

Apu Kapadia: Curriculum Vitae

Employment

<i>Indiana University</i> Associate Professor Department of Computer Science School of Informatics, Computing, and Engineering	Jul 2015–Present
<i>Indiana University</i> Assistant Professor Department of Computer Science and Informatics School of Informatics and Computing	Sep 2009–Jun 2015
<i>MIT Lincoln Laboratory</i> Member of Technical Staff Information Systems Technology Group	Sep 2008–Aug 2009
<i>Dartmouth College</i> Research Assistant Professor Department of Computer Science	Jul 2008–Aug 2008
<i>Dartmouth College</i> Post-Doctoral Research Fellow Institute for Security Technology Studies (ISTS)	Oct 2005–Jun 2008

Education

Ph.D. in Computer Science University of Illinois at Urbana-Champaign Dissertation Topic: <i>Models for Privacy in Ubiquitous Computing Environments</i> Advisor: Prof. Roy H. Campbell	October 2005
M.S. in Computer Science University of Illinois at Urbana-Champaign Thesis: <i>I-RBAC 2000: A Dynamic Role Translation Model For Secure Interoperability</i> Advisor: Prof. Roy H. Campbell	May 2001
B.S. in Computer Science with Honors University of Illinois at Urbana-Champaign	May 1998

Awards and Recognition

Honorable Mention Award, 2016
Mohammed Korayem, Robert Templeman, Dennis Chen, David Crandall, and Apu Kapadia, “Enhancing Lifelogging Privacy by Detecting Screens,” In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '16)

Honorable Mention for Best Paper Award, 2015
Zheng Dong, Apu Kapadia, Jim Blythe, L. Jean Camp, “Beyond the lock icon: real-time detection of phishing websites using public key certificates,” In Proceedings of APWG Symposium on Electronic Crime Research (eCrime '15)

Distinguished Alumni Educator Award, 2015

Department of Computer Science, University of Illinois at Urbana-Champaign

Google Research Award, Winter 2014

Privacy-Enhanced Life-Logging with Wearable Cameras

(with David Crandall)

Talks as Distinguished Speaker

Distinguished Lecture Series, Laboratory of Education and Research in Security Assured Information Systems (LERSAIS), University of Pittsburgh, 2015.

Distinguished Lecturer Series, Dept. of Computer Science, Kansas State University, 2014.

Workshop on Information Security and Privacy, Colorado Research Institute for Security and Privacy, 2013.

Distinguished Visitor (Scottish Informatics and Computer Science Alliance), Univ. of St Andrews, 2012.

Distinguished Visitor (Scottish Informatics and Computer Science Alliance), Univ. of Glasgow, 2012.

Trustees Teaching Award, Indiana University Bloomington, 2013

"These awards were established to recognize and enhance excellent teaching at Indiana University, especially at the undergraduate level."

Best of 2012: MIT Technology Review arXiv Blog

Robert Templeman, Zahid Rahman, David Crandall, and Apu Kapadia, "PlaceRaider: Virtual Theft in Physical Spaces with Smartphones," CoRR arXiv Technical Report arXiv:1209.5982, September 2012.

Runner-up for PET Award, 2009: Outstanding Research in Privacy Enhancing Technologies

Patrick P. Tsang, Man Ho Au, Apu Kapadia, and Sean W. Smith, "PEREA: Towards Practical TTP-Free Revocation in Anonymous Authentication," In Proceedings of The 15th ACM Conference on Computer and Communication Security (CCS), 2008

Runner-up for PET Award, 2009: Outstanding Research in Privacy Enhancing Technologies

Patrick P. Tsang, Man Ho Au, Apu Kapadia, and Sean W. Smith, "Blacklistable Anonymous Credentials: Blocking Misbehaving Users without TTPs," In Proceedings of the 14th ACM Conference on Computer and Communication Security (CCS), 2007

Honorable Mention Award (Runner-up for Best Paper)

Apu Kapadia, Tristan Henderson, Jeffrey Fielding, and David Kotz, "Virtual Walls: Protecting Digital Privacy in Pervasive Environments," In Proceedings of The Fifth International Conference on Pervasive Computing (PERVASIVE), 2007

Institute of Security Technology Studies (ISTS) Post-Doctoral Research Fellowship

Funded by Department of Homeland Security (DHS)

Dartmouth College, October 2005–June 2008

Department of Energy (DoE) High-Performance Computer Science Fellowship

Four Year Research Fellowship, September 2001–August 2005

Outstanding Department Service Award

Department of Computer Science, University of Illinois at Urbana-Champaign. May 2003

Invited Paper, The Journal of Supercomputing

Annette C. Feng, Apu C. Kapadia, Wu-chun Feng, and Geneva G. Belford, "Packet Spacing: An Enabling Mechanism for Delivering Multimedia Content in Computational Grids," 23(1):51–66 (2002)

Outstanding Class Project (CS 497 RHK)

First Annual Illinois Computer Systems Symposium (iCSS), 2002

Grants

Personal Share: \$1.7M

As Principal Investigator (PI)

NSF Secure and Trustworthy Cyberspace (SaTC), IU Award: \$800K (Personal Share: \$400K, Total Award: \$1.2M), PI

TWC SBE: Medium: Collaborative: A Socio-Technical Approach to Privacy in a Camera-Rich World

Co-PI: David Crandall

Collaborative award with Denise Anthony, Dartmouth College

CNS-1408730

October 2014–September 2018

NSF Secure and Trustworthy Cyberspace (SaTC), \$559K (projected, with REU Supplement), PI

CAREER: Sensible Privacy: Pragmatic Privacy Controls in an Era of Sensor-Enabled Computing

CNS-1252697

September 2013–August 2018 (estimated)

NSF Secure and Trustworthy Cyberspace (SaTC), IU Award: \$244K (Personal Share: \$122K, Total Award: \$366K), PI

TWC SBES: Medium: Collaborative: Crowdsourcing Security

Co-PI: Kelly Caine (now at Clemson University)

Collaborative award with Michael Reiter, University of North Carolina at Chapel Hill

CNS-1228364

September 2012–August 2014

NSF Secure and Trustworthy Cyberspace (SaTC), \$25K, PI

Workshop Organization Supplement: A Series of Workshops on Security in Emerging Areas at the 2012 ACM Conference on Computer and Communications Security

CNS-1245825

July 2012–June 2014

NSF Networking Technology and Systems (NeTS), \$150K (Total Award: \$300K), PI

NeTS: Small: Collaborative Research: ReDS: Reputation for Directory Services in P2P Systems

Collaborative award with Matthew Wright, University of Texas Arlington

CNS-1115693

September 2011–August 2014

I3P, IU Award: \$305K (Personal Share: \$105K, Total Award: \$1.2M), PI

Developing Frameworks to Address Issues in Privacy

Co-PIs: Kelly Caine, Minaxi Gupta, Arun Chauhan

Collaborative award with teams from: Carnegie Mellon University, Dartmouth College, University of California, Berkeley, and Georgia Tech

I3P sub-award funded by Federal Prime DHS contract #2006-CS-001-000001

February 1, 2011–July 31, 2013

NSF Trustworthy Computing, IU Award: \$286K (Total Award: \$420K) (with REU Supplement), PI

TC: Small: Collaborative Research: Improved Privacy through Exposure Control

Collaborative proposal with Adam J. Lee, University of Pittsburgh

CNS-1016603

September 2010–August 2014

Microsoft Research (MSR) Equipment Grant, \$5K, PI

Center for Applied Cybersecurity Research (CACR) Internal Grant, \$50K (Personal Share: \$25K), PI
Sourcing the Experts: Distributed Social Networks for Privacy-Aware Knowledge Sharing

Co-PIs: Katy Börner, Johan Bollen, Filippo Menczer

CACR Research Grant funded by an award from the Lilly Endowment to the Pervasive Technology Institute and the Center for Applied Cybersecurity Research
July 2010–June 2011

As Co-PI

Google Research Award, \$46K (Personal Share: \$23K), Co-PI

Privacy-Enhanced Life-Logging with Wearable Cameras

PI: David Crandall

March 2014–Feb 2015 (estimated)

Indiana University Faculty Research Support Program, \$40K (Personal Share: \$15K), Co-PI
(PI Yong-Yeol Ahn and Co-PI Fabio Rojas)

Do Revelations about Internet Security have a Chilling Effect?

Office of the Vice Provost of Research at Indiana University Bloomington
September 2014–February 2015

Indiana University Faculty Research Support Program, \$50K (Personal Share: \$25K), Co-PI with David Crandall

FRSP Type II: Vision for Privacy: Privacy-Aware Crowd Sensing Using Opportunistic Imagery

Office of the Vice Provost of Research at Indiana University-Bloomington
January 2013–December 2013

Publications

Peer-Reviewed Journal and Magazine Articles

PACM '17/CSCW '18 Bryan Dosono, Yasmeen Rashidi, Taslima Akter, Bryan Semaan, and Apu Kapadia, "Challenges in Transitioning from Civil to Military Culture: Hyper-Selective Disclosure through ICTs," Proceedings of the ACM Journal: Human-Computer Interaction: Computer Supported Cooperative Work and Social Computing (PACM '17/CSCW '18), Vol. 1, Issue CSCW, Article 41, 23 pages (November 2017).

