Bimal Viswanath

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Research Interests

Systems security and privacy, systems and data science aspects of social computing platforms, measurement and analysis of networked and distributed systems

Education

Doctor of Philosophy in Computer Science   10/2008 – 04/2016
Saarland University and Max Planck Institute for Software Systems (MPI-SWS), Saarbruecken, Germany
Advisors: Krishna P. Gummadi, Alan Mislove
Thesis: Towards Trustworthy Social Computing Systems

Master of Science in Computer Science and Engineering   08/2005 – 08/2008
Indian Institute of Technology Madras, Chennai, India
Advisor: C. Siva Ram Murthy
Thesis: A Stochastic Model for TCP over Optical Burst Switching Networks

Bachelor of Technology in Computer Science and Engineering   10/2001 – 05/2005
Cochin University of Science and Technology, Cochin, India

Employment History

Researcher   10/2015 – Present
Nokia Bell Labs, Stuttgart, Germany
Research topic: Cloud Computing, Data Analytics

Ph.D. Candidate   09/2008 – 9/2015
Max Planck Institute for Software Systems, Kaiserslautern/Saarbruecken, Germany
Advisors: Krishna P. Gummadi, Alan Mislove
Research topic: Security and Privacy in Social Computing Systems

Research Intern   06/2012 – 09/2012
Microsoft Research, Bangalore, India
Mentor: Saikat Guha
Research topic: Understanding Social Ad Traffic Quality

Research Intern   07/2011 – 09/2011
Northeastern University, Boston, MA, USA
Mentor: Alan Mislove
Research topic: Building Scalable Sybil Tolerant Systems

Research Intern   06/2010 – 09/2010
Microsoft Research, Redmond, WA, USA
Mentors: Emre Kıcıman, Stefan Saroiu
Research topic: User Privacy from Third-Party Social applications

Graduate Student   08/2005 − 08/2008
Indian Institute of Technology Madras, Chennai, India
Advisor: C. Siva Ram Murthy
Research topic: Optical Burst Switching Networks

Honors and Awards

Best Paper Award, ACM Conference on Online Social Networks (COSN), 2015

Distinguished Paper Award, Symposium on Usable Privacy and Security (SOUPS), 2014

Institutional nominee, Google European Doctoral Fellowship, 2013

Graduate student fellowship, MPI-SWS, 2008 - Present

Graduate student fellowship, Ministry of Human Resources and Development (MHRD), Government of
India, 2005-2008

Publications

Total Citations: 2007, H-Index: 11 (Source: Google Scholar[1] as of August 2016)

Refereed Conference Publications

[1] Strengthening Weak Identities Through Inter-Domain Trust Transfer
Giridhari Venkatadri, Oana Goga, Changtao Zhong, Bimal Viswanath, Krishna P. Gummadi and
Nishanth Sastry
WWW, Montreal, Canada, April 2016

[2] Strength in Numbers: Robust Tamper Detection in Crowd Computations
Bimal Viswanath, M. Ahmad Bashir, M. Bilal Zafar, Simon Bouget, Saikat Guha, Krishna P. Gummadi,
Aniket Kate, and Alan Mislove
COSN, Stanford University, CA, USA, November 2015

[3] Towards Detecting Anomalous User Behavior in Online Social Networks
Bimal Viswanath, M. Ahmad Bashir, Mark Crovella, Saikat Guha, Krishna P. Gummadi, Balachander
Krishnamurthy and Alan Mislove
USENIX Security, San Diego, CA, USA, August 2014

[4] Understanding and Specifying Social Access Control Lists
Mainack Mondal, Yabing Liu, Bimal Viswanath, Krishna P. Gummadi and Alan Mislove
SOUPS, Menlo Park, CA, USA, July 2014

[5] Defending Against Large-scale Crawls in Online Social Networks
Mainack Mondal, Bimal Viswanath, Allen Clement, Peter Druschel, Krishna P. Gummadi, Alan Mis-
love, and Ansley Post
CoNEXT, Nice, France, December 2012

[6] Canal: Scaling Social Network-based Sybil Tolerance Schemes
Bimal Viswanath, Mainack Mondal, Krishna P. Gummadi, Alan Mislove, and Ansley Post
EuroSys, Bern, Switzerland, April 2012

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[1] http://scholar.google.com/citations?user=bu1SCOuD_CMC&hl=en

[7] Understanding and Combating Link Farming in the Twitter Social Network
Saptarshi Ghosh (co-primary author), Bimal Viswanath (co-primary author), Farshad Kooti, Naveen
Kumar Sharma, Korlam Gautam, Fabricio Benevenuto, Niloy Ganguly, and Krishna P. Gummadi
WWW, Lyon, France, April 2012

[8] An Analysis of Social Network-based Sybil Defenses
Bimal Viswanath, Ansley Post, Krishna P. Gummadi, and Alan Mislove
SIGCOMM, New Delhi, India, August 2010

[9] You Are Who You Know: Inferring User Profiles in Online Social Networks
Alan Mislove, Bimal Viswanath, Krishna P. Gummadi, and Peter Druschel
WSDM, New York, NY, February 2010

[10] A Markov Chain Model for TCP NewReno over Optical Burst Switching Networks
Bimal Viswanath, T. Venkatesh, and C. Siva Ram Murthy
GLOBECOM, Washington D.C, November 2007.

