

## Saikat Guha

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### RESEARCH INTERESTS

Networked systems with particular interests in online advertising, mobile systems, privacy and security issues therein, and ancillary interests in social networks, and P2P systems.

### EDUCATION

**Ph.D. in Computer Science**, Cornell University, Aug. 2009

Advisor: Paul Francis

Dissertation: “Chasing EME: Arguments for an End-Middle-End Internet”

**B.S. (*magna cum laudé*) in Computer Science**, Cornell University, May 2003

GPA: 3.96/4.0

transferred from Indian Institute of Technology (IIT), Delhi; CGPA: 8.9/10.0

### EMPLOYMENT

**Microsoft Research India**, Bangalore, India

- Researcher: Feb. 2010 – present

**Max Planck Institute for Software Systems**, Kaiserslautern, Germany

- Postdoctoral Researcher: Jul. 2009 – Feb. 2010

### Summer Internships

- Max Planck Institute for Software Systems (with Krishna Gummadi): Summer 2008
- Google Inc. (Security Group): Summer 2007
- Microsoft Research Cambridge (with Pablo Rodriguez): Summer 2006
- DoCoMo Labs USA (with Neil Daswani): Summer 2005

### PUBLICATIONS

#### Refereed Conference Publications and Book Chapters

- V. Dave, S. Guha, Y. Zhang, “Measuring and Fingerprinting ClickSpam in Online Ad Networks,” in *Proceedings of the 2012 Conference of the Special Interest Group on Data Communications (SIGCOMM)*, Helsinki, Finland, Aug. 2012. To appear.
- S. Guha, M. Jain, V. Padmanabhan, “Koi: A Location-Privacy Platform for Smartphone Apps,” in *Proceedings of the 9th Symposium on Networked Systems Design and Implementation (NSDI)*, San Jose, Apr. 2012.
- A. Reznichenko, S. Guha, and P. Francis, “Auctions in Do-Not-Track Compliant Internet Advertising,” in *Proceedings of the 18th ACM Conference on Computer and Communications Security (CCS)*, Chicago, Oct. 2011.
- S. Guha, B. Cheng and P. Francis, “Privad: Practical Privacy in Online Advertising,” in *Proceedings of the 8th Symposium on Networked Systems Design and Implementation (NSDI)*, Boston, Mar. 2011.
- S. Guha, B. Cheng and P. Francis, “Challenges in Measuring Online Advertising Systems,” in *Proceedings of the 2010 Internet Measurement Conference (IMC)*, Melbourne, Australia, Nov. 2010.
- M. Dischinger, M. Marcon, S. Guha, K. Gummadi, R. Mahajan and S. Saroiu, “Glasnost: Enabling End Users to Detect Traffic Differentiation,” in *Proceedings of the 7th Symposium on Networked Systems Design and Implementation (NSDI)*, San Jose, CA, Apr. 2010.
- S. Guha, J. Chandrasekhar, N. Taft and K. Papagiannaki, “How Healthy are Today’s Enterprise Networks?,” in *Proceedings of the 2008 Internet Measurement Conference (IMC)*, Vouliagmeni, Greece, Oct. 2008.

- S. Guha and P. Francis, “An End-Middle-End Approach to Connection Establishment,” in *Proceedings of the 2007 Conference of the Special Interest Group on Data Communication (SIGCOMM)*, Kyoto, Japan, Aug. 2007.
- S. Annapureddy, S. Guha, C. Gkantsidis, D. Gunawardena and P. Rodriguez. “Is High-Quality VoD Feasible using P2P Swarming?,” in *Proceedings of the 16th International World Wide Web Conference (WWW)*, Banff, Canada, May 2007.
- S. Guha and P. Francis, “Characterization and Measurement of TCP Traversal through NATs and Firewalls,” in *Proceedings of the 2005 Internet Measurement Conference (IMC)*, Berkeley, CA, Oct. 2005.
- S. Guha, R. Murty, and E. G. Sirer, “Sextant: A Unified Node and Event Localization Framework Using Non-Convex Constraints,” in *Proceedings of the 6th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc)*, Urbana-Champaign, IL, May 2005.
- C. Botev et al., “Supporting Workflow in a Course Management System,” in *Proceedings of the 2005 Technical Symposium of Computer Science Education (SIGCSE)*, St. Louis, MO, Feb. 2005.
- K. P. Birman, S. Guha, and R. Murty, *Advances in Pervasive Computing and Networking*. Kluwer Academic Press, Fall 2004, Chapter: Scalable, Self-Organizing Technology for Sensor Networks.