PoPETs '17 Qatrunnada Ismail, Tousif Ahmed, Kelly Caine, Apu Kapadia, and Michael Reiter, "To Permit or Not to Permit, That is the Usability Question: Crowdsourcing Mobile Apps' Privacy Permission Settings," To appear in Proceedings on Privacy Enhancing Technologies (**PoPETs '17**), Vol. 2017, No. 4, pp. 3957 (October 2017).
Acceptance rate: 22.5%

IC '17 Tousif Ahmed, Roberto Hoyle, Patrick Shaffer, Kay Connelly, David Crandall, and Apu Kapadia, "Understanding Physical Safety, Security, and Privacy Concerns of People with Visual Impairments," **IEEE Internet Computing**, Special Issue on Usable Security (To appear: May/June

2017)

JCR 5-Year Impact Factor in 2015: 2.3

- Sensors '15** Minhoo Shin, Cory Cornelius, Apu Kapadia, Nikos Triandopoulos, and David Kotz, "Location Privacy for Mobile Crowd Sensing through Population Mapping," *Sensors*, Vol 15, Issue 7, pp. 15285–15310 (June 2015).
JCR 5-Year Impact Factor in 2015: 2.44
- TPDS '14** Ruj Akavipat, Mahdi N. Al-Ameen, Apu Kapadia, Zahid Rahman, Roman Schlegel, and Matthew Wright, "ReDS: A Framework for Reputation-Enhanced DHTs," *IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS)*, Volume 25, Issue 2, pp. 321–331 (February 2014).
JCR 5-Year Impact Factor in 2015: 2.75
- TISSEC '11** Man Ho Au, Patrick P. Tsang, and Apu Kapadia, "PEREA: Practical TTP-Free Revocation of Repeatedly Misbehaving Anonymous Users," *ACM Transactions on Information and System Security (ACM TISSEC)*, Volume 14, Issue 4, Article 29, 34 pages (December 2011).
JCR 5-Year Impact Factor in 2015: 1.61
- TDSC '11** Patrick P. Tsang, Apu Kapadia, Cory Cornelius, and Sean W. Smith, "Nymble: Blocking Misbehaving Users in Anonymizing Networks," *IEEE Transactions on Dependable and Secure Computing (IEEE TDSC)*, Volume 8, Number 2, pp. 256–269 (March–April 2011).
JCR 5-Year Impact Factor in 2015: 1.91
- PMC '11** Minhoo Shin, Cory Cornelius, Dan Peebles, Apu Kapadia, David Kotz, and Nikos Triandopoulos, "AnonySense: A System for Anonymous Opportunistic Sensing," *Journal of Pervasive and Mobile Computing (PMC)*, Volume 7, Issue 1, pp. 16–30 (February 2011).
JCR 5-Year Impact Factor in 2015: 2.37
- TISSEC '10** Patrick P. Tsang, Man Ho Au, Apu Kapadia, and Sean W. Smith, "BLAC: Revoking Repeatedly Misbehaving Anonymous Users Without Relying on TTPs," *ACM Transactions on Information and System Security (ACM TISSEC)*, Volume 13, Issue 4, Article 39, 33 pages (December 2010).
JCR 5-Year Impact Factor in 2015: 1.61
- JSC '02** Annette C. Feng, Apu C. Kapadia, Wu-chun Feng, and Geneva G. Belford, "Packet Spacing: An Enabling Mechanism for Delivering Multimedia Content in Computational Grids," *The Journal of Supercomputing (JSC)*, 23(1):51–66 (2002), (*Invited submission*).
JCR 5-Year Impact Factor in 2015: 1.013

Selected Peer-Reviewed Conference Papers

- CHI '18** Rakibul Hasan, Eman Hassan, Yifang Li, Kelly Caine, David J. Crandall, Roberto Hoyle, and Apu Kapadia, "Viewer Experience of Obscuring Scene Elements in Photos to Enhance Privacy," To appear in ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '18), Montreal, Canada, April 21–26, 2018.
- CHI '17** Roberto Hoyle, Srijita Das, Apu Kapadia, Adam Lee, and Kami Vaniea, "Was my message read?: Privacy and Signaling on Facebook Messenger," In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '17), pp. 3838–3842, Denver, CO, USA, May 6–11, 2017.
Acceptance rate: 25%.

- CSCW '17** Roberto Hoyle, Srijita Das, Apu Kapadia, Adam Lee, and Kami Vaniea, "Viewing the Viewers: Publishers' Desires and Viewers' Privacy Concerns in Social Networks," In Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '17), pp. 555–566, Portland, OR, USA, February 25–March 1, 2017.
Acceptance rate: 34.5%.
- SOUPS '16** Tousif Ahmed, Patrick Shaffer, Kay Connelly, David Crandall, and Apu Kapadia, "Addressing Physical Safety, Security, and Privacy for People with Visual Impairments," In Proceedings of the Twelfth Symposium on Usable Privacy and Security (SOUPS '16), pp. 341–354, Denver, CO, USA, June 22–24, 2016.
Acceptance rate: 27.8%.
Invited (peer reviewed article) to IEEE Internet Computing Special Issue on Usable Security
- ICWSM '16** Shirin Nilizadeh, Anne Groggel, Peter Lista, Srijita Das, Yong-Yeol Ahn, Apu Kapadia, and Fabio Rojas, "Twitter's Glass Ceiling: The Effect of Perceived Gender on Online Visibility," In Proceedings of The International AAAI Conference on Web and Social Media (ICWSM '16), pp. 289–298, Cologne, Germany, May 17–20, 2016.
Acceptance rate: 17%.
- CHI '16** Mohammed Korayem, Robert Templeman, Dennis Chen, David Crandall, and Apu Kapadia, "Enhancing Lifelogging Privacy by Detecting Screens," In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '16), pp. 4309–4314, San Jose, CA, USA, May 7–12, 2016.
Acceptance rate: 23.4%.
Honorable Mention Award (Top 4% of Submissions)
- eCrime '15** Zheng Dong, Apu Kapadia, Jim Blythe, L. Jean Camp, "Beyond the lock icon: real-time detection of phishing websites using public key certificates," In Proceedings of APWG Symposium on Electronic Crime Research (eCrime '15) pp. 112, May 26–29, 2015.
Acceptance rate: *unavailable*%.
Honorable Mention for Best Paper Award
- CHI '15a** Tousif Ahmed, Roberto Hoyle, Kay Connelly, David Crandall, and Apu Kapadia, "Privacy Concerns and Behaviors of People with Visual Impairments," In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '15), pp. 3523–3532, Seoul, South Korea, April 18–23, 2015.
Acceptance rate: 23%.
- CHI '15b** Qatrunnada Ismail, Tousif Ahmed, Apu Kapadia, and Michael K. Reiter, "Crowdsourced Exploration of Security Configurations," In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '15), pp. 467–476, Seoul, South Korea, April 18–23, 2015.
Acceptance rate: 23%.
- CHI '15c** Roberto Hoyle, Robert Templeman, Denise Anthony, David Crandall, and Apu Kapadia, "Sensitive Lifelogs: A Privacy Analysis of Photos from Wearable Cameras," In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '15), pp. 1645–1648, Seoul, South Korea, April 18–23, 2015.
Acceptance rate: 23%.
- CHI '15d** Sameer Patil, Roberto Hoyle, Roman Schlegel, Apu Kapadia, and Adam Lee, "Interrupt Now

