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#### RESEARCH INTERESTS

Systems, security, and privacy issues of social network-based systems; Internet measurement; algorithmic auditing; use and management of public key infrastructures

#### **EDUCATION**

#### 05/2009 Doctor of Philosophy in Computer Science

Rice University, Houston, Texas

 $The sis:\ Online\ Social\ Networks:\ Measurement,\ Analysis,\ and\ Applications\ to\ Distributed$ 

Information Systems

Advisors: Peter Druschel and Krishna P. Gummadi

#### 12/2004 Master of Science in Computer Science

Rice University, Houston, Texas

Thesis: POST: A Decentralized Platform for Reliable Collaborative Applications

Advisor: Peter Druschel

05/2002 Bachelor of Arts in Computer Science and Mathematics, awarded cum laude

Rice University, Houston, Texas

#### PROFESSIONAL EXPERIENCE

01/2022 - Present	Professor and Senior Associate Dean for Academic Affairs
07/2021 - 12/2021	Professor and Interim Dean
01/2021 - 06/2021	Professor, Senior Associate Dean for Academic Affairs & Associate Dean for Faculty Affairs
07/2020 - 12/2020	Professor and Associate Dean for Faculty Affairs
07/2019 - 06/2020	Professor and Associate Dean and Director of Undergraduate Programs
08/2016 - 06/2019	Associate Professor and Associate Dean and Director of Undergraduate Programs
07/2015 - 07/2016	Associate Professor
09/2009 - 06/2015	Assistant Professor
	Khoury College of Computer Sciences, Northeastern University, Boston, Massachusetts
07/2015 06/2016	Guest Professor
07/2013 - 00/2016	Guest Floressor
	Department of Economics, Copenhagen University, Copenhagen, Denmark

### 07/2011 - 06/2018 Co-Founder and Chief Data Architect

Janys Analytics, Boston, Massachusetts

#### ADVISING

#### **Research Scientists**

08/2019 - Present Piotr Sapiezynski

#### **Postdoctoral Researchers**

04/2017 - 07/2019 Piotr Sapiezynski

10/2015 - 08/2018 Taejoong Chung (now Asst. Prof. at Virginia Tech)

#### Ph.D. Students

08/2018 - Present	Avijit Ghosh (co-advised with Christo Wilson)
08/2018 - Present	Muhammad Ali (co-advised with Christo Wilson

08/2017 - 08/2020 Giridhari Venkatadri (now at Facebook)

```
08/2016 - Present Lucianna Kiffer (co-advised with Rajmohan Rajaraman)
```

08/2016 - 04/2020 Connor Zanin (co-advised with Cristina Nita-Rotaru, now at New Store, Inc)

08/2011 - 10/2017 Arash Molavi Kakhki (co-advised with David Choffnes, now at ThousandEyes)

05/2010 - 11/2016 Yabing Liu (now at Twitter)

05/2011 - 07/2016 Liang Zhang (now at Google)

05/2010 - 06/2016 Ancsa Hannák (co-advised with David Lazer, now Asst. Prof. at Univ. of Zurich)

08/2009 - 02/2016 Bimal Viswanath (co-advised with Krishna P. Gummadi, now Asst. Prof. at Virginia Tech)

#### Ph.D. Committees

Spring 2021 Shan Jiang (Northeastern)

Fall 2020 Fangfan Li (Northeastern)

Fall 2017 Christopher Riederer (Columbia)

Spring 2016 Paridhi Jain (IIIT Delhi)

Spring 2015 Aldo Cassola (Northeastern)

Spring 2014 Qian Zhang (Northeastern)

Spring 2014 Kapil Arya (Northeastern)

Spring 2014 Alper Okcan (Northeastern)

Fall 2012 Tao Jin (Northeastern)

Spring 2012 Fangfei Zhou (Northeastern)

Spring 2012 Shahzad Rajput (Northeastern)

Spring 2012 Nicholas Blumm (Northeastern)

#### M.S. Committees

Spring 2015 Poonam Bhide (Northeastern)

#### **Bachelors**

Spring 2011 Tommy Nguyen (Suffolk, now at RPI)

#### **TEACHING**

S15, F20 CS 3700, Networks and Distributed Systems

F16, F17, F18, S19 CS 2500, Fundamentals of Computer Science I

 $F11-F14\ CS\ 3600$ , Systems and Networks

F13 CS 5750/IS 4700, Social Information Systems (F13 co-taught with Christo Wilson)

Fog. S11, F13 CS 4700/CS 5700, Fundamentals of Computer Networks (F13 co-taught with Christo Wilson)

F10 CS 5600, Computer Systems

S10 CS 7780, Special Topics in Networks

#### **IOURNAL PUBLICATIONS**

#### ACM TWEB Utilizing Web Trackers for Sybil Defense

M. Flores, A. Kahn, M. Warrior, A. Mislove, and A. Kuzmanovic

ACM TWEB, 15(2), Apr. 2021

#### Nature Machine behaviour

I. Rahwan, M. Cebrian, N. Obradovich, J. Bongard, J.-F. Bonnefon, C. Breazeal, J. W. Crandall, N. A. Christakis, I. D. Couzin, M. O. Jackson, N. R. Jennings, E. Kamar, I. M. Kloumann, H. Larochelle, D. Lazer, R. Mcelreath, A. Mislove, D. C. Parkes, A. Pentland, M. E. Roberts, A. Shariff, J. B. Tenenbaum, and M. Wellman

 $Nature,\,568,\,https://\verb|www.nature.com/articles/s41586-019-1138-y,\,Apr.\,\,2019$ 

#### TRR Profiling Transport Network Company Activity using Big Data

D. Cooper, J. Castiglione, A. Mislove, and C. Wilson TRR, 2672(42), 2018

#### **CCR A First Look at Certification Authority Authorization (CAA)**

Q. Scheitle, T. Chung, J. Hiller, O. Gasser, J. Naab, R. van Rijswijk-Deij, O. Hohlfeld, R. Holz, D. Choffnes, A. Mislove, and G. Carle CCR, 48(2), Apr. 2018

#### JoTS Meddle: Enabling Transparency and Control for Mobile Internet Traffic

A. Rao, A. Molavi Kakhki, A. Razaghpanah, A. Li, D. Choffnes, A. Legout, A. Mislove, and P. Gill

JoTS, 2015103003, http://techscience.org/a/2015103003/, Oct. 2015

#### PLoS One Timescales of Massive Human Entrainment

R. Fusaroli, M. Perlman, A. Mislove, A. Paxton, T. Matlock, and R. Dale PLoS One, 10(4), Apr. 2015

#### REFEREED CONFERENCE PUBLICATIONS

- CCS'22 Hammurabi: A Framework for Pluggable, Logic-based X.509 Certificate Validation Policies
  J. Larisch, W. Aqeel, C. Wilson, A. Mislove, T. Chung, D. Levin, B. Parno, and B. Maggs
  CCS, Los Angeles, CA, USA, Nov. 2022
- ConPro'22 All Things Unequal: Measuring Disparity of Potentially Harmful Ads on Facebook M. Ali, A. Goetzen, P. Sapiezynski, E. Redmiles, and A. Mislove ConPro, San Francisco, CA, USA, May 2022
- ConPro'22 Algorithms that "Don't See Color": Measuring Biases in Lookalike and Special Ad Audiences

P. Sapiezynski, A. Ghosh, L. Kaplan, A. Mislove, and A. Rieke ConPro, San Francisco, CA, USA, May 2022

AIES'22 Algorithms that "Don't See Color": Measuring Biases in Lookalike and Special Ad Audiences

