

**Center for Human, Artificial Intelligence,
and Robot Teaming**



**Technology
teaming with
humans for
global security**

CHART Speaker Series

Join us for a presentation by:

Dr. X. Jessie Yang, Associate Professor and Richard Wilson faculty fellow in the Department of Industrial and Operations Engineering, University of Michigan

From trust to trust dynamics: Combining empirical and computational approaches to model trust dynamics in human-autonomy interaction



Fri, Mar 1, 2024

**1:30 – 2:15 pm AZ Talk
2:15 – 2:30pm AZ Q&A**

Zoom Information:

<https://asu.zoom.us/j/82163744193?pwd=a2VFN3ZHWkwYmV0bzJpUGZFSDZ3dz09&from=addon>

Meeting ID: 821 6374 4193
Password: 747102

In Person: SANCA 151
Register at
<https://forms.gle/D3rKH7QUm54f8UsM8>

Deadline Wed, 2/29 at noon

Abstract:

Trust has been identified as one central factor in effective human-autonomy interaction. In this talk, I will first present the results of several studies examining trust dynamics in human-autonomy interaction. In study 1, we identify three properties of trust dynamics, namely continuity, negativity bias, and stabilization. The three properties characterize a human agent's trust formation and evolution process de facto. In study 2, we propose a computational model of trust dynamics that adheres to the three properties and evaluate the computational model against existing trust inference models. After that, I will showcase the application of our trust model in the design of trust-aware agents and present our latest work in trust modeling in multi-human multi-robot settings.

Bio:

Dr. X. Jessie Yang is an Associate Professor and a Richard Wilson faculty fellow in the Department of Industrial and Operations Engineering, University of Michigan. She also has a courtesy appointment in the School of Information. Dr. Yang obtained her PhD in Mechanical & Aerospace Engineering (Human Factors) and her BEng in Electrical and Electronic Engineering, both from Nanyang Technological University, Singapore. Dr. Yang's research interests include human-autonomy/robot interaction, human factors in high-risk industries, and user experience design. Her research has been supported by grants from NSF, NIH, and DoD, including an NSF CAREER award, as well as from industrial collaborations, including Boeing and GM.