- or Inform Later?: Comparing Immediate and Delayed Privacy Feedback,” In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (**CHI '15**), pp. 1415–1418, Seoul, South Korea, April 18–23, 2015.
Acceptance rate: 23%.
- CCS '14** Shirin Nilizadeh, Apu Kapadia, and Yong-Yeol Ahn, “Community-Enhanced De-anonymization of Online Social Networks,” In Proceedings of the 21st ACM Conference on Computer and Communications Security (**CCS '14**), pp. 537–548, Scottsdale, Arizona, USA, November 3–7, 2014.
Acceptance rate: 19%.
- UbiComp '14** Roberto Hoyle, Robert Templeman, Steven Armes, Denise Anthony, David Crandall, and Apu Kapadia, “Privacy Behaviors of Lifeloggers using Wearable Cameras,” In Proceedings of The ACM International Joint Conference on Pervasive and Ubiquitous Computing (**UbiComp '14**), pp. 571–582, Seattle, WA, USA, September 13–17, 2014.
Acceptance rate: 21%.
- WiSec '14** Luke Hutton, Tristan Henderson, and Apu Kapadia, ““Here I am, now pay me!”: Privacy Concerns in Incentivised Location-Sharing Systems,” In Proceedings of the 7th ACM Conference on Security and Privacy in Wireless and Mobile Networks (**WiSec '14**), pp. 81–86, Oxford, UK, July 23–25, 2014.
Acceptance rate: 26%.
- CHI '14** Sameer Patil, Roman Schlegel, Apu Kapadia, and Adam J. Lee, “Reflection or Action?: How Feedback and Control Affect Location Sharing Decisions,” In Proceedings of The ACM SIGCHI Conference on Human Factors in Computing Systems (**CHI '14**), pp. 101–110, Toronto, Canada, Apr 26–May 1, 2014.
Acceptance rate: 23%.
- NDSS '14** Robert Templeman, Mohammed Korayem, David Crandall, and Apu Kapadia, “PlaceAvoider: Steering First-Person Cameras away from Sensitive Spaces,” In Proceedings of The 21st Annual Network & Distributed System Security Symposium (**NDSS '14**), San Diego, CA, February 23–26, 2014.
Acceptance rate: 19%.
- NDSS '13** Robert Templeman, Zahid Rahman, David Crandall, and Apu Kapadia, “PlaceRaider: Virtual Theft in Physical Spaces with Smartphones,” In Proceedings of The 20th Annual Network & Distributed System Security Symposium (**NDSS '13**), San Diego, CA, February 24–27, 2013.
Acceptance rate: 19%.
MIT Technology Review arXiv Blog's "Best of 2012"
- CoNEXT '12** Shirin Nilizadeh, Sonia Jahid, Prateek Mittal, Nikita Borisov, and Apu Kapadia, “Cachet: A Decentralized Architecture for Privacy Preserving Social Networking with Caching,” In Proceedings of The 8th ACM International Conference on Emerging Networking Experiments and Technologies (**CoNEXT '12**), pp. 337–348, Nice, France, December 10–13, 2012.
Acceptance rate: 18%.
- CCS '12** Man Ho Au and Apu Kapadia, “PERM: Practical Reputation-Based Blacklisting without TTPs,” In Proceedings of The 19th ACM Conference on Computer and Communication Security (**CCS '12**), pp. 929–940, Raleigh, NC, October 16–18, 2012.
Acceptance rate: 19%.

- SOUPS '12** 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 '12**), Article 5, 15 pages, Washington DC, July 11–13, 2012.
Acceptance rate: 21%.
- SACMAT '12** 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 '12**), pp. 219–228, Newark, NJ, USA, June 20–22, 2012.
Acceptance rate: 26%.
- NDSS '12** Man Ho Au, Apu Kapadia, and Willy Susilo, "BLACR: TTP-Free Blacklistable Anonymous Credentials with Reputation," In Proceedings of the 19th Annual Network & Distributed System Security Symposium (**NDSS '12**), San Diego, CA, February 5–8, 2012.
Acceptance rate: 18%.
- SOUPS '11** Roman Schlegel, Apu Kapadia, and Adam J. Lee, "Eyeing your Exposure: Quantifying and Controlling Information Sharing for Improved Privacy," In Proceedings of the 2011 Symposium on Usable Privacy and Security (**SOUPS '11**), Article 14, 14 pages, Pittsburgh, PA, July 20–22, 2011.
Acceptance rate: 30%.
- NDSS '11** Roman Schlegel, Kehuan Zhang, Xiaoyong Zhou, Mehool Intwala, Apu Kapadia, and XiaoFeng Wang, "Soundcomber: A Stealthy and Context-Aware Sound Trojan for Smartphones," In Proceedings of the 18th Annual Network and Distributed System Security Symposium (**NDSS '11**), pp. 17–33, San Diego, CA, February 6–9, 2011.
Acceptance rate: 20%.
- CCS '08** Patrick P. Tsang, Man Ho Au, Apu Kapadia, and Sean W. Smith, "PEREA: Towards Practical TTP-Free Revocation in Anonymous Authentication," In Proceedings of The 15th ACM Conference on Computer and Communication Security (**CCS '08**), pp. 333–344, Alexandria, VA, October 27–31, 2008.
Acceptance rate: 18%.
Runner-up for PET Award, 2009: Outstanding Research in Privacy Enhancing Technologies
- MOBISYS '08** Cory Cornelius, Apu Kapadia, David Kotz, Dan Peebles, Minh Shin and Nikos Triandopoulos, "AnonySense: Privacy-Aware People-Centric Sensing," In Proceedings of The Sixth ACM/USENIX International Conference on Mobile Systems, Applications, and Services (**MOBISYS '08**), pp. 211–224, Breckenridge, Colorado, June 17–20, 2008.
Acceptance rate: 18%.
- PERVASIVE '08** Apu Kapadia, Nikos Triandopoulos, Cory Cornelius, Daniel Peebles, and David Kotz, "AnonySense: Opportunistic and Privacy-Preserving Context Collection," In Proceedings of The Sixth International Conference on Pervasive Computing (**PERVASIVE '08**), pp. 280–297, Sydney, Australia, May 19–22, 2008. Springer-Verlag, LNCS 5013.
Acceptance rate: 15%.
- NDSS '08** Apu Kapadia and Nikos Triandopoulos, "Halo: High-Assurance Locate for Distributed Hash Tables," In Proceedings of the 15th Annual Network and Distributed System Security Symposium (**NDSS '08**), pp. 61–79, San Diego, CA, February 10–13, 2008.
Acceptance rate: 18%.

- CCS '07** Patrick P. Tsang, Man Ho Au, Apu Kapadia, and Sean W. Smith, "Blacklistable Anonymous Credentials: Blocking Misbehaving Users without TTPs," In Proceedings of the 14th ACM Conference on Computer and Communication Security (**CCS '07**), pp. 72–81, Alexandria, VA, Oct 29–Nov 2, 2007.
Acceptance rate: 18%.
Runner-up for PET Award, 2009: Outstanding Research in Privacy Enhancing Technologies
- PET '07** Peter C. Johnson, Apu Kapadia, Patrick P. Tsang, and Sean W. Smith, "Nymble: Anonymous IP-Address Blocking," In Proceedings of The Seventh International Symposium on Privacy Enhancing Technologies (**PET '07**), pp. 113–133, Ottawa, Canada, June 20–22, 2007. Springer-Verlag, LNCS 4776.
Acceptance rate: 20%.
- PERVASIVE '07** Apu Kapadia, Tristan Henderson, Jeffrey Fielding, and David Kotz, "Virtual Walls: Protecting Digital Privacy in Pervasive Environments," In Proceedings of The Fifth International Conference on Pervasive Computing (**PERVASIVE '07**), pp. 162–179, Toronto, Canada, May 13–16, 2007. Springer-Verlag, LNCS 4480.
Acceptance rate: 16%.
Honorable Mention Award (Runner-up for Best Paper)
- NDSS '07** Apu Kapadia, Patrick P. Tsang and Sean W. Smith, "Attribute-Based Publishing with Hidden Credentials and Hidden Policies," In Proceedings of The Fourteenth Annual Network and Distributed System Security Symposium (**NDSS '07**), pp. 179–192, San Diego, CA, February 28–March 2, 2007.
Acceptance rate: 15%.
- CCS '04** Apu Kapadia, Geetanjali Sampemane, and Roy H. Campbell, "KNOW Why Your Access Was Denied: Regulating Feedback for Usable Security," In Proceedings of Eleventh ACM Conference on Computer and Communications Security (**CCS '04**), pp. 52–61, Washington DC, October 25–29, 2004.
Acceptance rate: 14%.
- ICDCS '02** Jalal Al-Muhtadi, Roy H. Campbell, Apu Kapadia, Dennis Mickunas, and Seung Yi, "Routing Through the Mist: Privacy Preserving Communication in Ubiquitous Computing Environments," In Proceedings of The 22nd IEEE International Conference on Distributed Computing Systems (**ICDCS '02**), pp. 74–83, Vienna, Austria, July 2–5, 2002.
Acceptance rate: 18%.
- ICDCS '01** Apu Kapadia, Annette Feng, and Wu-chun Feng, "The Effects of Inter-Packet Spacing on the Delivery of Multimedia Content," In Proceedings of The 21st IEEE International Conference on Distributed Computing Systems (**ICDCS '01**), pp. 665–672, Phoenix, Arizona, April 16–19, 2001.
Acceptance rate: 32%.

Peer-Reviewed Workshop and other Conference Papers

- UPSIDE '14** Robert Templeman, Roberto Hoyle, Apu Kapadia, and David Crandall, "Reactive Security: Responding to Visual Stimuli from Wearable Cameras," In Proceedings of the Workshop on Usable Privacy & Security for wearable and domestic ubiquitous DEVICES (**UPSIDE '14**), pp. 1297–1306, Seattle, WA, USA, Sep 14, 2014.
Acceptance rate: 80%.

