ACM Symposium on Access Control Models and Technologies (SACMAT)
- ACM Workshop on Privacy in the Electronic Society (WPES)
- ACM Workshop on Visualization for Computer Security
- European Symposium on Research in Computer Security (ESORICS)
- IEEE/ACM International Conference on Grid Computing (Grid)
- IEEE Symposium on Security and Privacy
- IEEE Workshop on Policies for Distributed Systems and Networks (POLICY)
- International Conference on Data Engineering (ICDE)
- International Conference on Deontic Logic in Computer Science (DEON)
- International Conference on Emerging Trends in Information and Communication Security (ETRICS)
- International Conference on Trust Management (iTrust)
- International Conference on Trust, Privacy, and Security in Digital Business (TrustBus)
- International Conference on Very Large Data Bases (VLDB)
- International Semantic Web Conference (ISWC)
- Joint iTrust and PST Conferences on Privacy, Trust Management, and Security (IFIPTM)
- Secure Knowledge Management Workshop (SKM)
- The Workshop on the Value of Security through Collaboration (SECOVAL)
- WWW 2005 Workshop on Policy Management for the Web
- WWW 2006 Workshop on Models of Trust for the Web

DEPARTMENT SERVICE

Committee Service

- Director of Graduate Studies (2015–present)
- Member, Ad-hoc Committee on Undergraduate Math/Theory Course Sequence (2012, 2013)
- Member, Computer Science Day committee (2008–2012)
- Chair, Diversity Committee (2012–2014)
- Member, Graduate Admissions and Financial Aid committee (2008–2011, 2015)
- Member, Graduate Programs and Examinations Committee (2014–present)

Event Organization

- Organizer, Computer Science Day Poster Contest (2009–2012)
 - Judge, Computer Science Day Poster Contest (2013, 2014)
 - Judge, Computer Science Day Research Contest (2010, 2012, 2014)
 - Organizer, Computer Science Day Scavenger Hunt (2010–2012)
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SELECT INVITED PRESENTATIONS

- Panelist, “Trustworthy Data Science,” 7th ACM Conference on Data and Application Security and Privacy (CODASPY), March 2017
- “Suitability Analysis and the Practicality of Cryptographically Enforcing Dynamic Access Control Policies in the Cloud,” Università deli Studi di Milano, March 2017.
- “Suitability Analysis and the Practicality of Cryptographically Enforcing Dynamic Access Control Policies in the Cloud,” Fondazione Bruno Kessler, March 2017.
- Panelist, “Security and Privacy in the Age of Internet of Things: Opportunities and Challenges,” 21st ACM Symposium on Access Control Models and Technologies (SACMAT), June 2016
- Panelist, “Mobility and Big Data: Adding an M to the Vs, or Not?,” 16th IEEE International Conference on Mobile Data Management (MDM), June 2015
- “Application-Centric Access Control Analysis,” University of Pittsburgh iSchool LERSAIS Seminar Series, November 2014.
- “Application-Centric Access Control Analysis,” Indiana University of Pennsylvania (IUP) Information Assurance Day, October 2014.
- “Application-Sensitive Access Control Evaluation,” Carnegie Mellon University CyLab Seminar Series, November 2013.
- “Increasing Querier Privacy in Distributed Database Systems,” Indiana University of Pennsylvania (IUP) Information Assurance Day, November 2013.
- “Challenges in Bio-Inspired Security: An IaaS Malware Case Study,” Mini Keynote, University of Pittsburgh Workshop on Bio-Inspired Secure Computing, October 2013.
- “Application-Sensitive Access Control Analysis,” Spring 2013 Protocol eXchange Meeting (Fort Meade, MD), May 2013.
- “Surreptitious Propagation of Virtual Machine Monitor Exploits: Attack Vector and Proposed Countermeasures,” Software Engineering Institute (Pittsburgh, PA), March 2013.
- “Composite Trust Management and Intensional Query Privacy,” University of Texas at San Antonio, February 2013.
- Panelist, “Security and Privacy in Human-centered Computing and Big Data Management,” The Third ACM Conference on Data and Application Security and Privacy (CODASPY), February 2013.
- “Improved Privacy Through Exposure Control,” Indiana University of Pennsylvania (IUP) Information Assurance Day, November 2012.
- “Towards Practical and Secure Decentralized Attribute-Based Authorization Systems,” Advanced Digital Sciences Center (via video conference), October 2012.
- Panelist, “Advice on Grantspersonship,” Joint University of Pittsburgh and Carnegie Mellon University Graduate Students of Color Dinner Series, October 2012.

- “Composite Trust and Intensional Privacy,” Indiana University Center for Applied Cybersecurity Research (CACR) Seminar Series, December 2011.
- “Towards a Less Rigid View of Access Control,” College of Information Sciences and Technology, The Pennsylvania State University, April 2011.
- “Composite Trust Management,” Fuji Xerox Palo Alto Laboratory (FXPAL), August 2010.
- “Privacy and Access Control for Inter-Domain Data Sharing,” Fuji Xerox Palo Alto Laboratory (FXPAL), July 2009.
- “Privacy, Security, and Performance in Distributed Proof Systems,” Università di Trento, June 2009.
- “Privacy, Security, and Performance in Distributed Proof Systems,” University of Texas at San Antonio, May 2009.
- “Confidentiality-Preserving Distributed Proofs of Conjunctive Queries,” University of Pittsburgh LER-SAIS Seminar Series, September 2008.
- “Towards Practical and Secure Decentralized Attribute-Based Authorization Systems,” Purdue University, April 2008.
- “Towards Practical and Secure Decentralized Attribute-Based Authorization Systems,” Michigan State University, March 2008.
- “Towards Practical and Secure Decentralized Attribute-Based Authorization Systems,” University of Pittsburgh, February 2008.
- “Towards Practical and Secure Decentralized Attribute-Based Authorization Systems,” University of Illinois at Urbana-Champaign Information Trust Institute (ITI) Trust and Security Seminar Series, February 2008.
- “Trust Negotiation: From Theory to Practice,” Sandia National Laboratories, December 2007.
- “Safety and Consistency in Policy-Based Authorization Systems,” University of Illinois at Urbana-Champaign Systems and Networking Seminar, September 2006.
- “Safety and Consistency in Policy-Based Authorization Systems,” University of Illinois at Urbana-Champaign Information Trust Institute (ITI) Trust and Security Seminar Series, September 2006.
- “Trust Negotiation and Security Policy Composition,” Sandia National Laboratories, August 2005.