Refereed Workshop Publications

[11] Keeping Information Safe from Social Networking Apps
Bimal Viswanath, Emre Kıcıman, and Stefan Saroiu
WOSN, Helsinki, Finland, August 2012

[12] Simplifying Friendlist Management (Demo Paper)
Yabing Liu, Bimal Viswanath, Mainack Mondal, Krishna P. Gummadi, and Alan Mislove
WWW, Lyon, France, April 2012

[13] Sharing Social Content from Home: A Measurement-driven Feasibility Study
Massimiliano Marcon, Bimal Viswanath, Meeyoung Cha, and Krishna P. Gummadi
NOSSDAV, Vancouver, Canada, June 2011

[14] On the Evolution of User Interaction in Facebook
Bimal Viswanath, Alan Mislove, Meeyoung Cha, and Krishna P. Gummadi
WOSN, Barcelona, Spain, August 2009

Refereed Journal Publications

[15] A Stochastic Model for the Behavior of Multiple TCP NewReno Sources over Optical Burst Switching
Network
Bimal Viswanath, T. Venkatesh, C. Siva Ram Murthy
Photonic Network Communications, October 2011

Non-Refereed Publications

[16] Defending Against Large-scale Crawls in Online Social Networks
Mainack Mondal, Bimal Viswanath, Allen Clement, Peter Druschel, Krishna P. Gummadi, Alan Mis-
love, and Ansley Post
Technical Report 2011-006, MPI-SWS, November 2011

[17] Exploring the Design Space of Social Network-based Sybil Defenses (Invited Paper)
Bimal Viswanath, Mainack Mondal, Allen Clement, Peter Druschel, Krishna P. Gummadi, Alan Mis-
love, and Ansley Post
COMSNETS, Bangalore, India, January 2012

Invited Talks

"Strength in Numbers: Robust Tamper Detection in Crowd Computations", Yelp Security Team, San Francisco, CA, USA, November 2015

"Towards Trustworthy Social Computing Systems"

NEC Laboratories Europe, Heidelberg, Germany, March 2015

Bell Labs, Stuttgart, Germany, March 2015

Microsoft Research India, Bangalore, India, April 2015

Telefonica Research, Barcelona, Spain, May 2015

"Understanding and Combating Link Farming in the Twitter Social Network", Réseaux et individus, Informatique et sciences sociales, Paris-Diderot University, Paris, France, November 2012

Conference/Workshop Talks

"Strength in Numbers: Robust Tamper Detection in Crowd Computations", COSN, Stanford University, CA, USA, November 2015

"Towards Detecting Anomalous User Behavior in Online Social Networks", USENIX Security, San Diego, CA, USA, August 2014

"Understanding and combating link farming in the Twitter social network", WWW, Lyon, France, April 2012

"Canal: Scaling social network-based Sybil tolerance schemes", EuroSys, Bern, Switzerland, April 2012

"Keeping information safe from social networking apps", WOSN, Helsinki, Finland, August 2012

"Sharing social networking content from home: A measurement-driven feasibility study", NOSSDAV, Vancouver, Canada, June 2011

"An analysis of Social network-based Sybil defenses", SIGCOMM, New Delhi, India, August 2010

"On the evolution of user interaction in Facebook", WOSN, Barcelona, Spain, August 2009

Software

TrulyTweeting, `http://trulytweeting.app-ns.mpi-sws.org/`: A service to detect tampered tweet promotions.

TrulyFollowing, `http://trulyfollowing.app-ns.mpi-sws.org/`: A service to detect users with tampered follower counts.

Service

PC Member: Social Networking Workshop at COMSNETS (2015), ICWSM (2015), COMSNETS (2016), ICWSM (2016)

Reviewer: IEEE Network Special Issue on Online Social Network (2010), IEEE TDSC, IEEE TON

External Reviewer: CCS (2011), EuroSys (2012), IMC (2012), PAM (2011), SIGCOMM (2009), SYSTOR (2011), ACM TKDD

Teaching Experience

Instructor, Readings in Social Computing Systems, Saarland University, Summer 2013.

Teaching Assistant, Operating Systems, Saarland University, Summer 2009.

Teaching Assistant, Computational Engineering, IIT Madras, July-November 2005 and January-May 2006.

Teaching Assistant, Performance Evaluation of Computer Systems, IIT Madras, July-November 2006 and July-November 2007.

Teaching Assistant, Network Management Systems, IIT Madras, January-May 2006.

Advising

Summer Interns at MPI-SWS: Advait Alai, M. Ahmad Bashir, Simon Bouget

References

Krishna P. Gummadi
Head, Networked Systems Research Group
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Alan Mislove
Associate Professor
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