P. Sapiezynski, A. Ghosh, L. Kaplan, A. Mislove, and A. Rieke AIES, Oxford, UK, Aug. 2022

SIGCSE'22 Broadening Participation in Computing via Ubiquitous Combined Majors (CS+X)

C. Brodley, B. Hescott, J. Biron, A. Ressing, M. Peiken, and A. Mislove SIGCSE, Providence, RI, USA, Mar. 2022

IMC'21 Selfish & Opaque Transaction Ordering in the Bitcoin Blockchain: The Case for Chain Neutrality

J. Messias, M. Alzayat, B. Chandrasekaran, K. P. Gummadi, P. Loiseau, and A. Mislove IMC, Online, Nov. 2021

SIGCOMM'21 IP Unbound: Robust, Responsive CDN-scale service without CDN-Scale Addresses

M. Fayed, V. Giotsas, L. Bauer, S. Kerola, M. Majkowski, P. Odintsov, J. Sitnicki, D. Levin, A. Mislove, A. Mislove, and C. Wood SIGCOMM, Online, Aug. 2021

PAM'21 Measurement and Analysis of Automated Certificate Reissuance

O. Omolola, R. Roberts, I. Ashiq, T. Chung, D. Levin, and A. Mislove PAM, Online, Mar. 2021

FAccT'21 Building and Auditing Fair Algorithms: A Case Study in Candidate Screening

C. Wilson, A. Ghosh, S. Jiang, A. Mislove, L. Baker, J. Szary, K. Trindel, and F. Polli FAccT, Online, Mar. 2021

### USENIX Security'21 Mind Your Weight(s): A Large-scale Study on Insufficient Machine Learning Model Protection in Mobile Apps

Z. Sun, R. Sun, L. Lu, and A. Mislove USENIX Security, Vancouver, Canada, Aug. 2021

#### FC'21 Under the Hood of the Ethereum Gossip Protocol

L. Kiffer, A. Salman, D. Levin, A. Mislove, and C. Nita-Rotaru FC, St. George's, Grenada, Mar. 2021

#### WSDM'21 Ad Delivery Algorithms: The Hidden Arbiters of Political Messaging

M. Ali, P. Sapiezynski, A. Korolova, A. Mislove, and A. Rieke WSDM, Online, Feb. 2021

#### IMC'20 On the Potential for Discrimination via Composition

G. Venkatadri and A. Mislove IMC, Pittsburgh, PA, USA, Oct. 2020

### CCS'19 You Are Who You Appear to Be: A Longitudinal Study of Domain Impersonation in TLS Certificates

R. Roberts, Y. Goldschlag, R. Walter, T. Chung, A. Mislove, and D. Levin CCS, London, UK, Nov. 2019

### IMC'19 RPKI is Coming of Age: A Longitudinal Study of RPKI Deployment and Invalid Route Origins

T. Chung, E. Aben, T. Bruijnzeels, B. Chandrasekaran, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, R. van Rijswijk-Deij, J. P. Rula, and N. Sullivan IMC, Amsterdam, The Netherlands, Oct. 2019

#### SIGCOMM'19 A Large-Scale Analysis of Deployed Traffic Differentiation Practices

F. Li, A. A. Niaki, D. Choffnes, P. Gill, and A. Mislove SIGCOMM, Beijing, China, Aug. 2019

#### PETS'19 Investigating sources of PII used in Facebook's targeted advertising

G. Venkatadri, E. Lucherini, P. Sapiezyski, and A. Mislove PETS, Stockholm, Sweden, July 2019

#### WWW'19 Auditing Offline Data Brokers via Facebook's Advertising Platform

G. Venkatadri, P. Sapiezyski, E. M. Redmiles, A. Mislove, O. Goga, M. Mazurek, and K. P. Gummadi

WWW, San Francisco, CA, USA, May 2019

#### NDSS'19 Measuring the Facebook Advertising Ecosystem

A. Andreou, M. Silva, F. Benevenuto, O. Goga, P. Loiseau, and A. Mislove NDSS, San Diego, CA, USA, Feb. 2019

#### IMC'18 Is the Web Ready for OCSP Must Staple?

T. Chung, J. Lok, B. Chandrasekaran, D. Choffnes, D. Levin, B. Maggs, A. Mislove, J. Rula, N. Sullivan, and C. Wilson IMC, Boston, MA, USA, Oct. 2018

#### IMC'18 Analyzing Ethereum's Contract Topology

L. Kiffer, D. Levin, and A. Mislove IMC, Boston, MA, USA, Oct. 2018

### IEEE S&P'18 Privacy Risks with Facebook's PII-based Targeting: Auditing a Data Broker's Advertising Interface

G. Venkatadri, Y. Liu, A. Andreou, O. Goga, P. Loiseau, A. Mislove, and K. P. Gummadi IEEE S&P, San Francisco, CA, USA, May 2018

WWW'18 On Ridesharing Competition and Accessibility: Evidence from Uber, Lyft, and Taxi S. Jiang, L. Chen, A. Mislove, and C. Wilson WWW, Lyon, France, Apr. 2018

#### FAccT'18 On the Potential for Discrimination in Online Targeted Advertising

T. Speicher, M. Ali, G. Venkatadri, F. N. Ribeiro, G. Arvanitakis, F. Benevenuto, K. P. Gummadi, P. Loiseau, and A. Mislove FAccT, New York, NY, USA, Feb. 2018

### NDSS'18 Investigating Ad Transparency Mechanisms in Social Media: A Case Study of Facebook's Explanations

A. Andreou, G. Venkatadri, O. Goga, K. P. Gummadi, P. Loiseau, and A. Mislove NDSS, San Diego, CA, USA, Feb. 2018

# NDSS'18 Automated Attack Discovery in TCP Congestion Control Using a Model-guided Approach S. Jero, E. Hoque, D. Choffnes, A. Mislove, and C. Nita-Rotaru NDSS, San Diego, CA, USA, Feb. 2018

#### IMC'17 Understanding the Role of Registrars in DNSSEC Deployment

T. Chung, R. van Rijswijk-Deij, D. Choffnes, A. Mislove, C. Wilson, D. Levin, and B. M. Maggs IMC, London, UK, Nov. 2017

### IMC'17 lib erate, (n): A library for exposing (traffic-classification) rules and avoiding them efficiently

F. Li, A. Razaghpanah, A. M. Kakhki, A. A. Niaki, D. Choffnes, P. Gill, and A. Mislove IMC, London, UK, Nov. 2017

### IMC'17 Taking a Long Look at QUIC: An Approach for Rigorous Evaluation of Rapidly Evolving Transport Protocols

A. Molavi Kakhki, S. Jero, D. Choffnes, A. Mislove, and C. Nita-Rotaru IMC, London, UK, Nov. 2017

### EMNLP'17 Using millions of emoji occurrences to pretrain any-domain models for detecting emotion, sentiment and sarcasm

B. Felbo, A. Mislove, A. Søgaard, I. Rahwan, and S. Lehmann EMNLP, Copenhagen, Denmark, Sept. 2017

#### USENIX Security'17 A Longitudinal, End-to-End View of the DNSSEC Ecosystem

T. Chung, R. van Rijswijk-Deij, B. Chandrasekaran, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson
USENIX Security, Vancouver, Canada, Aug. 2017

