

# Bimal Viswanath

*Postdoctoral Scholar*

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Department of Computer Science  
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📁 [vbimal.github.io](https://github.com/vbimal)

## Research interests

Data-driven security; Data mining; Machine learning; Measurement and analysis of networked systems

## Education

- 2008–2016 **Doctor of Philosophy in Computer Science** (*Summa cum laude*)  
Saarland University and Max Planck Institute for Software Systems (MPI-SWS), Saarbruecken, Germany  
Advisors: Prof. Krishna P. Gummadi, Prof. Alan Mislove  
Thesis: *Towards Trustworthy Social Computing Systems*
- 2005–2008 **Master of Science in Computer Science and Engineering**  
Indian Institute of Technology Madras, Chennai, India  
Advisor: Prof. C. Siva Ram Murthy  
Thesis: *A Stochastic Model for TCP over Optical Burst Switching Networks*
- 2001–2005 **Bachelor of Technology in Computer Science and Engineering**  
Cochin University of Science and Technology, Cochin, India

## Employment History

- 2017–Present **External Postdoctoral Researcher**  
University of Chicago, Chicago, IL, USA  
Research topic: Systems and Network Security
- 2016–Present **Postdoctoral Scholar**  
University of California, Santa Barbara, CA, USA  
Research topic: Systems and Network Security
- 2015–2016 **Researcher**  
Nokia Bell Labs, Stuttgart, Germany  
Research topic: Cloud Computing, Data Analytics
- 2008–2015 **Ph.D. Candidate**  
Max Planck Institute for Software Systems, Kaiserslautern/Saarbruecken, Germany  
Research topic: Security and Privacy in Social Computing Systems
- 2012 **Research Intern**  
Microsoft Research India, Bangalore, India  
Mentor: Dr. Saikat Guha  
Research topic: Understanding Social Ad Traffic Quality
- 2010 **Research Intern**  
Microsoft Research, Redmond, WA, USA  
Mentor: Dr. Emre Kiciman, Dr. Stefan Saroiu  
Research topic: User Privacy in Third-Party Social applications
- 2005–2008 **Graduate Student**  
Indian Institute of Technology Madras, Chennai, India  
Research topic: Optical Burst Switching Networks

## Honors and Awards

- 2015 Best Paper Award, ACM Conference on Online Social Networks (COSN)
- 2014 Distinguished Paper Award, Symposium on Usable Privacy and Security (SOUPS)
- 2013 Institutional nominee (MPI-SWS), Google European Doctoral Fellowship

## Publications

Total Citations: 2956, H-Index: 14 (Source: [Google Scholar](#) as of July 2018)

- USENIX Security'18 **With Great Training Comes Great Vulnerability: Practical Attacks against Transfer Learning**  
Bolun Wang, Yuanshun Yao, Bimal Viswanath, Haitao Zheng, and Ben Y. Zhao  
USENIX Security, Baltimore, MD, USA, August 2018
- EuroS&P'18 **I Spy with My Little Eye: Analysis and Detection of Spying Browser Extensions**  
Anupama Aggarwal, Bimal Viswanath, Liang Zhang, Saravana Kumar, Ayush Shah, and Ponnurangam Kumaraguru  
EuroS&P, London, United Kingdom, April 2018
- CoNEXT'17 **Towards Reliable Application Deployment in the Cloud**  
Ruichuan Chen, Istemi Ekin Akkus, Bimal Viswanath, Ivica Rimal, and Volker Hilt  
CoNEXT, Seoul, South Korea, December 2017
- Middleware'17 **Sieve: Actionable Insights from Monitored Metrics in Distributed Systems**  
Jörg Thalheim, Antonio Rodrigues, Istemi Ekin Akkus, Pramod Bhatotia, Ruichuan Chen, Bimal Viswanath, Lei Jiao, and Christof Fetzer  
Middleware, Las Vegas, NV, USA, December 2017
- IMC'17 **Complexity vs. Performance: Empirical Analysis of Machine Learning as a Service**  
Yuanshun Yao, Zhujun Xiao, Bolun Wang, Bimal Viswanath, Haitao Zheng, and Ben Y. Zhao  
IMC, London, UK, November 2017
- CCS'17 **Automated Crowdturfing Attacks and Defenses in Online Review Systems**  
Yuanshun Yao, Bimal Viswanath, Jenna Cryan, Haitao Zheng, and Ben Y. Zhao  
CCS, Dallas, TX, USA, October 2017
- WWW'16 **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
- COSN'15 **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
- USENIX Security'14 **Towards Detecting Anomalous User Behavior in Online Social Networks**  
Bimal Viswanath, Muhammad Ahmad Bashir, Mark Crovella, Saikat Guha, Krishna P. Gummadi, Balachander Krishnamurthy, and Alan Mislove  
USENIX Security, San Diego, CA, USA, August 2014
- SOUPS'14 **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

