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Education

Ph.D	Computer Science	Dartmouth College	February 2006
M.E.	Mechanical Engineering	Keio University	March 1989
B.E.	Mechanical Engineering	Keio University	March 1987

Employment

Research Associate Department of Computer Science, University of Illinois at Urbana-Champaign
August 2006–current.

Visiting lecturer Department of Computer Science, University of Illinois at Urbana-Champaign
August 2007–December 2007 and August 2008–December 2008.

Research Associate Department of Computer Science, Dartmouth College
February 2006– July 2006.

Research Assistant Department of Computer Science, Dartmouth College
1999–2006. Security and Context-sensitive Authorization in Pervasive Computing.

Teaching Assistant Department of Computer Science, Dartmouth College
Spring 2001. Computer Networks.

Software Engineer IBM Japan, LTD.
1989–1999. Developed a mobile agent system and its applications; a power-demand prediction system; and a component-based multimedia publishing system.

Research Interests

Security and privacy in pervasive computing, logic-based distributed authorization, decentralized trust management, and secure data aggregation in open environments

Honors and Awards

- 12th ACM Symposium on Access Control Models and Technologies (SACMAT 2007) paper [RC5] invited to ACM Transactions on Information and System Security, 2008
- Institute for Information Infrastructure Protection (I3P) research fellowship (\$150,000), 2006
- IBM Overseas Graduate Study Scholarship (4 years from 1999 to 2003)
- IBM Invention Achievement Award, 1999
- IBM Invention Achievement Award, 1998
- IBM Excellent Invention Award, 1998

Publications



PH.D DISSERTATION

- D1. Kazuhiro Minami. *Secure context-sensitive authorization*.
 Summary: In this thesis, we present a secure distributed proof system for context-sensitive authorization. Our system enables multiple hosts to evaluate an authorization query in a peer-to-peer way, while preserving the confidentiality and integrity policies of mutually untrusted principals running those hosts. We also develop a novel caching and revocation mechanism to support context-sensitive policies that refer to information in dozens of different administrative domains. Our experimental results show that the amortized performance of our system scales to dozens of servers in a distributed environment.





INVITED BOOK CHAPTERS

- IB1. Kazuhiro Minami and David Kotz. *Distributed proof systems for cross-domain authorization*.
 In H. Raghav Rao and Shambhu Upadhyaya, editors, *Annals of Emerging Research in IA, Security and Privacy Services*, Elsevier, 2009.
- IB2. Guanling Chen, Kazuhiro Minami, and David Kotz. *Naming and discovery in mobile systems*.
 In Rajeev Shorey, Chan Mun Choon, A. Ananda, and Ooi Wei Tsang, editors, *Mobile middleware*, John Wiley, 2006.

REFEREED JOURNAL ARTICLES


- RJ1. Adam Lee, Kazuhiro Minami, and Marianne Winslett. *On the Consistency of Distributed Proofs with Hidden Subtrees*.
ACM Transactions on Information and System Security (TISSEC), Accepted for publication. Revision of **RC5**. 
- RJ2. Kazuhiro Minami and David Kotz. *Secure context-sensitive authorization*.
Journal of Pervasive and Mobile Computing, 1(1):123–156, March 2005. Revision of **TR1**. 

REFEREED CONFERENCE PAPERS




- RC1. Kazuhiro Minami, Nikita Borisov, and Carl A. Gunter. *Safety in Discretionary Access Control for Logic-based Publish-subscribe Systems*.
 In *Proceedings of ACM Symposium on Access Control Models and Technologies*, Stresa, Italy, June 2009. Acceptance rate 32% of 75 submissions 
- RC2. Adam Lee, Kazuhiro Minami, and Nikita Borisov. *Confidentiality-Preserving Distributed Proofs of Conjunctive Queries*.
 In *Proceedings of ACM Symposium on Information, Computer, and Communication Security (ASIACCS)*, Sydney, Australia, March 2009. Acceptance rate 22% of 147 submissions 
- RC3. Kazuhiro Minami, Adam Lee, Marianne Winslett, and Nikita Borisov. *Secure Aggregation in a Publish-Subscribe System*.
 In *Proceedings of the Workshop on Privacy in the Electronic Society (WPES)*, Alexandria, VA, USA, October 2008. Acceptance rate 21% of 42 submissions. 
- RC4. Nikita Borisov and Kazuhiro Minami. *Single-bit Re-encryption with Applications to Distributed Proof Systems*.
 In *Proceedings of the Workshop on Privacy in the Electronic Society (WPES)*, Alexandria, VA, USA, October 2007. Acceptance rate 19% of 48 submissions. 