#### IEEE S&P'17 CRLite: a Scalable System for Pushing all TLS Revocations to Browsers

J. Larisch, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson IEEE S&P, San Jose, CA, USA, May 2017

#### CSCW'17 Bias in Online Freelance Marketplaces: Evidence from TaskRabbit and Fiverr

A. Hannak, C. Wagner, D. Garcia, A. Mislove, M. Strohmaier, and C. Wilson CSCW, Portland, OR, USA, Feb. 2017

#### IMC'16 Measuring and Applying Invalid SSL Certificates: The Silent Majority

T. Chung, Y. Liu, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson IMC, Santa Monica, CA, USA, Nov. 2016

### IMC'16 Tunneling for Transparency: A Large-Scale Analysis of End-to-End Violations in the Internet

T. Chung, D. Choffnes, and A. Mislove IMC, Santa Monica, CA, USA, Nov. 2016

## IMC'16 Classifiers Unclassified: An Efficient Approach to Revealing IP-Traffic Classification Rules F. Li, A. Molavi Kakhki, D. Choffnes, P. Gill, and A. Mislove IMC, Santa Monica, CA, USA, Nov. 2016

#### CCS'16 Measurement and Analysis of Private Key Sharing in the HTTPS Ecosystem

F. Cangialosi, T. Chung, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson CCS, Vienna, Austria, Oct. 2016

#### EuroSys'16 Picocenter: Supporting long-lived, mostly-idle applications in cloud environments

L. Zhang, J. Litton, F. Cangialosi, T. Benson, D. Levin, and A. Mislove EuroSys, London, UK, Apr. 2016

#### WWW'16 An Empirical Analysis of Algorithmic Pricing on Amazon Marketplace

L. Chen, A. Mislove, and C. Wilson WWW, Montréal, Canada, Apr. 2016

#### COSN'15 Identifying Personal Information in Internet Traffic

Y. Liu, H. H. Song, I. Bermudez, A. Mislove, M. Baldi, and A. Tongaonkar COSN, Palo Alto, CA, USA, Nov. 2015

#### COSN'15 Strength in Numbers: Robust Tamper Detection in Crowd Computations

B. Viswanath, M. A. Bashir, M. B. Zafar, S. Bouget, S. Guha, K. P. Gummadi, A. Kate, and A. Mislove

COSN, Palo Alto, CA, USA, Nov. 2015

#### IMC'15 Peeking Beneath the Hood of Uber

L. Chen, A. Mislove, and C. Wilson IMC, Tokyo, Japan, Oct. 2015

#### IMC'15 An End-to-End Measurement of Certificate Revocation in the Web's PKI

Y. Liu, W. Tome, L. Zhang, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, A. Schulman, and C. Wilson

IMC, Tokyo, Japan, Oct. 2015

#### IMC'15 Opportunities and Challenges in Crowdsourced War-driving

P. Sapiezyski, R. Gatej, A. Mislove, and S. Lehmann IMC, Tokyo, Japan, Oct. 2015

#### IMC'15 Identifying Traffic Differentiation in Mobile Networks

A. Molavi Kakhki, A. Razaghpanah, H. Koo, A. Li, R. Golani, D. Choffnes, P. Gill, and A. Mislove

IMC, Tokyo, Japan, Oct. 2015

## IMC'15 Location, Location: The Impact of Geolocation on Web Search Personalization C. Kliman-Silver, A. Hannák, D. Lazer, C. Wilson, and A. Mislove

IMC, Tokyo, Japan, Oct. 2015

#### IMC'14 Measuring Price Discrimination and Steering on E-commerce Web Sites

A. Hannak, G. Soeller, D. Lazer, A. Mislove, and C. Wilson IMC, Vancouver, Canada, Nov. 2014

#### IMC'14 Analysis of SSL certificate reissues and revocations in the wake of Heartbleed

L. Zhang, D. Choffnes, T. Dumitra, D. Levin, A. Mislove, A. Schulman, and C. Wilson IMC, Vancouver, Canada, Nov. 2014

#### COSN'14 Measurement and Analysis of OSN Ad Auctions

Y. Liu, C. Kliman-Silver, B. Krishnamurthy, R. Bell, and A. Mislove COSN, Dublin, Ireland, Oct. 2014

#### COSN'14 Beyond CPM and CPC: Determining the Value of Users on OSNs

D. Saez-Trumper, Y. Liu, R. Baeza-Yates, B. Krishnamurthy, and A. Mislove COSN, Dublin, Ireland, Oct. 2014

#### USENIX Security'14 Towards Detecting Anomalous User Behavior in Online Social Networks

B. Viswanath, M. A. Bashir, M. Crovella, S. Guha, K. P. Gummadi, B. Krishnamurthy, and A. Mislove

USENIX Security, San Diego, CA, USA, Aug. 2014

#### SOUPS'14 Understanding and Specifying Social Access Control Lists

M. Mondal, Y. Liu, B. Viswanath, K. P. Gummadi, and A. Mislove SOUPS, Menlo Park, CA, USA, July 2014

#### ICWSM'14 The tweets they are a-changin': Evolution of Twitter users and behavior

Y. Liu, C. Kliman-Silver, and A. Mislove ICWSM, Ann Arbor, MI, USA, June 2014

### ICWSM'14 Of Pins and Tweets: Investigating how users behave across image- and text-based social networks

R. Ottoni, D. de Las Casas, J. P. Pesce, W. Meira, Jr, C. Wilson, A. Mislove, and V. Almeida ICWSM, Ann Arbor, MI, USA, June 2014