- ISTAS '13** Vaibhav Garg, Sameer Patil, Apu Kapadia, and L. Jean Camp, Peer-produced Privacy Protection, In Proceedings of the IEEE International Symposium on Technology and Society (**ISTAS '13**), pp. 147–154, Toronto, Canada, June 27–29, 2013.
Acceptance rate: *unavailable*.
- NSPW '12** Zheng Dong, Vaibhav Garg, Jean Camp, and Apu Kapadia, “Pools, Clubs and Security: Designing for a Party Not a Person,” In Proceedings of The New Security Paradigms Workshop (**NSPW '12**), pp. 77–86, Bertinoro, Italy, September 19–21, 2012.
Acceptance rate: 39%.
- HotSec '12** Robert Templeman and Apu Kapadia, “GANGRENE: Exploring the Mortality of Flash Memory,” In Proceedings of The 7th USENIX Workshop on Hot Topics in Security (**HotSec '12**), Bellevue, WA, August 7, 2012.
Acceptance rate: 28%.
- SESOC '12** Sonia Jahid, Shirin Nilizadeh, Prateek Mittal, Nikita Borisov, and Apu Kapadia, “DECENT: A Decentralized Architecture for Enforcing Privacy in Online Social Networks,” In Proceedings of the 4th IEEE International Workshop on Security and Social Networking (**SESOC '12**), pp. 326–332, Lugano, Switzerland, March 19, 2012.
Acceptance rate: 29%.
- USEC '12** Sameer Patil, Yann Le Gall, Adam J. Lee, and Apu Kapadia, “My Privacy Policy: Exploring End-user Specification of Free-form Location Access Rules,” In Proceedings of the Workshop on Usable Security (**USEC '12**), pp. 86–97, Bonaire, March 2, 2012. Springer-Verlag LNCS 7398.
Acceptance rate: 62%.
- WPES '11a** Huina Mao, Xin Shuai, and Apu Kapadia, “Loose Tweets: An Analysis of Privacy Leaks on Twitter,” In Proceedings of the 2011 ACM Workshop on Privacy in the Electronic Society (**WPES '11**), pp. 1–11, Chicago, Illinois, October 17, 2011.
Acceptance rate: 29%.
- WPES '11b** Shirin Nilizadeh, Naveed Alam, Nathaniel Husted, and Apu Kapadia, “Pythia: A Privacy Aware, Peer-to-Peer Network for Social Search,” In Proceedings of the 2011 ACM Workshop on Privacy in the Electronic Society (**WPES '11**), pp. 43–48, Chicago, Illinois, October 17, 2011.
Acceptance rate: 29%.
- CTS '11** Apu Kapadia, Steven Myers, XiaoFeng Wang and Geoffrey Fox, “Toward securing sensor clouds,” In Proceedings of The 2011 International Symposium on Collaborative Technologies and Systems (**CTS '11**), pp. 280–289, Philadelphia, PA, May 23–27, 2011.
Acceptance rate: *unavailable*.
- IHI '10** Emily K. Adams, Mehool Intwala, and Apu Kapadia, “MeD-Lights: A Usable Metaphor for Patient Controlled Access to Electronic Health Records,” In Proceedings of the 1st ACM International Health Informatics Symposium (**IHI '10**), pp. 800–808, Arlington, VA, November 11–12, 2010.
Acceptance rate: 48%.
- WITS '10** Ruj Akavipat, Apurv Dhadphale, Apu Kapadia, and Matthew Wright, “ReDS: Reputation for Directory Services in P2P Systems,” In Proceedings of the ACM CCS Workshop on Insider Threats (**WITS '10**), pp. 47–54, Chicago, IL, October 8, 2010.
Acceptance rate: 50%.

- ISARCS '10** Michael N. Gagnon, John Truelove, Apu Kapadia, Joshua Haines, and Orton Huang, "Towards Net-centric Cyber Survivability for Ballistic Missile Defense," 1st International Symposium on Architecting Critical Systems Federated (**ISARCS '10**), pp. 125–141, Prague, Czech Republic, June 23–25, 2010. Springer-Verlag, LNCS 6150.
Acceptance rate: *unavailable*.
- CTS '10** Apu Kapadia, Steven Myers, XiaoFeng Wang and Geoffrey Fox, "Secure Cloud Computing with Brokered Trusted Sensor Networks," In Proceedings of The 2010 International Symposium on Collaborative Technologies and Systems (**CTS '10**), pp. 581–592, Chicago, IL, May 17–21, 2010.
Acceptance rate: *unavailable*.
- WPES '08** Katelin Bailey, Apu Kapadia, Linden Vongsathorn, and Sean W. Smith, "TwoKind Authentication: Protecting Private Information in Untrustworthy Environments," In Proceedings of The Seventh ACM Workshop on Privacy in the Electronic Society (**WPES '08**), pp. 39–43, Alexandria, VA, October 27, 2008.
Acceptance rate: 36%.
- POLICY '07** Apu Kapadia, Prasad Naldurg, and Roy H. Campbell, "Distributed Enforcement of Unlinkability Policies: Looking Beyond the Chinese Wall," In Proceedings of The Eighth IEEE Workshop on Policies for Distributed Systems and Networks (**POLICY '07**), pp. 141–150, Bologna, Italy, June 13–15, 2007.
Acceptance rate: 45%.
- POLICY '04** Apu Kapadia, Prasad Naldurg, and Roy H. Campbell, "Routing with Confidence: Supporting Discretionary Routing Requirements in Policy Based Networks," In Proceedings of Fifth IEEE International Workshop on Policies for Distributed Systems and Networks (**POLICY '04**), pp. 45–54, Yorktown Heights, New York, June 7–9, 2004.
Acceptance rate: 38%.
- GLOBECOM '02** Wu-chun Feng, Apu Kapadia, and Sunil Thulasidasan, "GREEN: Proactive Queue Management over a Best-Effort Network," In Proceedings of IEEE Global Telecommunications Conference (**GLOBECOM '02**), 21(1):1784–1788, Taipei, Taiwan, November 17–21, 2002.
Acceptance rate: 31%.
- IC '00** Apu Kapadia, Jalal Al-Muhtadi, Roy H. Campbell, and Dennis Mickunas, "I-RBAC 2000: Secure Interoperability Using Dynamic Role Translation," In Proceedings of The First International Conference on Internet Computing (**IC '00**), pp. 231–238, Las Vegas, Nevada, June 26–29, 2000.
Acceptance rate: *unavailable*.

Peer-Reviewed Posters, Poster Abstracts, Extended Abstracts, and Work-in-Progress Papers

- CV-COPS '17** Eman Hassan, Rakibul Hasan, Patrick Shaffer, David Crandall, and Apu Kapadia. Cartooning for Enhanced Privacy in Lifelogging and Streaming Video. In IEEE Conference on Computer Vision and Pattern Recognition Workshop on Computer Vision Challenges and Opportunities for Privacy and Security (**CV-COPS**), 2017.
- NDSS '14** Mohammed Korayem, David Crandall, and Apu Kapadia, "Objectavoider: Detecting Sensitive Objects in Imagery from Wearable Cameras (Poster)". In The 21st Annual Network & Distributed System Security Symposium (**NDSS '14**), San Diego, CA, February 23–26, 2014.

- CSCW '13** Roberto Hoyle, Sameer Patil, Dejanae White, Jerald Dawson, Paul Whalen, and Apu Kapadia, "Attire: Conveying Information Exposure through Avatar Apparel (Demo)," In Proceedings of The 2012 ACM Conference on Computer Supported Cooperative Work Companion (**CSCW '13**), pp. 19–22, San Antonio, Texas, USA, February 23–27, 2013.
- CHI EA '12** 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 Extended Abstracts (**CHI EA '12**), pp. 1997–2002, Austin, TX, May 5–10, 2012.
- CSCW '12** Sameer Patil and Apu Kapadia, "Are You Exposed? Conveying Information Exposure (Extended Abstracts)," In Proceedings of The 2012 ACM Conference on Computer Supported Cooperative Work Companion (**CSCW '12**), pp. 191–194, Seattle, WA, USA, February 11–15, 2012.
- CSIIRW '10** Matthew Wright, Apu Kapadia, Mohan Kumar, and Apurv Dhadphale, "ReDS: Reputation for Directory Services in P2P Systems (Extended Abstract)," In Proceedings of the 6th Annual Cyber Security and Information Intelligence Research Workshop (**CSIIRW '10**), Article 71, 4 pages, Oak Ridge, TN, April 21–23, 2010.
- SOUPS '08** Fabeah Adu-Oppong, Casey K. Gardiner, Apu Kapadia, and Patrick P. Tsang, "Social Circles: Tackling Privacy in Social Networks (Poster Abstract)," Fourth Symposium on Usable Privacy and Security (**SOUPS '08**), Pittsburgh, Pennsylvania, July 23–25, 2008.
- MOBISYS '08** Minh Shin, Cory Cornelius, Daniel Peebles, Apu Kapadia, Patrick Tsang and David Kotz, "SenseRight: Reliable People-centric Sensing with Unreliable Participants (Poster Abstract)," The 6th ACM/USENIX International Conference on Mobile Systems, Applications, and Services (**MOBISYS '08**), Breckenridge, Colorado, June 17–20, 2008.
- SOUPS '07** Katelin Bailey, Linden Vongsathorn, Apu Kapadia, Chris Masone, Sean W. Smith, "TwoKind Authentication: Usable Authenticators for Untrustworthy Environments (Poster Abstract)," In Proceedings of the Third Symposium on Usable Privacy and Security (**SOUPS '07**), pp. 169–170, Pittsburgh, Pennsylvania, July 18–20, 2007.
- WATC '06** Patrick P. Tsang, Apu Kapadia, and Sean W. Smith, "Anonymous IP-Address Blocking in Tor with Trusted Computing (Work in Progress)," The Second Workshop on Advances in Trusted Computing (**WATC '06**), Tokyo, Japan, November 30–December 1, 2006.
- MIDDLEWARE '04** Raquel Hill, Jalal Al-Muhtadi, Roy Campbell, Apu Kapadia, Prasad Naldurg, Anand Ranganathan, "A Middleware Architecture for Securing Ubiquitous Computing Cyber Infrastructures (Work in Progress)," ACM/IFIP/USENIX Fifth International Middleware Conference (**MIDDLEWARE '04**), Toronto, Canada, October 18th–22nd, 2004. Appears in IEEE Distributed Systems Online, 5(9), September 2004.

