The National Academies of
SCIENCES · ENGINEERING · MEDICINE

AGENDA

Human-AI Teaming Workshop

Sponsored by AFRL

July 28-29, 2021

MEETING OBJECTIVES

- Identify key human-systems integration design considerations, methods, approaches, and associated research aimed at warfighter systems that incorporate human-AI teaming
- Identify gaps in knowledge on effective human-machine teaming necessary to achieve future Air Force mission capability
- Identify promising human-systems integration and human factors research opportunities that would accelerate mission capability development.

Wednesday, July 28, 2021

10:00 a.m.   **Welcome and Introductions**
  ➢ Mica Endsley, *Chair*

10:15 a.m.   **AI In Future DOD Operations**
  Facilitated by Nancy Cooke (committee member)
  ➢ Mark Draper, *Human-AI Interaction in Future Joint All Domain Operations: Some Challenges & Opportunities*, Air Force Research Laboratory
  ➢ Robin Murphy, *Role of Autonomy in DOD and HADR*, Texas A&M University
  ➢ Greg Zacharias, *Human-Autonomy Test and Evaluation*, DOD-OSD

12:00 p.m.   **Break**

12:30 p.m.   **AI Status & Challenges**
  Facilitated by Missy Cummings (committee member)
  ➢ Matt Turek, *XAI Program*, DARPA
  ➢ Joanna Bryson, *AI Ethics and Human Cooperation*, Hertie School
  ➢ Gary Bradski, *Fuzzing, Feature Deprecation, Causal Models and Metaphors: How to make AI more Robust from experience on the Vision/Robotics Front* ,Open CV

2:00 p.m.   **Break**

2:30 p.m.   **Human-AI Teaming Approaches**
  Facilitated by Bill Rouse (committee member)
  ➢ Ben Shneiderman, *Human-Centered AI*, University of Maryland

> ➢ Jay Shively, *Human Autonomy Teaming*, NASA Ames
> ➢ Matthew Johnson, *Intelligent Teaming*, Florida Institute for Human & Machine Cognition

4:45 p.m.   **Adjourn**

Thursday, July 29, 2021

10:00 a.m.   **Welcome and First Day wrap up**
> ➢ Mica Endsley, *Chair*

10:15 a.m.   **Human-AI Team Design and Processes**
Facilitated by Emilie Roth (committee member)
> ➢ Jamie Gorman, *Modeling human-autonomy team coordination using layered dynamics*, Georgia Tech University
> ➢ Brian Sandberg, *ASIST program*, DARPA
> ➢ Thomas O'Neill, *Future Directions in Human-Autonomy Teams Research*, University of Calgary

12:15 p.m.   **Break**

12:30 p.m.   **Bias and Trust**
Facilitated by John Lee (committee member)
> ➢ Chris Wickens, *Black Swans, Complacency and Automation Bias*
> ➢ Peter Hancock, *Trust in AI Meta-Analysis*, University of Central Florida
> ➢ Joe Lyons, *Trust Research in AFRL*, Air Force Research Laboratory

2:00 p.m.   **Break**

2:30 p.m.   **Transparency and Explainability**
Facilitated by Chris Miller (committee member)
> ➢ Shane Mueller, *Human-centered Principles for Explainable AI*, Michigan Technology University
> ➢ Jessie Chen, *Transparent Communications for Effective Human-Autonomy Teaming*, Army Research Laboratory
> ➢ Tim Miller, *Transparency & Explainability*, University of Melbourne

4:30 p.m.   Conclusions/Discussion

5:00 p.m.   Adjourn