#### COSN'13 Building confederated Web-based services with Priv.io

L. Zhang and A. Mislove COSN, Boston, MA, USA, Oct. 2013

#### www'13 Measuring Personalization of Web Search

A. Hannak, P. Sapiezyski, A. Molavi Kakhki, B. Krishnamurthy, D. Lazer, A. Mislove, and C. Wilson

WWW, Rio de Janeiro, Brazil, May 2013

#### www'13 Iolaus: Securing online content rating systems

A. Molavi Kakhki, C. Kliman-Silver, and A. Mislove WWW, Rio de Janeiro, Brazil, May 2013

#### EuroSys'13 Maygh: Building a CDN from client web browsers

L. Zhang, F. Zhou, A. Mislove, and R. Sundaram EuroSys, Prague, Czech Republic, Apr. 2013

#### CoNEXT'12 Defending against large-scale crawls in online social networks

M. Mondal, B. Viswanath, A. Clement, P. Druschel, K. P. Gummadi, A. Mislove, and A. Post CoNEXT, Nice, France, Dec. 2012

#### IEEE NCA'12 WebCloud: Recruiting social network users to assist in content distribution

F. Zhou, L. Zhang, E. Franco, A. Mislove, R. Revis, and R. Sundaram IEEE NCA, Cambridge, MA, USA, Aug. 2012

#### EuroSys'12 Canal: Scaling social network-based Sybil tolerance schemes

B. Viswanath, M. Mondal, K. P. Gummadi, A. Mislove, and A. Post EuroSys, Bern, Switzerland, Apr. 2012

#### IMC'11 Analyzing Facebook privacy settings: User expectations vs. reality

Y. Liu, K. P. Gummadi, B. Krishnamurthy, and A. Mislove IMC, Berlin, Germany, Nov. 2011

#### NSDI'11 Bazaar: Strengthening user reputations in online marketplaces

A. Post, V. Shah, and A. Mislove NSDI, Boston, MA, USA, Mar. 2011

#### SIGCOMM'10 An Analysis of Social Network-based Sybil Defenses

B. Viswanath, A. Post, K. P. Gummadi, and A. Mislove SIGCOMM, Delhi, India, Aug. 2010

#### WSDM'10 You Are Who You Know: Inferring User Profiles in Online Social Networks

A. Mislove, B. Viswanath, K. P. Gummadi, and P. Druschel WSDM, New York, NY, USA, Feb. 2010

#### WWW'09 A Measurement-driven Analysis of Information Propagation in the Flickr Social Network

M. Cha, A. Mislove, and K. P. Gummadi WWW, Madrid, Spain, Apr. 2009

#### **IMC'08 Detecting BitTorrent Blocking**

M. Dischinger, A. Mislove, A. Haeberlen, and K. P. Gummadi IMC, Vouliagmeni, Greece, Oct. 2008

#### NSDI'08 Ostra: Leverging trust to thwart unwanted communication

A. Mislove, A. Post, K. P. Gummadi, and P. Druschel NSDI, San Francisco, CA, USA, Apr. 2008

#### IMC'07 Measurement and Analysis of Online Social Networks

A. Mislove, M. Marcon, K. P. Gummadi, P. Druschel, and B. Bhattacharjee IMC, San Diego, CA, USA, Oct. 2007

#### EuroSys'06 Experiences in building and operating ePOST, a reliable peer-to-peer application

A. Mislove, A. Post, A. Haeberlen, and P. Druschel EuroSys, Leuven, Belgium, Apr. 2006

#### NSDI'05 Glacier: Highly durable, decentralized storage despite massive correlated failures

A. Haeberlen, A. Mislove, and P. Druschel NSDI, Boston, MA, USA, May 2005

#### REFEREED WORKSHOP AND OTHER SHORT PUBLICATIONS

#### FCS'20 Assertion-Carrying Certificates

W. Aqeel, Z. Hanif, J. Larisch, O. Omolola, T. Chung, D. Levin, B. Maggs, A. Mislove, B. Parno, and C. Wilson FCS, Boston, MA, USA, June 2020

#### ConPro'19 Analyzing Facebook Political Advertisers' Targeting

A. Ghosh, G. Venkatadri, and A. Mislove ConPro, San Francisco, CA, USA, May 2019

#### FATES'19 Quantifying the Impact of User Attention on Fair Group Representation in Ranked Lists

P. Sapiezynski, W. Zeng, R. E. Robertson, A. Mislove, and C. Wilson FATES, San Francisco, CA, USA, May 2019

#### HotNets'18 Treads: Transparency-Enhancing Ads

G. Venkatadri, A. Mislove, and K. P. Gummadi HotNets, Redmond, WA, USA, Nov. 2018

#### HotNets'17 Stick a Fork in it: Analyzing the Ethereum network partition

L. Kiffer, D. Levin, and A. Mislove HotNets, Palo Alto, CA, USA, Nov. 2017

#### Internet-QoE'16 BingeOn Under the Microscope: Understanding T-Mobile's Zero-Rating Implementation

A. Molavi Kakhki, F. Li, D. Choffnes, E. Katz-Bassett, and A. Mislove Internet-QoE, Florianópolis, Brazil, Aug. 2016

#### USEC'14 Beyond Access Control: Managing Online Privacy via Exposure

M. Mondal, P. Druschel, K. P. Gummadi, and A. Mislove USEC, San Diego, CA, USA, Feb. 2014

#### ICWSM'12 Tweetin' in the Rain: Exploring societal-scale effects of weather on mood (Poster Paper)

A. Hannak, E. Anderson, L. F. Barrett, S. Lehmann, A. Mislove, and M. Riedewald ICWSM, Dublin, Ireland, June 2012

#### WWW'12 Simplifying Friendlist Management (Demo Paper)

Y. Liu, B. Viswanath, M. Mondal, K. P. Gummadi, and A. Mislove WWW, Lyon, France, Apr. 2012

#### ICWSM'11 Understanding the demographics of Twitter users (Poster Paper)

A. Mislove, S. Lehmann, Y.-Y. Ahn, J.-P. Onnela, and J. N. Rosenquist ICWSM, Barcelona, Spain, July 2011

#### WOSN'09 On the Evolution of User Interaction in Facebook

B. Viswanath, A. Mislove, M. Cha, and K. P. Gummadi WOSN, Barcelona, Spain, Aug. 2009

#### WOSN'08 Growth of the Flickr Social Network

A. Mislove, H. S. Koppula, K. P. Gummadi, P. Druschel, and B. Bhattacharjee WOSN, Seattle, WA, USA, Aug. 2008

#### WOSN'08 Characterizing Social Cascades in Flickr

M. Cha, A. Mislove, B. Adams, and K. P. Gummadi WOSN, Seattle, WA, USA, Aug. 2008

#### HotNets'06 Exploiting Social Networks for Internet Search

A. Mislove, K. P. Gummadi, and P. Druschel HotNets, Irvine, CA, USA, Nov. 2006

#### IPTPS'06 Fallacies in evaluating decentralized systems

A. Haeberlen, A. Mislove, A. Post, and P. Druschel IPTPS, Santa Barbara, CA, USA, Feb. 2006

#### IPTPS'05 Sharing micronews with peer-to-peer event notification

D. Sandler, A. Mislove, A. Post, and P. Druschel IPTPS, Ithaca, NY, USA, Feb. 2005

#### SIGOPS-EW'04 AP3: Cooperative, decentralized anonymous communication

A. Mislove, G. Oberoi, A. Post, P. Druschel, and D. S. Wallach SIGOPS-EW, Leuven, Belgium, Sept. 2004

#### IPTPS'04 Providing Administrative Control and Autonomy in Peer-to-Peer Overlays

A. Mislove and P. Druschel IPTPS, La Jolla, CA, USA, Feb. 2004

#### HotOS'03 POST: A Secure, Resilient, Cooperative Messaging System

A. Mislove, A. Post, C. Reis, P. Willmann, P. Druschel, D. S. Wallach, X. Bonnaire, P. Sens, J.-M. Busca, and L. Arantes-Bezerra HotOS, Lihue, HI, USA, May 2003

#### NON-REFEREED PUBLICATIONS

### Taking a Long Look at QUIC: An Approach for Rigorous Evaluation of Rapidly Evolving Transport Protocols

A. Molavi Kakhki, S. Jero, D. Choffnes, A. Mislove, and C. Nita-Rotaru CACM, 62(7), https://cacm.acm.org/magazines/2019/7/237717-taking-a-long-look-at-quic/fulltext, July 2019

#### Ad Delivery Algorithms: The Hidden Arbiters of Political Messaging

M. Ali, P. Sapiezynski, A. Korolova, A. Mislove, and A. Rieke WSDM, Online, Feb. 2021

#### A Practitioner's Guide to Ethical Web Data Collection

A. Mislove and C. Wilson

The Oxford Handbook of Networked Communication, Brooke Foucault Welles and Sandra González-Bailón, eds., Oxford University Press, http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780190460518.001.0001/oxfordhb-9780190460518, 2018

#### Analysis of SSL Certificate Reissues and Revocations in the Wake of Heartbleed

L. Zhang, D. Choffnes, T. Dumitra, D. Levin, A. Mislove, A. Schulman, and C. Wilson CACM, 61(3), https://cacm.acm.org/magazines/2018/3/225489-analysis-of-ssl-certificate-reissufulltext, Mar. 2018

#### An End-to-End View of DNSSEC Ecosystem Management

T. Chung, R. van Rijswijk-Deij, B. Chandrasekaran, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson

;login: 42(4), https://www.usenix.org/publications/login/winter2017/chung, Dec. 2017

### An Empirical Evaluation of Deployed DPI Middleboxes and Their Implications for Policy-makers

D. Choffnes, P. Gill, and A. Mislove

TPRC, Arlington, VA, USA, https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2941535, Sept. 2017