Peer-Reviewed Position Papers and Abstracts at Workshops without Proceedings

Mohammed Korayem, Robert Templeman, Dennis Chen, Apu Kapadia, and David Crandall, "Enhancing lifelogging privacy through computer vision," In ACM International Conference on Multimedia Workshop on Lifelogging Tools and Applications, 2016.

Patrick Shaffer, Tousif Ahmed, Roberto Hoyle, Kay Connelly, David Crandall, and Apu Kapadia, "Surveillance considerations concerning assistive devices for people with visual impairments," In

ACM SIGCHI Conference on Human Factors in Computing Systems Workshop on Everyday Surveillance, San Jose, CA, USA, 2016.

Tousif Ahmed, Roberto Hoyle, Patrick Shaffer, Kay Connelly, David Crandall, and Apu Kapadia, "Considering privacy implications of assistive devices for people with visual impairments," ACM CHI Workshop on Interactive Systems in Healthcare (WISH), San Jose, CA, USA, 2016.

Roberto Hoyle, Apu Kapadia, and David Crandall, "Challenges in running wearable camera-related user studies," In ACM Conference on Computer-Supported Cooperative Work and Social Computing Workshop on The Future of Networked Privacy: Challenges and Opportunities, 2015.

Sameer Patil and Apu Kapadia, "Are you exposed? Conveying information exposure." Position paper for Workshop on Reconciling Privacy with Social Media at The ACM Conference on Computer Supported Cooperative Work (CSCW), Seattle, WA, USA, 2012.

Kavin Chandrasekaran, Srikanth Iyer, David Crandall, and Apu Kapadia, "Automated activity monitoring using Kinect," Workshop on Evaluating Off-the-Shelf Technologies for Personal Health Monitoring at The ACM International Conference on Ubiquitous Computing (UbiComp), 2012.

Invited Journal and Magazine Articles (Not Peer-Reviewed)

Apu Kapadia, "A Case (Study) For Usability in Secure Email Communication," IEEE Security and Privacy, 5(2):80–84, March/April 2007.

Invited Conference and Workshop Papers (Not Peer-Reviewed)

Alana Libonati, Kelly Caine, Apu Kapadia, and Michael K. Reiter, "Defending Against Device Theft with Human Notarization," In Proceedings of The 10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing (**CollaborateCom '14**), Miami, FL, USA, October 22–25, 2014.

Apu Kapadia, David Kotz, and Nikos Triandopoulos, "Opportunistic Sensing: Security Challenges for the New Paradigm," In The First International Conference on Communication Systems and Networks (**COMSNETS '09**), Bangalore, India, January 5–10, 2009.

Theses

Apu Kapadia, "Models for Privacy in Ubiquitous Computing Environments," Ph.D. Thesis, University of Illinois at Urbana-Champaign, October 2005.

Apu Kapadia, "I-RBAC 2000: A Dynamic Role Translation Model For Secure Interoperability," M.S. Thesis, University of Illinois at Urbana-Champaign, May 2001.

Technical Reports

Mohammed Korayem, Robert Templeman, Dennis Chen, David J. Crandall, and Apu Kapadia, "ScreenAvoider: Protecting Computer Screens from Ubiquitous Cameras," CoRR arXiv Technical Report arXiv:1412.0008, November 2014.

Robert Templeman, Zahid Rahman, David Crandall, and Apu Kapadia, "PlaceRaider: Virtual Theft in Physical Spaces with Smartphones," CoRR arXiv Technical Report arXiv:1209.5982, September

2012.

Ruj Akavipat, Mahdi N. Al-Ameen, Apu Kapadia, Zahid Rahman, Roman Schlegel, and Matthew Wright, "ReDS: A Framework for Reputation-Enhanced DHTs," CoRR arXiv Technical Report arXiv:1209.4867, September 2012.

Sonia Jahid, Shirin Nilizadeh, Prateek Mittal, Nikita Borisov, and Apu Kapadia, "DECENT: A Decentralized Architecture for Enforcing Privacy in Online Social Networks," CoRR arXiv Technical Report arXiv:1111.5377v1, November 2011.

Patrick P. Tsang, Man Ho Au, and Apu Kapadia, "PEREA: Practical TTP-Free Revocation of Repeatedly Misbehaving Anonymous Users," Indiana University Technical Report TR688, July 2011.

Shirin Nilizadeh, Naveed Alam, Nathaniel Husted, and Apu Kapadia, "Pythia: A Privacy Aware, Peer-to-Peer Network for Social Search," Indiana University Technical Report TR687, October 2010.

Patrick P. Tsang, Apu Kapadia, Cory Cornelius, and Sean W. Smith, "Nymble: Blocking Misbehaving Users in Anonymizing Networks," Dartmouth Computer Science Technical Report 2008-637, December 2008.

Patrick P. Tsang, Man Ho Au, Apu Kapadia and Sean W. Smith, "BLAC: Revoking Repeatedly Misbehaving Anonymous Users Without Relying on TTPs," Dartmouth Computer Science Technical Report 2008-635, October 2008.

Katelin Bailey, Apu Kapadia, Linden Vongsathorn, and Sean W. Smith, "TwoKind Authentication: Protecting Private Information in Untrustworthy Environments (Extended Version)," Dartmouth Computer Science Technical Report TR2008-632, August 2008.

Patrick P. Tsang, Man Ho Au, Apu Kapadia, and Sean W. Smith, "Blacklistable Anonymous Credentials: Blocking Misbehaving Users without TTPs (Extended Version)," Dartmouth Computer Science Technical Report TR2007-601, September 2007.

Peter C. Johnson, Apu Kapadia, David Kotz, and Nikos Triandopoulos, "People-Centric Urban Sensing: Security Challenges for the New Paradigm," Dartmouth Computer Science Technical Report TR2007-586, Feb 2007.

Apu Kapadia, Prasad Naldurg, and Roy H. Campbell, "Distributed Enforcement of Unlinkability Policies: Looking Beyond the Chinese Wall," UIUC Technical Report UIUCDCS-R-2006-2689 (UILU-ENG-2006-1718), February 2006.

Apu Kapadia, Prasad Naldurg, and Roy H. Campbell, "Routing with Confidence: A Model for Trustworthy Communication," UIUC Technical Report UIUCDCS-R-2006-2680 (UILU-ENG-2006-1707), Jan 2006.

Apu Kapadia, Wu-chun Feng, and Roy H. Campbell, "GREEN: A TCP Equation-Based Approach to Active Queue Management," UIUC Technical Report: UIUCDCS-R-2004-2408/UIIU-ENG-2004-1710, February 2004.

