

# Mixed methods and the future of multi-modal media.

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## ABSTRACT

Humans are complex and their behaviors follow complex multi-modal patterns, however to solve many social computing problems one often looks at complexity in large-scale yet single point data sources or methodologies. While single data/single method techniques, fueled by large scale data, enjoyed some success, it is not without fault. Often with one type of data and method, all the other aspects of human behavior are overlooked, discarded, or, worse, misrepresented. We identify this as two succinct problems. First, social computing problems that cannot be solved using a single data source and need intelligence from multiple modals and, second, social behavior that cannot be fully understood using only one form of methodology. Throughout this talk, we discuss these problems and their implications, illustrate examples, and propose new directives to properly approach in the social computing research in today's age.

## CCS CONCEPTS

- **Information systems** → *Multimedia and multimodal retrieval*;
- **Human-centered computing** → *Social engineering (social sciences)*;
- **Computing methodologies** → *Machine learning*;

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This keynote is part of the MUSA2 ACM MM 2017 workshop<sup>1</sup> and will take place on October 27th as the scientific opening of the workshop. A short biography of the two speakers is given below.

**Dr. Saide Bakhshi** is a computational social scientist and a quantitative UX researcher at Facebook. Prior to Facebook, she was a research scientist at Yahoo Labs HCI group. She holds a PhD in Computer Science from Georgia Tech. Saide is interested in how humans create, curate, consume and interact with multimedia content online. She combines methodologies from various disciplines of statistics, computer science and social sciences to uncover patterns of social behavior online. Her prior work has widely been featured on popular press including New York Times, Wired and the Atlantic.

<sup>1</sup><http://project.inria.fr/musa2/>

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**Dr. David A. Shamma** is a senior research scientist at FX Palo Alto Laboratory (FXPAL). Prior to FXPAL, he was a principal investigator at Centrum Wiskunde & Informatica (CWI) where he led a project on Artificial Intelligence (AI), wearables, and fashion. Before CWI, he was the founding director of the HCI Research Group at Yahoo Labs and Flickr. He investigates social computing systems (how people interact, engage, and share media experiences both online and in-the-world) through three avenues: AI, systems & prototypes, and qualitative research; his goal is to create and understand methods for media-mediated communication in small environments and at web scale. Ayman holds a B.S./M.S. from the Institute for Human and Machine Cognition at The University of West Florida and a Ph.D. in Computer Science from the Intelligent Information Laboratory at Northwestern University. He has taught courses at the Medill School of Journalism and also in many Computer Science and Studio Art departments. Prior to his Ph.D., he was a visiting research scientist in the Center for Mars Exploration at NASA Ames Research Center. Ayman's research on technology and creative acts has attracted international attention from Wired, New York Magazine, and the Library of Congress to name a few. Outside of the lab, Ayman's media art installations have been reviewed by The New York Times and Chicago Magazine and exhibited internationally, including the Amsterdam Dance Event, Second City Chicago, the Berkeley Art Museum, SIGGRAPH, Chicago Improv Festival, and Wired NextFest/NextMusic.