#### **Investigating End-To-End Integrity Violations in Internet Traffic**

A. Mislove, D. Choffnes, and T. Chung

TPRC, Arlington, VA, USA, https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2943668, Sept. 2017

#### Measuring Personalization of Web Search

A. Hannak, P. Sapiezyski, A. Molavi Kakhki, D. Lazer, A. Mislove, and C. Wilson CoRR, https://arxiv.org/abs/1706.05011, June 2017

#### Using the Middle to Meddle with Mobile

A. Rao, A. M. Kakhki, A. Razaghpanah, A. Tang, S. Wang, J. Sherry, P. Gill, A. Krishnamurthy, A. Legout, A. Mislove, and D. Choffnes

Northeastern University, Technical Report NEU-CCS-2013-12-10, Dec. 2013

#### An empirical validation of growth models for complex networks

A. Mislove, H. S. Koppula, K. P. Gummadi, P. Druschel, and B. Bhattacharjee Dynamics On and Of Complex Networks, Volume 2, Niloy Ganguly, Animesh Mukherjee, Bivas Mitr, Fernando Peruani, and Monojit Choudhury, eds., Springer-Verlag Publishers, Heidelberg, Germany, http://www.springer.com/us/book/9781461467281, Jan. 2012

#### Exploring the design space of social network-based Sybil defense

B. Viswanath, M. Mondal, A. Clement, P. Druschel, K. P. Gummadi, A. Mislove, and A. Post COMSNETS, Bangalore, India, Jan. 2012

#### Defending against large-scale crawls in online social networks

M. Mondal, B. Viswanath, A. Clement, P. Druschel, K. P. Gummadi, A. Mislove, and A. Post MPI-SWS, Technical Report 2011-006, Nov. 2011

#### Addressing the Privacy Management Crisis in Online Social Networks

K. P. Gummadi, B. Krishnamurthy, and A. Mislove IAB Workshop on Internet Privacy, Boston, MA, USA, Dec. 2010

#### Is Twitter a national mood ring? A. Mislove

CNN.com, Aug. 2010

http://www.cnn.com/2010/OPINION/08/03/mislove.twitter.research.

### Online Social Networks: Measurement, Analysis, and Applications to Distributed Information Systems

A. Mislove

Ph.D. Thesis, Rice University, Department of Computer Science, May 2009

#### **ePOST**

A. Mislove, A. Haeberlen, A. Post, and P. Druschel

Peer-to-Peer Systems and Applications, LNCS 3485, chapter 12, Ralf Steinmetz and Klaus Wehrle, eds., Springer-Verlag Publishers, Heidelberg, Germany, http://link.springer.com/book/10.1007/11530657, Aug. 2005

#### **Consistent Key Mapping in Structured Overlays**

A. Haeberlen, J. Hoye, A. Mislove, and P. Druschel

Rice University, Department of Computer Science, Technical Report TR05-456, Aug. 2005

#### POST: A Decentralized Platform for Reliable Collaborative Applications

A. Mislove

Master's Thesis, Rice University, Department of Computer Science, Dec. 2004

#### **INVITED TALKS**

Ad Delivery Algorithms: The Hidden Arbiters of Political Messaging

01/07/2021 Virtual Max Planck Intersectional Symposium on Computing and Society (C&S 2021)

06/18/2020 Workshop on Security and Human Behavior (SHB'20)

Privacy and security threats in social network ad targeting and delivery

10/10/2021 Next Generation Networking Webinar

04/21/2021 MIT Computational Social Science (CSS) Seminar

02/03/2021 Santa Fe Institute

01/13/2021 Federal Reserve Artificial Intelligence Symposium

06/10/2020 Network Traffic Measurement and Analysis Conference (TMA'20) Keynote talk

10/09/2019 Boston University School of Law

Measuring bias in social network ad targeting and delivery

11/07/2019 Indiana University

09/02/2019 Interdisciplinary Summerschool on Privacy

06/20/2019 Handling Web Bias Workshop Keynote talk

Discrimination through optimization: How Facebook's ad delivery can lead to skewed outcomes

06/06/2019 Workshop on Security and Human Behavior (SHB'19)

Investigating sources of PII used in Facebook's targeted advertising

11/16/2018 Brave Faculty Summit

Auditing Data Brokers' Advertising Interfaces: Privacy Risks with Facebook's PII-based Targeting

07/24/2018 Conference on Privacy Enhancing Technologies (PETS'18) Keynote talk

06/18/2018 EPFL Summer Research Institute on Security & Privacy

02/28/2018 FTC PrivacyCon 2018, Washington, DC

Increasing the transparency of online algorithms

12/01/2017 MIT Media Lab

01/30/2017 Interpol Workshop on Privacy Enhancing Technologies, Lyon, France

09/26/2016 Harvard University
04/22/2016 Queen Mary University

Mitigating Sybil Attacks in Online Services

09/04/2016 International Summer School on Social Networks Security, Privacy, and Trust; Padua, Italy

Measuring personalization of online services

01/13/2016 University of Hawai'i at Manoa

10/13/2015 University of St Andrews

10/12/2015 University of Edinburgh

10/09/2015 Danish Technical University

Understanding SSL Certificate Revocation: The Race to the Bottom in Securing the Web's PKI

06/19/2015 Cisco Talk Series, Webex

Measuring Personalization of Web Services

06/04/2015 International School and Conference on Network Science (NetSci'15), Zaragoza, Spain

05/12/2015 Raytheon BBN Technologies, Cambridge, MA

11/20/2014 Data Transparency Lab Kickoff, Telefonica, Barcelona, Spain

Privacy in Online Social Networks

10/18/2013 Harvard University

Social Media and Networks: A Computer Science Perspective

06/12/2013 Network Factory 2013 Summer School, Höllviken, Sweden

Leveraging social networks in systems design

11/16/2012 Worcester Polytechnic Institute

04/20/2011 University of Maryland, College Park

12/06/2010 University of Massachusetts Boston

12/01/2010 nuACM Lecture, Northeastern University

11/19/2010 McGill University 11/15/2010 Boston University

Writing a successful CISE CAREER proposal

05/18/2012 NSF CAREER Writing Workshop, Phoenix, Arizona

Privacy in online social media

12/15/2011 Copenhagen Center for Computational Social Science, Copenhagen, Denmark

Systems challenges in online social media

12/06/2011 Top-IX Annual Conference, Turin, Italy

Twittermood: Measuring the mood of the U.S. throughout the day

06/22/2011 R Twitter Group Meeting, Microsoft Research New England

Leveraging online social networks for health research

05/23/2011 Online Social Networks Conference, Columbia University

Leveraging online social networks for social science

09/17/2010 IBM Social Network Analysis Community

 $\textbf{09/15/2010} \hspace{0.2cm} \textbf{High Throughput Humanities Workshop, European Conference on Complex Systems} \hspace{0.2cm} \textit{Keynote}$ 

talk

Social media and networks

05/11/2010 International School and Conference on Network Science (NetSci'10)

Leveraging social networks in information systems

04/08/2010 Technische Universität Berlin

03/24/2010 University of Massachusetts Lowell

04/07/2009 University of Colorado at Boulder

03/31/2009 University of Pennsylvania

03/23/2009 AT&T Labs - Research

03/19/2009 Northeastern University

03/16/2009 University of Oregon

03/12/2009 University of Rochester

Towards Sybil-Tolerant Systems

07/20/2009 Army Research Office Trustworthy Social Computing Workshop

Automatically detecting communities in online social networks

12/11/2008 Facebook, Inc.