- RC5. Adam Lee, Kazuhiro Minami, and Marianne Winslett. *Lightweight Consistency Enforcement Schemes for Distributed Proofs with Hidden Subtrees*.
In *Proceedings of the 12th International Conference on Access Control Models and Technologies (SAC-MAT)*, Nice, France, June 2007. Acceptance rate 24% of 80 submissions. 
- RC6. Kazuhiro Minami and David Kotz. *Scalability in a secure distributed proof system*.
In *Proceedings of the Fourth International Conference on Pervasive Computing (Pervasive)*, Dublin, Ireland, May 2006. Acceptance rate 13% of 178 submissions. 
- RC7. Kazuhiro Minami and David Kotz. *Secure context-sensitive authorization*.
In *Proceedings of the Third IEEE International Conference on Pervasive Computing and Communications (PerCom)*, pages 257–268, Kauai, Hawaii, March 2005. Later revised as **TR1**. Acceptance rate 13% of 240 submissions. 
- RC8. Shan Jiang, Sean Smith, and Kazuhiro Minami. *Securing Web Servers against Insider Attack*.
In *17th Annual Computer Security Applications Conference (ACSAC)*, pages 265–276, New Orleans, Louisiana, December 2001. Revision of **TR3**. 
- RC9. Kazuhiro Minami and Toshihiro Suzuki. *Java-Based Moderator Templates for Multi-Agent Planning*.
In *ACM Conference on Object-Oriented Systems, Languages and Applications (OOPSLA) Workshop on Java-based Paradigms for Agent Facilities*, Atlanta, Georgia, October 1997. 

CONFERENCE POSTERS

- CP1. Kazuhiro Minami and David Kotz. *Controlling access to pervasive information*.
Poster session of the First International Conference on Mobile Systems, Applications, and Services (MobiSys), May 2003. Revision of **TR2**. 

UNREFEREED TECHNICAL REPORTS

- TR1. Kazuhiro Minami and David Kotz. *Secure context-sensitive authorization*.
Technical Report TR2004-529, Dept. of Computer Science, Dartmouth College, December 2004. Revision of **RC7**. Later revised as **RJ2**. 
- TR2. Kazuhiro Minami and David Kotz. *Controlling access to pervasive information in the “Solar” system*.
Technical Report TR2002-422, Dept. of Computer Science, Dartmouth College, February 2002. Later revised as **CP1**. 
- TR3. Shan Jiang, Sean Smith, and Kazuhiro Minami. *Securing Web Servers against Insider Attack*.
Technical Report TR2001-410, Dept. of Computer Science, Dartmouth College, July 2001. Later revised as **RC8**. 

PATENTS

- P1. Koji Zettsu, Kazuhiro Minami, and Hajime Tsuchitani. *Method and apparatus for fixing display information*.
US Patent 6980205, December 27, 2005.
- P2. Kazuhiro Minami, Koji Zettsu, Hajime Tsuchitani, Satoshi Higuchi, and Masakazu Tsuchiya. *Method and apparatus for deciding display information*.
US Patent 6968499, November 22, 2005.
- P3. Toshihiro Suzuki and Kazuhiro Minami. *Mobile agent and method for providing identifying information to mobile agents and subsequent generation agents*.
US Patent 6615232, September 2, 2003.

- P4. Toshihiro Suzuki and Kazuhiro Minami. *Method of executing mobile objects and recording medium storing mobile objects.*
US Patent 6434595, August 13, 2002.
- P5. Kazuhiro Minami and Toshihiro Suzuki. *Method and apparatus of generating mobile objects and storage medium storing an object generating mobile objects.*
US Patent 6615232, June 18, 2002.
- P6. Kazuhiro Minami and Junji Kishaba. *Method and apparatus for verifying dimensional values of a drawing.*
US Patent 5566286, October 15, 1996.

Teaching Experience

Courses taught

CS 411 Database Systems at University of Illinois at Urbana-Champaign, Fall 2008
CS 411 Database Systems at University of Illinois at Urbana-Champaign, Fall 2007

Research Coadvisor I co-advised the undergraduate research project with prof. David Kotz below.
David Blinn Wireless location tracking system 2003

Teaching assistant

Undergraduate course at Dartmouth College: Computer Networks, Spring 2001.

Professional Activities

Program committees

- 2009 International Symposium on Ubiquitous Computing Systems (UCS 2009)
- 2008 International Conference On Embedded and Ubiquitous Computing (EUC 2008)
- 2007 International Symposium on Ubiquitous Computing Systems (UCS 2007)

External reviewers

- 14th ACM Symposium on Access Control Models and Technologies (SACMAT 2009)
- 15th ACM Conference on Computer and Communications Security (CCS 2008)
- 13th European Symposium on Research in Computer Security (ESORICS 2008)
- 13th ACM Symposium on Access Control Models and Technologies (SACMAT 2008)
- 14th ACM Conference on Computer and Communications Security (CCS 2007)
- 12th European Symposium On Research In Computer Security (ESORICS 2007)
- 5th International Conference on Mobile Systems, Applications, and Services (Mobisys 2006)

References

Prof. David Kotz

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Prof. Nikita Borisov

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Prof. Marianne Winslett

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