#### Refereed Workshop and Symposium Publications

- S. Guha, A. Reznichenko, K. Tang, H. Haddadi and P. Francis, “Serving Ads from localhost for Performance, Privacy, and Profit,” in *Proceedings of the 8th Workshop on Hot Topics in Networks (HotNets)*, New York, NY, Oct. 2009.
- S. Guha, K. Tang and P. Francis, “NOYB: Privacy in Online Social Networks,” in *Proceedings of the 1st ACM SIGCOMM Workshop on Online Social Networks (WOSN)*, Seattle, WA, Aug. 2008.
- B. Wong and S. Guha, “Quasar: A Probabilistic Publish-Subscribe System for Social Networks,” in *Proceedings of the 7th International Workshop on Peer-to-Peer Systems (IPTPS)*, Tampa Bay, FL, Feb. 2008.
- S. Guha and P. Francis, “Identity Trail: Covert Surveillance Using DNS,” in *Proceedings of the 7th International Symposium on Privacy Enhancing Technologies (PET)*, Ottawa, Canada, Jun. 2007.
- S. Annapureddy, S. Guha, C. Gkantsidis, D. Gunawardena and P. Rodriguez. “Exploring VoD in P2P Swarming Systems,” in *Proceedings of the 2007 INFOCOM Mini Symposiums*, Anchorage, AK, May 2007.
- S. Guha, N. Daswani, and R. Jain, “An experimental study of the skype peer-to-peer voip system,” in *Proceedings of the 5th International Workshop on Peer-to-Peer Systems (IPTPS)*, Santa Barbara, CA, Feb. 2006.
- S. Guha, Y. Takeda, and P. Francis, “NUTSS: A SIP-based Approach to UDP and TCP Network Connectivity,” in *Proceedings of the 2004 ACM SIGCOMM Workshop on Future Directions in Network Architecture*, Portland, OR, Aug. 2004, pp. 43–48.

#### Thesis

- S. Guha, “Chasing EME: Arguments for an End-Middle-End Internet,” Cornell University, Ph.D. Thesis, Ithaca, NY, Aug. 2009.

#### RFCs

- P. Srisuresh, B. Ford, S. Sivakumar and S. Guha, “RFC5508 — NAT Behavioral Requirements for ICMP,” Apr. 2009.
- S. Guha, K. Biswas, B. Ford, S. Sivakumar and P. Srisuresh, “RFC5382 — NAT Behavioral Requirements for TCP,” Oct. 2008.

## Patents

- S. Guha, R. Bhaskar, S. Laxman, P. Naldurg, “Patent — Transparent Virtual Currency Using Verifiable Tokens,” Filed Jun 2011.
- S. Guha, M. Jain, V. Padmanabhan, “Patent — Privacy Preserving Matching Service,” Filed Jun 2011.
- S. Guha, M. Jain, A. Jain, V. Padmanabhan, “Patent — Privacy Preserving Platform,” Filed May 2011.
- P. Francis, S. Guha, “Patent US 2011/0252226 A1 — Preserving User Privacy in Response to User Interactions,” Filed Apr. 2010.
- P. Francis, S. Guha and H. Haddadi, “Patent US 2011/0055552 A1 — Private, Accountable, and Personalized Information Delivery in a Networked System,” Filed Sep. 2009.

## SERVICE

### Ph.D. Thesis Committee

- Vacha Dave, University of Texas at Austin

### Organizing Committee

- Workshop on Internet Tracking, Advertising, and Privacy (WiTAP): 2011 (co-chair)
- Microsoft Research India Summer School on Security and Privacy: 2011 (co-chair)

### Technical Program Committee

- International Conference on Cyber Security (ICCS): 2012
- Privacy and Anonymity for the Digital Economy Workshop (PADE): 2012
- EuroSys Workshop on Measurement, Mobility, and Privacy (MPM): 2012
- Passive and Active Measurement Conference (PAM): 2011
- Internet Measurement Conference (IMC): 2010
- Protocols for Future, Large-Scale and Diverse Network Transports (PFLDNeT): 2010
- International Conference on Computer Communications and Networks (ICCCN): 2009