12/05/2008 New York University

12/03/2008 University of Maryland, College Park

Leveraging communities in online social networks

11/20/2008 International Max Planck Research School Ringvorlesung

Structure and growth of online social networks

11/28/2007 Microsoft Research Cambridge Social Networks Workshop

#### **TESTIMONY**

9/28/2021 The Disinformation Black Box: Researching Social Media Data, hearing before the Subcommittee on Investigations & Oversight of the Committee on Space, Science, and Technology of the U.S. House of Representatives

INVITED WORKSHOPS AND PANELS 10/13/2018 Kicking the Black Box: The Perils and Promise of Algorithm Auditing Panel at AoIR'18 06/14/2018 A Technical Research Agenda in Data Ethics and Responsible Data Management Panel at SIGMOD'18 03/14/2017 Innovations in Informatics Education at Universities - International Best Practice Workshop, TU Wien 2017 Proposal Review Panel, NSF 2016 Proposal Review Panel, NSF 2015 Data Transparency Lab Grant Committee, Telefónica 2015 Proposal Review Panel, NSF 05/22/2014 SaTC Frontier External Review Panel, NSF 2014 Proposal Review Panel, NSF 2013 Proposal Review Panel, NSF 2013 Proposal Review Panel, NSF 2013 Proposal Review Panel, NSF 2012 Proposal Review Panel, NSF 2012 Proposal Review Panel, NSF 2012 Proposal Review Panel, NSF 11/13/2012 NSF US-Japan Networking Research Collaboration Workshop, Tokyo, Japan 10/15/2012 Synergic Investigations in Network Science, Bertinoro, Italy 02/23/2012 Workshop on Social Networks and Mobility in the Cloud, NSF 11/09/2011 Workshop on Analysis of Dynamic Social and Technological Networks (#11452), Dagstuhl 06/28/2011 New England Summit on Cyber Security, Boston University 05/23/2011 Online Social Networks and Health Research, Columbia University 04/03/2011 Social Networking Roundtable, Qatar Computing Research Institute 2010 Proposal Review Panel, NSF 12/08/2010 Internet Privacy Workshop, IAB 07/20/2010 Cybervetting Focus Group, IACP **06/22/2010** Apps in 2020, IEEE SECON'10 04/16/2010 Idea Summit: Mapping Edges in a World of Global Connectivity, DARPA 03/23/2006 Workshop on Peer-to-Peer Systems and Applications (#06131), Dagstuhl

#### **POSTERS**

08/21/2017 The Root Canary: Monitoring and Measuring the DNSSEC Root Key Rollover, SIGCOMM'17 08/28/2015 Picocenter: Supporting long-lived, mostly-idle applications in cloud environments, SOCC'15 10/02/2014 Modeling content sharing preferences in Online Social Networks, COSN'14 08/20/2014 Identifying Traffic Differentiation on Cellular Data Networks, SIGCOMM'14 (2nd place, research competition) 03/26/2014 Identifying traffic differentiation by mobile providers, AIMS'14 04/15/2013 Magyh: Building a CDN from client web browsers, EuroSys'13 10/24/2011 Mitigating Sybil attacks on content rating systems, SOSP'11 08/17/2011 Limiting large-scale crawls of social networking sites, SIGCOMM'11 (research competition finalist) 07/20/2011 Understanding the demographics of Twitter users, ICWSM'11 03/30/2011 WebCloud: Enabling more direct content exchange between Web clients, NSDI'11 04/16/2008 Anonymity in the Personalized Web, NSDI'08

#### **PATENTS**

- 06/02/2015 A. Mislove and A. Molavi Kakhki, "Systems and Methods for Securing Online Content Ratings," U.S. patent 9,047,628, issued Jun. 2015.
- 01/14/2014 A. Mislove and R. Sundaram, "Content Distribution Network using a Web Browser and Locally Stored Content to Directly Exchange Content between Users," U.S. patent 8,631,091, issued Jan. 2014.

#### HONORS AND AWARDS

- 2019 IRTF Applied Networking Research Prize for IMC'17 paper Understanding the Role of Registrars in DNSSEC Deployment
- 2018 IRTF Applied Networking Research Prize for NDSS'18 paper Taking a Long Look at QUIC: An Approach for Rigorous Evaluation of Rapidly Evolving Transport Protocols
- 2018 Cisco Network Security Distinguished Paper Award, NDSS'18
- 2017 IEEE Cybersecurity Award for Innovation for Oakland'17 paper CRLite: a Scalable System for Pushing all TLS Revocations to Browsers
- 2017 ACM SIGCOMM Test of Time Award, for IMC'07 paper Measurement and Analysis of Online Social Netv
- 2017 Distinguished Paper Award, USENIX Security'17
- 2017 Outstanding Reviewer Award, WWW'17
- 2015 Best Paper Award, COSN'15
- 2014 Community Contribution Award, COSN'14
- 2014 Distinguished Paper Award, USEC'14
- 2013 TwitterMood visualization selected for Places & Spaces: Mapping Science exhibit
- 2011 Google Faculty Research Award
- 2011 NSF CAREER Award
- 2010 Institutional Nominee, Microsoft Research Faculty Fellowship, Northeastern University
- 2004 Distinguished Graduate Student Award, Department of Computer Science, Rice University
- 2003 Honorable Mention, NSF Graduate Research Fellowship

#### SERVICE

#### Area Chair

'22 Conference on Fairness, Accountability, and Transparency (FAccT)

#### **General Chair**

- '16 Workshop on Data and Algorithmic Transparency (DAT)
- '18, '21 Internet Measurement Conference (IMC)

#### **Local Arrangements Chair**

'13 ACM Conference on Online Social Networks (COSN)

#### **Organizing Committee Member**

- '14 New England Networking and Systems Day (NENS)
- '13 International School and Conference on Network Science (NetSci)

#### **Poster Committee Chair**

- '15 ACM Conference on Online Social Networks (COSN)
- '10 Passive and Active Measurement Conference (PAM)

#### **Program Committee Chair**

- '16 Workshop on Data and Algorithmic Transparency (DAT)
- '08 Workshop on Social Network Systems (SNS)

#### **Program Committee Member**

- '14, '15 ACM Conference on Online Social Networks (COSN)
- '14, '15, '16, '17 Conference on Emerging Networking Experiments and Technologies (CoNEXT)
  - '12, '13 International Workshop on Complex Networks (CompleNet)
    - '14 European Conference on Computer Systems (EuroSys)

- '18, '19, '20 Conference on Fairness, Accountability, and Transparency (FAccT)
  - '21 Workshop on Free and Open Communications on the Internet (FOCI)
  - '15 International Conference on Computational Social Science (IC2S2)
  - '13 IEEE International Conference on Distributed Computing Systems (ICDCS)
  - '12 International Conference on Network Protocols (ICNP)
  - '13, '14 International Conference on Weblogs and Social Media (ICWSM)
- '12, '14, '15, '17, Internet Measurement Conference (IMC)
- '18, '20, '22 '15 USENIX Symposium on Networked Systems Design and Implementation (NSDI)
  - '11 Workshop on the Economics of Networks, Systems, and Computation (NetEcon)
  - '10, '11, '14, '16, Passive and Active Measurement Conference (PAM)
- '17, '21 '19, '20, '21 Privacy Enhancing Technologies Symposium (PETS)
  - '17 International Conference on Measurement and Modeling of Computer Systems (SIGMET-RICS)
  - '11 Workshop on Simplifying Complex Networks for Practitioners (SIMPLEX)
  - '08, '09 Workshop on Social Network Systems (SNS)
  - '11, '12 Systems and Storage Conference (SYSTOR)
    - '16 Workshop on Understanding and Enhancing Online Privacy (UEOP)
    - '12 Workshop on Online Social Networks (WOSN)
  - '13, '14 International Conference on Web Search and Data Mining (WSDM)
- '12, '13, '14, '16, International World Wide Web Conference, Social Networks Track (WWW)
- '17, '18 '12 ACM Web Science Conference (WebSci)