Academic Activities

Teaching Experience

G: Graduate course; U: Undergraduate course; U/G: Undergraduate and Graduate course

<i>Instructor, CSCI-B 433/INFO-I 433: Systems & Protocol Security & Info. Assurance (U)</i> School of Informatics and Computing, Indiana University Bloomington	Spring 2018
<i>Instructor, CSCI-B 430/INFO-I 430: Security For Networked Systems (U)</i>	Fall 2017
<i>Instructor, CSCI-B 649/INFO-I 433: Systems & Protocol Security & Info. Assurance (U)</i>	Spring 2017
<i>Instructor, CSCI-B 649/INFO-I 590: Advanced Topics in Privacy (G)</i>	Spring 2016
<i>Instructor, INFO-I 230: Analytical Foundations of Security (U)</i>	Fall 2015
<i>Instructor, CSCI-B 649/INFO-I 520: Security For Networked Systems (G)</i>	Spring 2015
<i>Instructor, CSCI-P 538: Computer Networks (G)</i>	Fall 2014
<i>Instructor, CSCI-B 649/INFO-I 590: Advanced Topics in Privacy (G)</i>	Spring 2014
<i>Instructor, CSCI-P 538: Computer Networks (G)</i>	Fall 2013
<i>Instructor, CSCI-B 649/INFO-I 430/520: Security For Networked Systems (U/G)</i>	Spring 2013
<i>Instructor, INFO-I 230: Analytical Foundations of Security (U)</i>	Fall 2012
<i>Instructor, CSCI-B 649/INFO-I 433/533: Systems & Protocol Security & Info. Assurance (U/G)</i> 2012	Spring
<i>Instructor, CSCI-B 649/INFO-I 590: Advanced Topics in Privacy (G)</i>	Fall 2011
<i>Instructor, I-308: Information Representation (U)</i>	Spring 2011
<i>Instructor, CSCI-B 649/INFO-I 590: Advanced Topics in Privacy (G)</i>	Fall 2010
<i>Instructor, INFO-I 400/590: Advanced Security and Privacy (U/G)</i>	Spring 2010
<i>Instructor, INFO-I 590: Advanced Topics in Privacy (G)</i>	Fall 2009
<i>Instructor, CS 38: Security and Privacy (U/G)</i> Department of Computer Science, Dartmouth College	Fall 2007
<i>Faculty supervisor of Security Reading Group Seminar</i> School of Informatics and Computing, Indiana University Bloomington	Sep 2009–present
<i>Founder and facilitator of Security Reading Group Seminar</i> Institute for Security Technology Studies (ISTS), Dartmouth College	Nov 2005–Aug 2008
<i>Co-founder and co-facilitator of Security Reading Group Seminar</i> Department of Computer Science, University of Illinois at Urbana-Champaign	Sep 2000–May 2005

Master Classes

<i>SICSA Masterclass: Mobile User Studies and Experience Sampling</i> Distinguished SICSA Visitor (Scottish Informatics and Computer Science Alliance) Two-day master class held at University of St Andrews and University of Glasgow Co-instructed with Tristan Henderson	August, 2012
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Outreach Activities

<i>Video host</i> Social Networking Do's and Don'ts (4 min, 19 sec) http://www.securitymatters.iu.edu/social-networking/	October, 2010
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Produced by the Center for Applied Cybersecurity Research
Indiana University Bloomington

<i>Co-Lead Instructor</i> Make and Break Cryptographic Security Summer Camp for Grades 10–12 Department of Computer Science, Dartmouth College	June 23–27, 2008
<i>Lead Instructor</i> Cybersecurity Summer Camp for Grades 10–12 Department of Computer Science, Dartmouth College	June 25–29, 2007
<i>Security and Programming Instructor</i> Summer Robotics Camp Camp I (Grades 6–8), Camp II (Grades 6–8), and Camp III (Grade 9) Department of Computer Science, Dartmouth College	July 10–28, 2006

PhD Thesis Committees

Chair

Roberto Hoyle <i>Privacy considerations in the context of wearable cameras</i> Chair, Indiana University	Defended July 2016
Robert Templeman <i>Safe Sensing: Controlling Exposure in a Sensor Rich World</i> Chair, Indiana University	Defended Dec 2014
Shirin Nilizadeh <i>Privacy-aware Decentralized Architectures for Socially Networked Systems</i> Chair, Indiana University	Defended June 2014

Committee Member

Andrew Kaizer Indiana University	Defended May 2017
Sumayah Alrwais Indiana University	Defended Dec 2016
Aarathi Prasad Dartmouth College	Defended April 2016
Zheng Dong Indiana University	Defended Aug 2015
Mohammed Korayem Indiana University	Defended May 2015

Xiaoyong Zhou Indiana University	Defended July 2014
Nathaniel Husted Indiana University	Defended May 2014
Zhou Li Indiana University	Defended Nov 2013
Sonia Jahid University of Illinois at Urbana-Champaign	Defended Jul 2013
Vaibhav Garg Indiana University	Defended Dec 2012
Kehuan Zhang Indiana University	Defended Aug 2012
Youngsang Shin Indiana University	Defended Jul 2011
Alexander Iliev Dartmouth College	Defended Sep 2008
Qatrunnada Ismail Chair, Indiana University	Proposed May 2016
Alana Libonati University of North Carolina at Chapel Hill	Proposed Sep 2014
John-Paul Verkamp Indiana University	Proposed Aug 2013
Christopher Dunn Indiana University	Proposed Aug 2013

Advising

Sameer Patil (Postdoc) School of Informatics and Computing, Indiana University Bloomington	Spring 2011–Summer 2012
Shirin Nilizadeh (Postdoc) School of Informatics and Computing, Indiana University Bloomington	Summer 2014–2015
Zheng Dong (PhD) Co-advised with Jean Camp School of Informatics and Computing, Indiana University Bloomington	Fall 2011–2015
Imtiaz Ahmad (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2017–Current

Taslima Akter (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2016–Current
Rakib Hasan (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2015–Current
Patrick Shaffer (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2015–Current
Tousif Eshan (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2013–Current
Qatrunnada Ismail (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2013–Current
Roberto Hoyle (PhD) School of Informatics and Computing, Indiana University Bloomington	Summer 2012–2016
Shirin Nilizadeh (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2010–Spring 2014
Greg Norcie (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2011–Spring 2012
Zahidur Rahman (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2011–on leave
Robert Templeman (PhD) School of Informatics and Computing, Indiana University Bloomington	Fall 2011–Fall 2014
Naveed Alam (MSSI) School of Informatics and Computing, Indiana University Bloomington	Fall 2010–May 2011
Roman Schlegel (PhD, Visiting Scholar) City University of Hong Kong Visiting School of Informatics and Computing, Indiana University Bloomington	Spring 2011–Fall 2011
Roman Schlegel (PhD, Intern) City University of Hong Kong Visiting School of Informatics and Computing, Indiana University Bloomington	Fall 2009

Graduate Mentoring

Patrick P. Tsang (PhD student) Department of Computer Science, Dartmouth College	Fall 2005–Summer 2008
Peter C. Johnson (Masters student) Department of Computer Science, Dartmouth College	Fall 2006–Summer 2007

Undergraduate Mentoring*Undergraduate students*

Zhipeng Tian, Indiana University Bloomington

Anthony Monaco, Indiana University Bloomington

Paul Whalen, NSF REU, Indiana University Bloomington

Steven Armes, NSF REU, Indiana University Bloomington

Tadeusz Reyher, NSF REU, Indiana University Bloomington

Jeffrey Fielding, Dartmouth College

Summer Interns (HBCU Internship Program), Indiana University Bloomington

Ashley Clodfelter, North Carolina A&T State University, 2011

Alana Anderson, North Carolina A&T State University, 2011

Cornelius Myles, Mississippi Valley State University, 2012

Jerald Dawson, Jackson State University, 2012

Dejanae White, North Carolina A&T State University, 2012

Our research was published as a demo abstract at the ACM Conference on Computer Supported Cooperative Work (CSCW '13).

Ahmal Baloubi, Shaw University, 2013

Jarvis Brewer, Savannah State University, 2013

Joshua Pinckney-Pierce, University of the District of Columbia, 2014

Joshua Sherfield, Norfolk State University, 2014

Undergraduate interns for Women in Science Project (WISP), Dartmouth College

Katelin Bailey, Linden Vongsathorn

Our research was published as a poster abstract at the Symposium on Usable Privacy and Security (SOUPS '07), and as a short paper at the Workshop on Privacy in the Electronic Society (WPES '08).

Casey Gardiner, Fabeah Adu-Oppong

Our research was published as a poster abstract at the Symposium on Usable Privacy and Security (SOUPS '08)

Research Appointments

Indiana University Bloomington

ASSOCIATE PROFESSOR OF COMPUTER SCIENCE AND INFORMATICS, Jul 2015–Present
School of Informatics and Computing

ASSISTANT PROFESSOR OF COMPUTER SCIENCE AND INFORMATICS, Sep 2009–Jun 2015
School of Informatics and Computing

MIT Lincoln Laboratory

MEMBER OF TECHNICAL STAFF, Information Systems Technology Group Sep 2008–Aug 2009
Research position exploring topics such as Intrusion Detection

Dartmouth College

RESEARCH ASSISTANT PROFESSOR, Department of Computer Science Jul 2008–Aug 2008

POST-DOCTORAL RESEARCH FELLOW, Institute for Security Technology Studies Oct 2005–Jun 2008
PKI/Trust Lab with Prof. Sean W. Smith, and
Center for Mobile Computing (CMC) with Prof. David Kotz

Microsoft Research India, Bangalore (MSRI)

VISITING RESEARCHER, Rigorous Software Engineering Group (RSE) Aug 2007
Policy languages for privacy

University of Illinois at Urbana-Champaign (UIUC)

DOE RESEARCH FELLOW Sep 2001–Aug 2005
Advisor: Prof. Roy H. Campbell
Anonymity, privacy, security aware routing, and policy protection