- CoNEXT'12 **Defending Against Large-scale Crawls in Online Social Networks**  
Mainack Mondal, Bimal Viswanath, Allen Clement, Peter Druschel, Krishna P. Gummadi, Alan Mislove, and Ansley Post  
CoNEXT, Nice, France, December 2012
- WOSN'12 **Keeping Information Safe from Social Networking Apps**  
Bimal Viswanath, Emre Kiciman, and Stefan Saroiu  
WOSN, Helsinki, Finland, August 2012
- EuroSys'12 **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
- WWW'12 **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
- COMSNETS'12 **Exploring the Design Space of Social Network-based Sybil Defenses (*Invited Paper*)**  
Bimal Viswanath, Mainack Mondal, Allen Clement, Peter Druschel, Krishna P. Gummadi, Alan Mislove, and Ansley Post  
COMSNETS, Bangalore, India, January 2012
- 2011 **A Stochastic Model for the Behavior of Multiple TCP NewReno Sources over Optical Burst Switching Network**  
Bimal Viswanath, T. Venkatesh, and C. Siva Ram Murthy  
Photonic Network Communications, October 2011
- NOSSDAV'11 **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
- SIGCOMM'10 **An Analysis of Social Network-based Sybil Defenses**  
Bimal Viswanath, Ansley Post, Krishna P. Gummadi, and Alan Mislove  
SIGCOMM, New Delhi, India, August 2010
- WSDM'10 **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
- WOSN'09 **On the Evolution of User Interaction in Facebook**  
Bimal Viswanath, Alan Mislove, Meeyoung Cha, and Krishna P. Gummadi  
WOSN, Barcelona, Spain, August 2009
- GLOBECOM'07 **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

## Professional Activities

### Technical Program Committees

- ICWSM AAAI International Conference on Web and Social Media. 2015, 2016, 2017, 2018
- ICDCS IEEE International Conference on Distributed Computing Systems. 2018
- COMSNETS International Conference on Communication Systems & Networks. 2016, 2018, 2019

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## Patents

- 2016 **Method Of And Device For Deploying An Application Reliably In A Computer Network**  
Ruichuan Chen, Bimal Viswanath, Istemi Ekin Akkus, Ivica Rimal, and Volker Hilt  
Europe 01380478EP, Filed May 2016. Patent pending
- 2016 **Method Of And Device For Determining Reliability in A Computer Network**  
Istemi Ekin Akkus, Ivica Rimal, Ruichuan Chen, Bimal Viswanath, and Volker Hilt  
Europe 013804077EP, Filed May 2016. Patent pending

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## Teaching Experience

- 2013 **Instructor**, Readings in Social Computing Systems, Saarland University, Summer 2013
- 2009 **Teaching Assistant**, Operating Systems, Saarland University, Summer 2009
- 2007 **Teaching Assistant**, Performance Evaluation of Computer Systems, IIT Madras, July-November 2007
- 2006 **Teaching Assistant**, Performance Evaluation of Computer Systems, IIT Madras, July-November 2006
- 2006 **Teaching Assistant**, Network Management Systems, IIT Madras, January-May 2006
- 2006 **Teaching Assistant**, Computational Engineering, IIT Madras, January-May 2006
- 2005 **Teaching Assistant**, Computational Engineering, IIT Madras, July-November 2005

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## Advising

**Ph.D. students:** Anupama Aggarwal (IIIT-Delhi, India), Mainack Mondal (MPI-SWS, Germany), Giridhari Venkatadri (MPI-SWS, Germany), Bolun Wang (University of California, Santa Barbara, USA), Yuanshun Yao (University of Chicago, USA)

**Masters students:** Kirti Bhandari (University of California, Santa Barbara, USA)

**Research Intern at Nokia Bell Labs:** Jörg Thalheim (TU Dresden, Germany)

**Research Interns at MPI-SWS:** Advait Alai (IIT Madras, India), M. Ahmad Bashir (LUMS, Pakistan), Simon Bouget (IRISA/INRIA Rennes – Bretagne Atlantique, France)

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## References

- **Prof. Ben Y. Zhao (ravenben@cs.uchicago.edu )**  
Neubauer Professor of Computer Science, University of Chicago, USA
- **Prof. Krishna P. Gummadi (gummadi@mpi-sws.org )**  
Head, Networked Systems Research Group, Max Planck Institute for Software Systems, Germany
- **Prof. Alan Mislove (amislove@ccs.neu.edu )**  
Associate Professor of Computer Science, Northeastern University, USA
- **Prof. Peter Druschel (druschel@mpi-sws.org )**  
Scientific Director, Max Planck Institute for Software Systems, Germany