#### **Publications Chair**

'19 Conference on Fairness, Accountability, and Transparency (FAT\*)

#### **Publicity Chair**

'11 Haifa Experimental Systems Conference (SYSTOR)

#### Senior Program Committee Member

'16, '17, '18 International Conference on Weblogs and Social Media (ICWSM)

#### **Steering Committee Member**

'18 Conference on Fairness, Accountability, and Transparency (FAT\*)

#### Track Chair

'15 International World Wide Web Conference, Social Networks Track (WWW)

#### **FUNDING**

#### **Amazon Web Services**

- 08/2017 08/2018 Research in Education Grant, Enabling process migration to resources. PI. \$5k.
- 12/2015 12/2016 Research in Education Grant, Picocenter: Supporting long-lived, mostly idle applications in cloud environments. PI. \$5k.
- 12/2013 12/2015 Research in Education Grant, Deploying confederated web services. PI. \$5k.
- 12/2011 12/2013 Research in Education Grant, Measuring and Predicting Sentiment in Online Social Networks. PI. \$7k.
- 12/2010 12/2011 Research in Education Grant, Measuring Information Flow in Real-Time. PI. \$7k.
- 12/2009 12/2010 Research in Education Grant, Tracing the Spread of Information in Social Networks. PI. \$4k.

#### **Army Research Office**

10/2012 - 10/2016 W911NF-12-1-0556, Will the revolution be tweeted? Weak ties, social media, and flash movements. Co-PI, joint with David Lazer. \$400k.

#### **Data Transparency Lab**

- 07/2017 07/2018 Research Award, Increasing transparency of data aggregation by Facebook and partners. PI, joint with Krishna P. Gummadi. €50k.
- 07/2015 07/2016 Research Award, Revealing and Controlling Mobile Privacy Leaks. Co-PI, joint with David Choffnes and Christo Wilson. €50k.

#### Facebook

07/2018 Facebook Secure the Internet Grant, *Towards privacy-protecting aggregate statistics in PII-based targeted advertising*. PI, joint with Krishna Gummadi. \$60k.

#### Google

12/2011 Google Faculty Research Award, Mitigating Sybil attacks on content rating systems. PI. \$49k.

#### **Knight Foundation**

08/2015 - 02/2016 Knight Prototype Fund, *Public Access to Pricing Personalization*. Co-PI, joint with David Lazer and Christo Wilson. \$30k.

#### Mozilla

07/2019 Research Grant, *Understanding the impact of ad preference controls*. Co-PI, joint with Piotr Sapiezynski and Aleksandra Korolova. \$25k.

#### Narus

03/2014 Unrestricted Gift, Identification of User Data Gathered and Shared by Companies. PI. \$40k.

#### **National Science Foundation**

- 10/2020 09/2025 CNS-1955227, SaTC: Frontiers: Collaborative: Protecting Personal Data Flow on the Internet. Co-PI, joint with David Choffnes and Woodrow Hartzog. \$10m (total), \$1.6m (NEU).
- 10/2019 09/2022 CNS-1916020, SaTC: Core: Medium: Collaborative: Understanding and mitigating the privacy and societal risks of advanced advertising targeting and tracking. PI, joint with Aleksandra Korolova and Jon Ullman. \$1.2m (total), \$799k (NEU).
- 06/2019 05/2022 CNS-1900879, CNS Core: Large: Collaborative Research: Towards an Evolvable Public Key Infrastructure. PI, joint with Christo Wilson, Dave Levin, Taejoong Chung, Bryan Parno, and Bruce Maggs. \$2m (total), \$600k (NEU).
- 10/2016 09/2019 CNS-1617728, NeTS: Small: A Principled Approach to Enabling Policy Transparency for Mobile Networks. Co-PI, joint with David Choffnes. \$299k.
- 10/2016 09/2019 CNS-1616234, NeTS: Small: Collaborative Research: Leveraging Personalized Internet Services to Combat Online Trolling. PI, joint with Aleksandar Kuzmanovic (Northwestern). \$499k (total), \$249k (NEU).
- 06/2016 05/2020 CNS-1563320, TWC: Medium: Collaborative: Measuring and Improving the Management of Today's PKI. PI, joint with Christo Wilson, David Choffnes, Dave Levin (UMD), and Tudor Dumitra (UMD). \$1.1m (total), \$598k (NEU).
- 10/2014 09/2017 CNS-1421444, TWC: Small: Towards Robust Crowd Computations. PI. \$450k.
- 08/2014 07/2018 CNS-1409191, CSR: Medium: Collaborative Research: Towards Finer-grained Cloud Computing. PI, joint with Dave Levin (UMD) and Theophilus Benson (Duke). \$1.2m (total), \$400k (NEU).
- **08/2014 07/2018** CHS-1408345, NeTS: Medium: Towards Transparency of Personalization on the Web. Co-PI, joint with Christo Wilson and David Lazer. \$727k.

- 09/2013 08/2016 CNS-1319019, CSR: Small: Towards Confederated Web-Based Services. PI, joint with Christo Wilson, \$498k.
- 09/2011 08/2016 CNS-1054233, CAREER: Systems for the emerging patterns of content exchange. PI. \$450k.
- 09/2010 09/2013 IIS-0964465, NeTS: Medium: Collaborative Research: Privacy Preserving Social Systems. PI, joint with Bobby Bhattacharjee (UMD), Neil Spring (UMD), and Jonathan Katz (UMD). \$1.2m (total), \$319k (NEU).

#### Raytheon

10/2014 - 05/2015 Large-Scale Attacks in Multi-Level Interdependent Networks: Emerging Threats, Mitigation, and Recovery. Co-PI, joint with Guevara Noubir, David Choffnes, Ravi Sundaram, and Edmund Yeh. \$100k.

#### Verizon

12/2017 - 05/2018 Sponsored Video Performance. Co-PI, joint with David Choffnes. \$55k.

#### SELECTED PRESS COVERAGE

2021/09/30 The fight to get tech giants to reveal their data is coming to a head in Congress, The Washington Post.

2021/06/09 Should Facebook Be Held Liable If Its Advertising Algorithm Discriminates?, Mother Jones.

2021/06/04 Anti-Hacking Law's Limits Lift Legal Uncertainty for Researchers, Bloomberg Law.

2020/08/25 Does Facebook still sell discriminitory ads?, The Markup.

2020/03/29 Court: Violating a site's terms of service isn't criminal hacking, Ars Technica.

2020/03/28 Court finds algorithm bias studies don't violate US anti-hacking law, Engadget.

2019/12/11 Facebook charges more for ads that aim to cross the political divide, New Scientist.

2019/12/11 It costs nearly 50 percent more to buy a Facebook ad that reaches members of the opposite political party, which is causing people to occupy 'informational filter bubbles', The Daily Mail.

2019/12/10 Facebook's ad tools subsidize partisanship, research shows. And campaigns may not even know it., The Washington Post.

2019/11/19 How Facebook fueled a precious-metal scheme targeting older conservatives, Quartz.

2019/08/19 Wireless Carrier Throttling of Online Video Is Pervasive, Bloomberg.