RESEARCH ASSISTANT, Systems Software Research Group Sep 1999–Aug 2001
Advisor: Prof. Roy H. Campbell
Secure interoperability using dynamic role translation

Los Alamos National Laboratory (LANL)

GRADUATE RESEARCH ASSISTANT, RADIANT Group May 2002–Aug 2002
Mentor: Prof. Wu-chun Feng
Proactive queue management schemes

GRADUATE RESEARCH ASSISTANT, RADIANT Group May 2000–Aug 2000
Mentor: Prof. Wu-chun Feng
Rate-based protocols for congestion control

National Center for Supercomputing Applications (NCSA)

RESEARCH ASSISTANT, Horizon Group Jun 1999–Aug 1999
Implemented a distributed version of the Horizon Browser using RMI

RESEARCH ASSISTANT, Hierarchical Data Format Group Sep 1998–May 1999
Performance evaluation of “chunking” for PO.DAAC’s (JPL, NASA) datasets

UNDERGRADUATE RESEARCH PROGRAMMER, Hierarchical Data Format Group Jan 1997–Jun 1997
Implemented a distributed version of the Java HDF Viewer using Java servlets

Industrial Appointments**Jet Propulsion Laboratory (NASA)**

SUMMER HIRE, Physical Oceanography DAAC (PO.DAAC) Jul 1998–Aug 1998
Developed Java client and server code to serve satellite data

Vosaic

UNDERGRADUATE RESEARCH PROGRAMMER Aug 1997–May 1998
Reflector code for streaming multimedia between Reflectors and RTSP servers

Strategic Technology Resources

SUMMER INTERN Jun 1997–Aug 1997
Developed a large multithreaded client application for an ISP system

Invited Talks

“When Electronic Privacy Gets Physical: Privacy in the Age of Sensors,”
CS Colloquium, Dartmouth College, November 2016
Privacy Seminar, Carnegie Mellon University, November 2016
Distinguished Seminar, CyLab Carnegie Mellon University, October 2016
CS Colloquium, University of Pittsburgh, September 2016
Information Privacy Workshop at iConference, March 2016

“Privacy in the Age of Pervasive Cameras: When Electronic Privacy gets Physical,”
Distinguished Lecture Series, Laboratory of Education and Research in Security Assured Information Systems (LERSAIS), University of Pittsburgh, March 2015.
Indiana University Bloomington, CS Colloquium, February 2015.

“When Electronic Privacy gets Physical”
Panelist, *Future of Privacy*, at NSF Secure and Trustworthy Cyberspace (SaTC) Principal Investigators’ Meeting, January 2015.

“Privacy in the Age of Pervasive Cameras”
Dartmouth College, May 2014.
Distinguished Lecturer Series, Kansas State University, April 2014.
Security Seminar, Georgia Tech, April 2014.

“PlaceAvoider: Steering First-Person Cameras away from Sensitive Spaces”

Department Colloquium, UNC Chapel Hill, February 2014.

MSR Talk Series, Microsoft Research Redmond, February 2014.

“PlaceRaider: Virtual Theft in Physical Spaces with Smartphones”

CMU CyLab Seminar, October 2013.

AT&T Labs, October 2013.

IEEE International Symposium on Technology and Society (ISTAS), June 2013.

University of Michigan, April 2013.

Kelley Technology Management Club, Indiana University, April 2013.

Palo Alto Research Center (PARC), February 2013.

Qualcomm Research Silicon Valley (QRSV), February 2013.

“(Ab)using Smartphone Sensors: Attacking and Reining in Privacy”

Distinguished Speaker, Workshop on Information Security and Privacy, Colorado Research Institute for Security and Privacy (CRISP), April 2013.

“Enhanced Privacy Through Exposure Control”

University of Glasgow, Scotland, August 2012.

I3P Privacy Workshop: Perceptions, Policies and Trade-offs, June 2012.

“(Ab)using Smartphone Sensors: Attacking and Reining in Privacy”

Information Trust Institute, University of Illinois at Urbana-Champaign, March 2012.

“Soundcomber: A Stealthy and Context-Aware Sound Trojan for Smartphones”

University of St Andrews, Scotland, August 2012.

Purdue University, December 2011.

“Halo: High-Assurance Searches in Peer-to-Peer Networks”

University of North Carolina, Chapel Hill, February 2010.

Naval Postgraduate School, April 2009.

Indiana University, March 2009.

New Jersey Institute of Technology, February 2009.

“Accountable Anonymity”

George Mason University, July 2008.

MIT Lincoln Laboratory, June 2008.

IBM Zurich, May 2008.

Harvard University, April 2008.

Rochester Institute of Technology, April 2008.

Johns Hopkins University, March 2008.

University of Massachusetts Lowell, February 2008.

George Washington University, February 2008.

Towson University, February 2008.

“Nymble: Anonymous IP-Address Blocking”

Indiana University, March 2009.

Microsoft Research India, Bangalore, August 2007.

“Attribute-Based Publishing with Hidden Credentials and Hidden Policies”

Microsoft Research India, Bangalore, August 2007.

“KNOW Why Your Access Was Denied: Usable Security in Ubiquitous Computing”
DOE High-Performance Computer Science Fellowship Conference, June 2005.
Presented by Geetanjali Sampemane and Apu Kapadia at CU Infosec, December 2004.

“Routing with Confidence: Supporting User Discretion in Policy Based Networks”
DOE High-Performance Computer Science Fellowship Conference, July 2004.

“Latency Based Triangulation—Augmenting Application Layer Multicast”
Outstanding Class Project, First Annual Illinois Computer Systems Symposium (iCSS), 2002.

Talks at Conferences and Workshops

“Crowdsourced Exploration of Security Configurations,”
The ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '15), Seoul, Korea,
April 2015

“Cachet: A Decentralized Architecture for Privacy Preserving Social Networking with Caching”
The 8th ACM International Conference on Emerging Networking Experiments and Technologies
(CoNEXT '12), Nice, France, December 2012

“Toward securing sensor clouds,”
The International Symposium on Collaborative Technologies and Systems (CTS '11), Philadelphia,
PA, May 2011

“TwoKind Authentication: Protecting Private Information in Untrustworthy Environments,”
Seventh ACM Workshop on Privacy in the Electronic Society (WPES '08), Alexandria, VA, October
2008

“AnonySense: Opportunistic and Privacy-Preserving Context Collection”
Sixth International Conference on Pervasive Computing (PERVASIVE '08), Sydney, Australia, May
2008.

“Nymble: Anonymous IP-Address Blocking”
Seventh Privacy Enhancing Technologies Symposium (PETS '07), Ottawa, Canada, June 2007.

“Distributed Enforcement of Unlinkability Policies: Looking Beyond the Chinese Wall”
Eighth IEEE Workshop on Policies for Distributed Systems and Networks (POLICY '07), Bologna,
Italy, June 2007.

“Virtual Walls: Protecting Digital Privacy in Pervasive Environments”
Fifth International Conference on Pervasive Computing (PERVASIVE '07), Toronto, Canada, May
2007.

“Attribute-Based Publishing with Hidden Credentials and Hidden Policies”
Fourteenth Annual Network and Distributed System Security Symposium (NDSS '07), San Diego,
CA, February/March 2007.

“Anonymous IP-Address Blocking in Tor with Trusted Computing (Work in Progress)”
Second Workshop on Advances in Trusted Computing (WATC '06), Tokyo, Japan, November/December
2006.

“Routing with Confidence: Supporting User Discretion in Policy Based Networks”
Fifth IEEE International Workshop on Policies for Distributed Systems and Networks (POLICY 2004),
Yorktown Heights, New York, June 2004.

“GREEN: Proactive Queue Management over a Best-Effort Network”
IEEE Global Telecommunications Conference (GLOBECOM 2002), Taipei, Taiwan, November 2002.

“I-RBAC 2000: Secure Interoperability Using Dynamic Role Translation”
First International Conference on Internet Computing (IC 2000), Las Vegas, Nevada, June 2000.

Professional Activities

NSF Review Panels

Years: 2011, 2012, 2013, 2015, 2017

Panels

Future of Privacy

Panelist at NSF Secure and Trustworthy Cyberspace (SaTC) Principal Investigators' Meeting, January 2015.

Cyber Spies and Cyber Warriors: The United States, China, and the Escalating Cybersecurity Crisis in World Affairs

Panelist at Center on American and Global Security (CAGS) Seminar, Indiana University, March 2013.

