



Information Ecosystem Threats in Minoritized Communities: Challenges, Open Problems and Research Directions

Shiri Dori-Hacohen

University of Connecticut & AuCoDe
Storrs, Connecticut, United States
shiridh@uconn.edu, shiri@aucode.io

Scott A. Hale

Meedan & University of Oxford
San Francisco, California, United States
scott@meedan.com, scott.hale@oii.ox.ac.uk

ABSTRACT

Journalists, fact-checkers, academics, and community media are overwhelmed in their attempts to support communities suffering from gender-, race- and ethnicity-targeted information ecosystem threats, including but not limited to misinformation, hate speech, weaponized controversy and online-to-offline harassment. Yet, for a plethora of reasons, minoritized groups are underserved by current approaches to combat such threats. In this panel, we will present and discuss the challenges and open problems facing such communities and the researchers hoping to serve them. We will also discuss the current state-of-the-art as well as the most promising future directions, both within IR specifically, across Computer Science more broadly, as well as that requiring transdisciplinary and cross-sectoral collaborations. The panel will attract both IR practitioners and researchers and include at least one panelist outside of IR, with unique expertise in this space.

CCS CONCEPTS

• **Security and privacy** → *Social aspects of security and privacy*; • **Information systems** → *Collaborative and social computing systems and tools*; *Web searching and information discovery*.

KEYWORDS

information ecosystem threats; misinformation; hate speech; abusive language; community-led; minoritized communities

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1 PANEL DESCRIPTION

Journalists, fact-checkers, academics, and community media are overwhelmed in their attempts to support communities suffering from gender-, race- and ethnicity-targeted information ecosystem

threats (IETs), such as misinformation, bias, hate speech and online-to-offline harassment [e.g., 1–3]. For example, by selectively quoting from media and reporting content out-of-context, media manipulators deliberately seek to stoke fear, drive wedges between social and racial groups, and amplify extremist ideologies. Yet, for a plethora of reasons, minoritized groups are underserved by current approaches to combat such threats. For example, in the wake of COVID-19, Asian-American and Pacific Islander (AAPI) communities are being disproportionately targeted with such hate and misinformation [4–6]; yet, such content remains largely off-the-radar of mainstream fact-checkers and academics due to the variety of languages involved, the use of ‘alternative’ platforms, and the need for cultural context to fully understand the manipulation.

In this panel, we will present and discuss the challenges and open problems facing such communities, as well as the researchers and practitioners partnering with communities to build new approaches.

Topics discussed will include:

- The interlocking nature of different IETs
- Unique challenges facing minoritized communities online
- Causes of overlooking IETs in minoritized communities
- Research challenges and open problems
- Current state-of-the-art regarding IET mitigation in general, and in minoritized communities more specifically
- Efforts currently underway regarding IETs in minoritized communities
- Promising future research directions (both within IR specifically, and across Computer Science more broadly)
- Major challenges requiring transdisciplinary and cross-sectoral collaborations

2 ORGANIZERS

The panel organizers bring a wealth of industry, non-profit and academic expertise and connections to bear on the proposed theme as well as the specific topics that will be discussed.

2.1 Institutions

AuCoDe is an AI-based startup that provides a platform technology that detects controversies, misinformation, bias and reputation and turns them into actionable intelligence. **Meedan** is a global technology not-for-profit that builds software and programmatic initiatives to strengthen journalism, digital literacy and accessibility of information online and off. The **Reducing Information Ecosystem Threats (RIET) Lab** at the **University of Connecticut** focuses on threats to the information ecosystem online and to healthy public discourse from an information retrieval lens, informed by insights

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from the social sciences. The **Oxford Internet Institute** is a multidisciplinary research and teaching department of the **University of Oxford**, dedicated to the social science of the Internet.

2.2 Moderator and Panelists

Panel co-organizer and Moderator **Prof. Shiri Dori-Hacohen** is the Founder & Executive Chairwoman at AuCoDe and an Assistant Professor at the Department of Computer Science & Engineering at the University of Connecticut. At the University of Connecticut, she leads the Reducing Information Ecosystem Threats (RIET) Lab and is an inaugural member of a first-of-its-kind entrepreneurial cluster, bridging the startup and academic worlds. She has 18 years of experience in industry, startups, and academia, including at Google and Facebook, and has served as PI or Co-PI on over \$2.7M worth of federal funds from the US National Science Foundation. Prof. Dori-Hacohen has been a quoted expert in media outlets including Forbes and the Boston Globe.

Panel co-organizer and Panelist **Prof. Scott A. Hale** is the Director of Research at Meedan, an Associate Professor at the Oxford Internet Institute of the University of Oxford, and a Fellow at the Alan Turing Institute. In these roles, he works to bridge academia and industry divides and increase equitable access to quality information online with a focus on misinformation and hate speech. Prof. Hale is currently the PI on an NSF Convergence Accelerator Phase I grant titled “FACT CHAMP - Fact-checker, Academic, and Community Collaboration Tools: Combating Hate, Abuse, and Misinformation with Minority-led Partnerships”.

Additional Panelists. The organizers will leverage their broad and deep networks to attract a diverse panel from industry, non-profit, government and academia with unique expertise in this space, both within and outside of IR. Within IR, we will invite experts specializing in IETs, including both an **industry practitioner**, such as Dr. Zeki Yalniz (Research Scientist in the misinformation group, Facebook) or Dr. David Corney (Senior NLP Data Scientist at Full Fact), and an **academic researcher**, such as Dr. Yelena Mejova (Senior Research Scientist, ISI Foundation), Dr. Damiano Spina and Prof. Mark Sanderson of RMIT (who collaborate extensively with the RMIT FactLab), or Prof. Matt Lease of UT Austin. Furthermore, we will invite 1-2 additional panelists **outside of traditional IR**

boundaries, such as Prof. Kiran Garimella, School of Communication and Information, Rutgers; Dr. Douglas Maughan, Office Head for the National Science Foundation (NSF) Convergence Accelerator; Prof. Kathleen Hall Jamieson, Director, Annenberg Public Policy Center and Co-founder, FactCheck.org; Gordon Pennycook, Associate Professor, University of Regina; Prof. Michael Lynch, Board of Trustees Distinguished Professor of Philosophy and Director of the Humanities Institute, University of Connecticut; or Kyla Fullenwider, Senior Advisor for the Surgeon General of the United States. We commit to inviting **at least one panelist in each category** (IR practitioner, IR researcher, and non-IR), but in any case **no more than 5** panelists total (including the co-organizers). We strongly believe this structure will greatly enhance the quality of the panel and its value to the SIRIP audience.

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