

# The Second International MIS2 Workshop: Misinformation and Misbehavior Mining on the Web

Aude Hofleitner<sup>1</sup>, Meng Jiang<sup>2</sup>, Srijan Kumar<sup>3</sup>, Neil Shah<sup>4</sup>, Kai Shu<sup>5</sup>

<sup>1</sup>Facebook, <sup>2</sup>University of Notre Dame, <sup>3</sup>Georgia Institute of Technology, <sup>4</sup>Snap Inc., <sup>5</sup>Illinois Institute of Technology  
aude@fb.com, mjiang2@nd.edu, srijan@gatech.edu, nshah171@gmail.com, kshu@iit.edu

## ABSTRACT

Misinformation and misbehavior mining on the web (MIS2) workshop is held virtually on August 14, 2021 and is co-located with the ACM SIGKDD 2021 conference. The web has become a breeding ground for misbehavior and misinformation. It is timely and crucial to understand, detect, forecast, and mitigate their harm. MIS2 workshop as an interdisciplinary venue for researchers and practitioners who study the dark side of the web. The workshop program includes a peer-reviewed set of paper presentations and keynote talks, giving the attendees an immersive experience of this research field.

### ACM Reference Format:

Aude Hofleitner<sup>1</sup>, Meng Jiang<sup>2</sup>, Srijan Kumar<sup>3</sup>, Neil Shah<sup>4</sup>, Kai Shu<sup>5</sup>. 2021. The Second International MIS2 Workshop: Misinformation and Misbehavior Mining on the Web. In *Proceedings of the 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '21), August 14–18, 2021, Virtual Event, Singapore*. ACM, New York, NY, USA, 2 pages. <https://doi.org/10.1145/3447548.3469443>

## 1 INTRODUCTION

The web allows individuals to interact with one another and read, publish and share content openly. Despite its groundbreaking benefits in areas such as education and communication, there is near-zero cost for any individual to reach millions of people on the internet near-instantaneously, purporting whatever they wish while also being shielded by anonymity. This capacity has led to rampant increases in misbehavior and misinformation vectors, via harassment, online scams, spread of propaganda, hate speech, deceptive reviews and more. The study of this topic has become focal for researchers across many subfields of data, computational, and social sciences, such as social network analysis, cybersecurity, human-computer interaction, communications, linguistics, natural language processing, social psychology, sociology, political science, journalism, and cognitive science.

The Second International MIS2 Workshop, co-located at ACM SIGKDD 2021, is an interdisciplinary venue for researchers and practitioners who study misbehavior and misinformation on the web. The workshop will focus on characterization, detection, forecasting and prevention of such abuse vectors on the web at large, including social and e-commerce web platforms, collaborative and knowledge sharing venues (e.g., question-answer platforms and

wikis), peer-to-peer communication methods such as email, text chat, video chat (which has become pervasive since the COVID-19 pandemic), online gaming platforms, online transactions platforms, crowdsourcing platforms, and many others. Due to the ongoing pandemic, a special focus during the second MIS2 workshop will be placed on the misinformation and misbehavior aspects of the pandemic.

The MIS2 workshop will be held on August 14, 2021, with an engaging day with eight peer-reviewed paper presentations and several keynote and invited talks. Several novel research ideas, demos, and work-in-progress papers will be presented at the workshop.

## 2 ORGANIZER BIO

- Aude Hofleitner is a research scientist and manager on the Core Data Science team at Facebook. Her research interests lie in the fields of machine learning and data mining. In particular, she focuses on the development of algorithms which leverage the structure of graphs and interactions to make predictions, such as graph representation learning or sequence modeling. She received her PhD in electrical engineering and computer science from the University of California, Berkeley where she studied statistical models of queuing networks using mobile data under the supervision of Alexandre Bayen and Pieter Abbeel. She also received a PhD in transportation engineering from Ecole des Ponts ParisTech, France. She has co-organized the MLG workshop at KDD'19 and KDD'20.

- Meng Jiang is an assistant professor of Computer Science and Engineering at the University of Notre Dame. His research focuses on data mining and machine learning for behavior prediction, recommendation, and suspicious behavior detection. He obtained his Ph.D. of Computer Science and Ph.D. Dissertation Award from Tsinghua University, China. He was a postdoctoral researcher in the University of Illinois at Urbana-Champaign. Meng has delivered nine tutorials in major data mining conferences including KDD, WWW, ICDM, CIKM, and SIGMOD. He received the Best Paper Finalist at KDD 2014 and the Best Paper Award at the Deep Learning on Graphs workshop at KDD 2020.

- Srijan Kumar is an Assistant Professor at the College of Computing at Georgia Institute of Technology. His research develops data science solutions to address the high-stakes challenges on the web and in the society. He has pioneered the development of user models and network science tools to enhance the well-being and safety of users. His methods are being used in production at Flipkart and taught at graduate level courses worldwide. He has received several awards including the Facebook Faculty Award, Adobe Faculty Award, ACM SIGKDD Doctoral Dissertation Award runner-up 2018, Larry S. Davis Doctoral Dissertation Award 2018, and 'best of' awards from WWW and ICDM. His research has been the subject of a documentary and covered in popular press, including CNN, The

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

*KDD '21, August 14–18, 2021, Virtual Event, Singapore.*

© 2021 Copyright held by the owner/author(s).

ACM ISBN 978-1-4503-8332-5/21/08.

<https://doi.org/10.1145/3447548.3469443>

Wall Street Journal, Wired, and New York Magazine. He completed his postdoctoral training at Stanford University, received a Ph.D. in Computer Science from University of Maryland, College Park, and B.Tech. from Indian Institute of Technology, Kharagpur.

- Neil Shah is a Sr. Research Scientist at Snap Inc, with interests spanning data mining, machine learning and computational social science, specifically in the contexts of graph-based modeling of user behavior and misbehavior. His work has resulted in 35+ conference and journal publications, in top venues such as KDD, ICDM, WWW, CIKM, SDM, AAAI, TKDD and more, including several best-paper awards. He has also served as an organizer, chair and on program committees at a number of these (PC Chair for WSDM Cup 2020, ASONAM 2019 Industrial Track; PC Chair and Workshop Chair for Cybersafety 2019-2020). He has had previous research experiences at Lawrence Livermore National Laboratory, Microsoft Research, and Twitch.tv. He earned a PhD in Computer Science in 2017 from Carnegie Mellon University's Computer Science Department, funded partially by the NSF Graduate Research Fellowship.

- Kai Shu is a Gladwin Development Chair Assistant Professor in the Department of Computer Science at Illinois Institute of Technology. He obtained his Ph.D. in Computer Science at Arizona State University and was the recipient of the 2020 ASU Engineering Dean's Dissertation Award. His research and computational tool development address challenges varying from big data, to social media, and to AI on issues on disinformation, responsible machine learning, trust social computing, and social media mining. He has published innovative works in highly ranked journals and top conference proceedings such as ACM KDD, SIGIR, WSDM, WWW, CIKM, IEEE ICDM, IJCAI, and AAAI. He was invited to talk and serve as a panelist at the first Global WHO Infodemiology Conference. He presented two tutorials at top data mining conferences (KDD'19 and WSDM'19), co-organized conference workshops, and guest-edited journal special issues, all related to his research on disinformation and misinformation.