Award Committees

PET Award Committee, Award for Outstanding Research in Privacy Enhancing Technologies, 2010

Editor

PoPETs (Proceedings on Privacy Enhancing Technologies) Journal Co-Editor-in-Chief, 2015–2016

ACM Transactions on the Web (TWEB) Associate Editor, 2016–present

Program Chairs

Program Co-Chair, The First International Workshop on The Bright and Dark Sides of Computer Vision: Challenges and Opportunities for Privacy and Security (**CV-COPS**), 2017

Program Co-Chair, Privacy Enhancing Technologies Symposium (**PETS**), 2015–2016

Program Co-Chair, USENIX Summit on Health Information Technologies (**HealthTech**), 2015

Chair, Workshop on Privacy Enhancing Tools (**PETools**), 2013

Organizing Committee Chair Positions

Publications Co-Chair, ACM Conference on Computer and Communications Security (**CCS**), 2017

Workshop Co-chair, ACM Conference on Computer and Communications Security (**CCS**), 2012

Organizing Committees

Board Member, Privacy Enhancing Technologies Symposium (**PETS**), 2015–Present

Steering Committee, Symposium On Usable Privacy and Security, **SOUPS** 2016–2019

Steering Committee, Special Workshop on Information Privacy, **iConference** 2013

Local Arrangements Committee, Privacy Enhancing Technologies Symposium (**PETS**), 2013

Session Chairs

Legal and Policy Issues, Workshop on Usable Privacy & Security for wearable and domestic ubiquitous Devices (**UPSIDE**), 2014

Authentication and Identity I, Network & Distributed System Security Symposium (**NDSS**), 2014

Human-Centered Privacy and Security, Birds-of-a-Feather session at IEEE Symposium on Security and Privacy (**Oakland**), 2013

Authentication, Network & Distributed System Security Symposium (**NDSS**), 2013

Advertising Security & Privacy, ACM Conference on Computer and Communications Security (**CCS**), 2012

Wild Woolly Web, ACM Conference on Computer and Communications Security (**CCS**), 2011

Network and System Privacy, ACM Workshop on Privacy in the Electronic Society (**WPES**), 2011

Privacy Attacks, Risks, Countermeasures, ACM Workshop on Privacy in the Electronic Society (**WPES**), 2010

Anonymization, ACM Conference on Computer and Communications Security (**CCS**), 2009

Location Privacy, ACM Workshop on Privacy in the Electronic Society (**WPES**), 2008

Privacy in distributed systems, ACM Workshop on Privacy in the Electronic Society (**WPES**), 2007

Grid and Trusted Domain, Workshop on Advances in Trusted Computing (**WATC**), 2006

Program Committees

2018

Symposium On Usable Privacy and Security (**SOUPS**), 2018

International Privacy Enhancing Technologies Symposium (**PETS**), 2018

ACM CHI Conference on Human Factors in Computing Systems (**CHI**), 2018

Workshop on Usable Security (**USEC**), 2018

2017

Symposium On Usable Privacy and Security (**SOUPS**), 2017

International Privacy Enhancing Technologies Symposium (**PETS**), 2017

ACM Workshop on Privacy in the Electronic Society (**WPES**), 2017

2016

Symposium On Usable Privacy and Security (**SOUPS**), 2016

International Workshop on Privacy Engineering (**IWPE**), 2016

2015

ISOC Network & Distributed System Security Symposium (**NDSS**), 2015

Workshop on Wearable Security and Privacy (**WEARABLE-S&P**), 2015

2014

IEEE Symposium on Security and Privacy (**Oakland**), 2014

ISOC Network & Distributed System Security Symposium (**NDSS**), 2014

Privacy Enhancing Technologies Symposium (**PETS**), 2014

Symposium On Usable Privacy and Security (**SOUPS**), 2014

IEEE/IFIP International Conference on Dependable Systems and Networks (**DSN**), 2014

ACM Conference on Security and Privacy in Wireless and Mobile Networks (**WiSec**), 2014

USENIX Summit on Health Information Technologies (**HealthTech**), 2014

Workshop on Usable Privacy & Security for wearable and domestic ubiquitous DEvices (**UPSIDE**), 2014

International Conference on Mobile Computing, Applications and Services (**MobiCASE**), 2014

2013

ACM Conference on Computer and Communications Security (**CCS**), 2013

ISOC Network & Distributed System Security Symposium (**NDSS**), 2013

Privacy Enhancing Technologies Symposium (**PETS**), 2013

Symposium On Usable Privacy and Security (**SOUPS**), 2013
ACM Workshop on Privacy in the Electronic Society (**WPES**), 2013
International Conference on Distributed Computing Systems (**ICDCS**), 2013
Annual Computer Security Applications Conference (**ACSAC**), 2013
International Conference on Trust & Trustworthy Computing (**TRUST**), 2013
Journal “mini-PC” for IEEE Transactions on Parallel and Distributed Systems (**TPDS**) Special Issue on Trust, Security and Privacy in Parallel and Distributed Systems

2012

Symposium On Usable Privacy and Security (**SOUPS**), 2012
ACM Workshop on Privacy in the Electronic Society (**WPES**), 2012
International Conference on Trust and Trustworthy Computing (**TRUST**), 2012
Australasian Conference on Information Security and Privacy (**ACISP**), 2012
International Workshop on Security and Privacy in Spontaneous Interaction and Mobile Phone Use (**IWSSI/SPMU**), 2012

2011

ACM Conference on Computer and Communications Security (**CCS**), 2011
International Conference on Applied Cryptography and Network Security (**ACNS**), 2011
ACM Symposium on Information, Computer and Communications Security (**ASIACCS**), 2011
Annual Computer Security Applications Conference (**ACSAC**), 2011
International Workshop on Security and Privacy in Spontaneous Interaction and Mobile Phone Use (**IWSSI/SPMU**), 2011

2010

ACM CCS Workshop on Insider Threats (**WITS**), 2010
ACM Workshop on Privacy in the Electronic Society (**WPES**), 2010
ACM Conference on Computer and Communications Security (**CCS**), 2010
International Conference on Distributed Computing Systems (**ICDCS**), 2010
Second International Workshop on Security and Privacy in Spontaneous Interaction and Mobile Phone Use (**IWSSI/SPMU**), 2010
Privacy Enhancing Technologies Symposium (**PETS**), 2010
Security and Privacy Track at the International World Wide Web Conference (**WWW**), 2010
Privacy on the Web, Technical Track at ACM Symposium on Applied Computing (**SAC**), 2010

2009

International Workshop on Data Privacy Management (**DPM**), 2009
ACM Conference on Computer and Communications Security (**CCS**), 2009
IEEE International Conference on Privacy, Security, Risk and Trust (**PASSAT**), 2009
Privacy Enhancing Technologies Symposium (**PETS**), 2009

2008

ACM Workshop on Privacy in the Electronic Society (**WPES**), 2008
Privacy Enhancing Technologies Symposium (**PETS**), 2008
IEEE International Conference on Sensor Networks, Ubiquitous and Trustworthy Computing (**SUTC**), 2008

2007, 2006

ACM Workshop on Privacy in the Electronic Society (**WPES**), 2007
International Workshop on the Value of Security through Collaboration (**SECOVAL**), 2007
IEEE International Workshop on Trust, Security, and Privacy for Ubiquitous Computing (**TSPUC**),

2007

International Conference on Computer Communications and Networks (ICCCN), 2006

Reviewer (Partial Listing)

Journals

ACM Transactions on Information and System Security (TISSEC)

Journal of Computer Security (JCS)

IEEE Transactions on Dependable and Secure Computing (TDSC)

IEEE Security and Privacy Magazine

ACM Computing Surveys

IEEE Magazine

IEEE Transactions on Multimedia

IEEE Transactions on Mobile Computing (TMC)

IEEE Pervasive

Elsevier Ad Hoc Networks Journal (ADHOC)

Elsevier Pervasive and Mobile Computing Journal (PMC)

Elsevier Computer Networks, Journal of Computer and Telecommunications Networking

Elsevier Journal of Systems and Software

Journal of Zhejiang University SCIENCE (JZUS)

Conferences and Workshops

The Eighth International Conference on Pervasive Computing

ACM Computer and Communications Security (CCS)

ACM Conference on Object-Oriented Programming Systems, Languages and Applications (OOP-SLA)

ACM/USENIX International Conference on Mobile Systems, Applications, and Services (MobiSys)

ACM International Conference on Mobile Computing and Networking (MobiCom)

IEEE International Conference on Distributed Computing Systems (ICDCS)

IEEE International Conference on Communication Systems (ICCS)

ISOC Network and Distributed System Security Symposium (NDSS)

IFIPTM Joint iTrust and PST Conferences on Privacy, Trust Management and Security

International Workshop on Security for Spontaneous Interaction (IWSSI)

European PKI Workshop (EuroPKI)

Memberships

Member of Association for Computing Machinery (ACM)

The Institute of Electrical and Electronics Engineers (IEEE)

Other Professional Activities

Affiliate of the Alliance for the Advancement of African-American Researchers in Computing (A4RC)

Co-organizer of ISTS Summer Cryptography Workshop (*Instructor: Patrick P. Tsang*),
Dartmouth College, 2006

Fellowships, Awards, and Admissions Committee

Department of Computer Science, University of Illinois at Urbana-Champaign, 2002

Volunteering

Pattern Languages of Programs Conference (PLoP '99)
Graduate Student Recruiting Campus Tours, University of Illinois at Urbana-Champaign