### Reviewer

- Transactions on Networking (TON): 2010, 2011, 2012
- Transactions on Information and System Security (TISSEC): 2010, 2012
- Computer Communication Review (CCR): 2008, 2010, 2012
- Transactions on Mobile Computing (TMC): 2011, 2012
- Computer Networks Journal (COMNET): 2009
- Transactions on the Web (TWEB): 2009
- Computer Communications (COMCOM): 2009
- International Journal of Communication Systems (IJCS): 2009

## PRESS COVERAGE

### Online Media

- On Facebook outing gay users to advertisers. *New York Times*, *CNN*, *Washington Post*, *MSNBC*, *Fox News*, *CBS*, *Wired News*, *Slashdot*, *ArsTechnica*, *Huffington Post*, *IDG News Service*, etc. (Oct. '10)

## INVITED TALKS

### Visits and Summits

- “Koi: A Location-Privacy Platform for Smartphone Apps,” *UTAustin* (Apr.'12), *UWashington* (May.'12)
- “Serving Ads from localhost for Performance, Privacy, and Profit,” *UCSD* (Mar.'11), *UCLA* (Mar.'11), *Harvard* (Mar.'11), *National University of Singapore* (Oct.'10), *Microsoft Research Silicon Valley* (Jul.'10), *Telefonica I&D* (Dec.'09), *Microsoft Research Cambridge* (Dec.'09), *Microsoft Research Redmond* (Oct.'09), *Electronic Frontier Foundation* (Oct.'09), *Google Inc.* (Oct.'09)
- “On End-Middle-End Connection Establishment in the Internet,” *AT&T Labs Research* (Mar.'09), *Telefonica I&D* (Feb.'09), *Microsoft Research India* (Feb.'09)

- “ShutUp: End-to-End Containment of Unwanted Traffic,” *Telefonica I&D* (Jul.’08)
- “An Endhost Perspective Into Today’s Enterprise Networks,” *Thomson Labs* (Jul.’08)
- “Using Off-Path and On-Path Signaling for Internet Security,” *IRTF EME Research Group* (Jul.’06)
- “NAT Behavioral Requirements for TCP,” *IETF BEHAVE Working Group* (Jul.’06, Mar.’06, Nov.’05)
- “Characterization and Measurement of TCP Traversal Through NATs and Firewalls,” *Microsoft Research Redmond* (Nov.’05)

### Conference and Workshop Talks

- “Koi: A Location-Privacy Platform for Smartphone Apps,” *NSDI ’12*
- “Privad: Practical Privacy in Online Advertising,” *NSDI ’11*
- “Challenges in Measuring Online Advertising Systems,” *IMC ’10*
- “Serving Ads from localhost for Performance, Privacy, and Profit,” *HotNets ’09*
- “How Healthy are Today’s Enterprise Networks?,” *IMC ’08*
- “Dear Facebook, My Data is None of Your Business,” *WOSN ’08*
- “Quasar: A Probabilistic Publish-Subscribe System for Social Networks,” *IPTPS ’08*
- “NUTSS: An End-Middle-End Approach to Connection Establishment,” *SIGCOMM ’07*
- “Identity Trail: Covert Surveillance Using DNS,” *PET ’07*
- “An Experimental Study of the Skype Peer-to-Peer VoIP System,” *IPTPS ’06*
- “Characterization and Measurement of TCP Traversal through NATs and Firewalls,” *IMC ’05*
- “Sextant: A Unified Node and Event Localization Framework Using Non-Convex Constraints,” *Mobi-Hoc ’05*

### TEACHING EXPERIENCE

#### Instructor, Cornell University

- Introduction to C (Fall 2006, Spring 2007, Fall 2008), *student evaluation: 5/5*
- Operating Systems Practicum (Fall 2005), *outstanding TA award*

#### Teaching Assistant, Cornell University

- Computer Architecture (Fall 2008), *student evaluation: 4.58/5, outstanding TA award*
- Functional Programming and Data Structures (Spring 2004)
- Intermediate Computer Systems (Fall 2003), *student evaluation: 5/5*

#### Undergraduate Consultant, Cornell University

- Functional Programming and Data Structures (Spring 2002, Fall 2002, Spring 2003)

### AWARDS AND HONORS

#### Cornell University

- Outstanding TA Award (Dept. of Computer Science): Fall 2005, Fall 2008
- Berman Prize (Dept. of Engineering Communications): Fall 2001
- Dean’s List (College of Engineering): Fall 2001, Spring 2002, Fall 2002, Spring 2003

### PARTICULARS

Citizen of India

### REFERENCES

Available upon request.