2019/07/23 Facebook deceived users about the way it used phone numbers, facial recognition, FTC to allege in complaint, The Washington Post.

2019/06/11 Are Facebook's Ads Discriminatory? It's Complicated, WIRED.

2019/04/04 The Secret Trust Scores Companies Use to Judge Us All, The Wall Street Journal.

2019/04/04 Facebook's Ad System Might Be Hard Coded for Discrimination, WIRED.

2019/04/04 Study: Facebook ad targeting may discriminate—even when advertisers don't want it to, FastCompany.

2019/04/04 Facebook delivers housing, employment ads based on race, gender stereotypes: study, The Hill.

2019/04/04 Facebook's Automated Systems Skew Ad Delivery Based on Race, Gender, AdWeek.

2019/04/04 Facebook's ad delivery could be inherently discriminatory, researchers say, The Verge.

2019/04/04 Facebook's Ad Algorithm Discriminates Even When It's Not Told To, Study Finds, New York Magazine.

2019/04/03 Facebook's ad system pushes stereotypes in housing, jobs, study says, NBC News.

2019/04/03 Facebook's Ad Algorithm is a Race and Gender Stereotyping Machine, New Study Suggests, The Intercept.

2019/04/03 Facebook's ads system leans on stereotypes for housing, job ads: study, Reuters.

2019/04/03 Facebook's ad system seems to discriminate by race and gender, The Economist.

2019/04/03 Facebook's Ads System Leans on Stereotypes for Housing, Job Ads: Study, US News and World Report.

2018/11/05 Midterm elections: How politicians know exactly how you're going to vote, CNET.

2018/09/28 Facebook said to use people's phone numbers for ad targeting, CBS News.

2018/09/28 Facebook slated over phone ad push, BBC.

2018/09/27 Yes Facebook is using your 2FA phone number to target you with ads, TechCrunch.

2018/09/27 Facebook under fire for 'shadow' advertising, which let brands target content based on users' private information, The Daily Mail.

2018/09/27 Facebook lets advertisers target you using 'shadow' phone numbers, The Telegraph.

2018/09/26 Facebook Is Giving Advertisers Access to Your Shadow Contact Information, Gizmodo.

2018/04/12 Everything you need to know about the hidden ways Facebook ads target you, VICE News.

2018/04/06 "Why am I seeing this ad" explanations on Facebook are incomplete and misleading, a study says, Quartz.

2018/03/26 Does Facebook's Ad Tool Mislead Voters?, Bloomberg Businessweek.

2018/03/23 Facebook will no longer show audience reach estimates for Custom Audiences after vulnerability detected, Marketing Land.

2018/03/22 To understand digital advertising, study its algorithms, The Economist.

2018/03/22 It's Too Late, Vice Motherboard.

2018/03/19 Cambridge Analytica's Ad Targeting Is the Reason Facebook Exists, Vice Motherboard.

2018/03/19 'It might work too well': the dark art of political advertising online, The Guardian.

2018/03/18 Is Facebook being honest with you about how it targets ads?, Australian Broadcasting Corporation.

2018/03/15 We still have no idea what really happens on Facebook, The Verge.

2018/03/06 Researchers Discovered Data Leak In Facebook's Ad Software, Fast Company.

2018/01/09 Facebook bug let advertisers find users' phone numbers, The Telegraph.

2018/01/09 Facebook bug could have exposed your phone number to marketers, Naked Security.

2018/01/07 Facebook Bug Could Let Advertisers Get Your Phone Number, WIRED.

2017/08/03 An Algorithm Trained on Emoji Knows When You're Being Sarcastic on Twitter, MIT Technology Review.

2017/06/20 How Many Rides Do Lyft and Uber Give Per Day? New Data Help Cities Plan for the Future, Union of Concerned Scientists Blog.

2017/06/13 Study: Uber, Lyft account for 15 percent of all vehicle trips in SF, San Francisco Examiner.

2017/03/28 We're suing the federal government to be free to do our research, The Conversation.

2016/11/23 Data shows race and sex bias is costly for gig economy workers at startups like TaskRabbit, Mic.

2016/11/22 Studies Show Racial and Gender Discrimination Throughout the Gig Economy, Bloomberg Businessweek.

2016/11/17 Is the Gig Economy Rigged?, MIT Technology Review.

2016/11/09 You May Be Paying More Than Others When Shopping Online, CBS News 11, Dallas.

2016/09/15 Northeastern and Northwestern professors fight online trolling in joint project, Huntington News

2016/09/02 Feds spend \$500,000 to 'combat online trolling', Fox News.

2016/07/12 Researchers Confirm EFF's Binge On Findings-And Learn How to Get Binge On to Zero-Rate Everything, EFF DeepLinks Blog.

2016/07/01 When Should Hacking Be Legal?, The Atlantic.

2016/06/29 Does this cybercrime law actually keep us from fighting discrimination?, The Washington Post.

2016/06/29 Researchers Sue the Government Over Computer Hacking Law, WIRED.

2016/06/29 ACLU files lawsuit over U.S. anti-hacking law, Reuters.

2016/06/10 Looking for the lowest prices on Amazon? You may have to dig a little, The Washington Post.

2016/04/12 The Truth Behind Pricing Algorithms on Amazon's Marketplace, BostInno.

2015/10/30 Why Uber's surge pricing doesn't work quite as expected, Christian Science Monitor.

2015/10/30 Scientists Claim to Have Cracked How to Beat Uber's Surge Pricing Algorithm, ABC News.

2015/10/29 This map shows the Boston boundaries of Uber's surge pricing, Boston Globe.

2015/10/29 How to hack Uber surge-charge fares by 10-20%, USA Today.

2015/10/29 Uber's Surge Pricing May Not Lead to a Surge in Drivers, ProPublica.

2015/04/21 Bot Bubble: How click farms have inflated social media currency, The New Republic.

2015/02/04 No one in control: The algorithms that run our lives, New Scientist.

2014/11/10 Sysadmins disposed of Heartbleed certs, but forgot to flush, The Register.

2014/11/03 Holiday Travel Saving Secrets: Beware of Price Steering, Good Morning America.

2014/11/03 If you use a Mac or an Android, e-commerce sites may be charging you more, The Washington Post.

2014/10/28 Online Personalization Means Prices Are Tailored To You, Too, Scientific American.

2014/10/26 Do companies charge online shoppers different prices?, CBS Evening News.

2014/10/23 Why You Can't Trust You're Getting the Best Deal Online, The Wall Street Journal.

2014/06/07 Google's searches narrowing our experience, The Saturday Paper.

2014/03/30 How Twitter Has Changed Over the Years in 12 Charts, The Atlantic.

2011/10/01 Decoding Our Chatter, The Wall Street Journal.

2011/08/29 The Leaky Nature of Online Privacy, Slate.

2011/08/25 Tweets move faster than earthquakes, The Washington Post (Business Blog).

2011/03/28 Privacy: Facebook's Achilles heel, cnet News.

2010/10/07 There's Wisdom in Those Tweets: Social Science Data Emerges from the Twitterverse, Scientific American.

2010/07/22 Tweets Map the Country's Mood, CBS Evening News.

2010/07/22 Tracking the National Mood Through Twitter, New York Times (bits Blog).

2010/07/21 Twitter mood maps reveal emotional states of America, New Scientist.

2008/05/15 Study Shows Comcast and Cox Slow P2P Traffic, New York Times.

2007/01/23 Suchen im Netz der Nutzer, MIT Technology Review (Germany).

2006/12/06 Web hits from my PeerSpective, New Scientist.