**Proposed Technical Group: Human–AI–Robot Teaming (HART)**

**Petitioner:**

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**Purpose of the TG:**

Research at the intersection of humans and artificial intelligence (AI) and robots is a growing area within Human Factors and Ergonomics Society (HFES), yet HF researchers lack the connection with the work of AI and robotics researchers. Most AI and robotics or human–robot interaction researchers go to conferences like International Conference on Human-Robot Interaction (HRI), International Symposium on Robot and Human Interactive Communication (RO-MAN), Robotics: System and Science, and IEEE International Conference on Robotics and Automation (ICRA), etc. Human Factors plays a vital role in Human–AI–Robot Teaming, but existing technical groups at HFES do not have an emphasis in this area. Emerging sessions on human factors and machine learning, human factors and explainable AI, human–autonomy teaming, human–robot teaming, and human–agent teaming at the HFES annual conference attract a large audience, but these sessions are scattered across multiple TGs, without an organized effort to set up research agenda and facilitate multidisciplinary collaborations. People with a strong background in AI and robotics have difficulty finding their affiliation in current HFES TGs. We propose to establish this new technical group to gather multidisciplinary researchers and practitioners in the combined domain of human factors, artificial intelligence, and robotics. The technical group will organize more focused sessions to advance the science and practices in this domain. Having this technical group will be likely to attract more researchers in AI and robotics to come to the HFES annual meetings and bring more cross-disciplinary collaborations to benefit both HFES and AI/robotics field. We can also do outreach activities (e.g., HART workshop in other conferences) to advocate the importance of HF in a bigger audience related to Human–AI–Robot Teaming.

**Objectives:**

* Organize all HF researchers’ efforts in Human–AI–Robot Teaming to agree on the status of this field, determine the most important issues and research agenda in related domains to move forward
* Bring collaborations between HF researchers and AI robotics researchers to advance the science in Human–AI–Robot Teaming by inviting related non-HF researchers to HFES annual meetings or hosting outreach workshops to reach researchers in related fields.

**Specific area of interest includes but are not limited to:**

* Human–AI teaming
* Human–Robot teaming
* Human–Autonomy teaming
* Human–Agent teaming
* Human–Machine teaming
* Human interaction with robotic swarms
* Human Factors and Explainable AI
* Ethics in human–AI–robot teaming
* Design philosophies and socially appealing design methodologies
* Interactions and collaborations between robots, humans and environments
* Other suggested topics will be updated when we receive feedback from our interested individuals.

**Minimally Required Officers for 2020 to 2021:**

* TG Chair: Dr. Lixiao Huang
* Society Annual Meeting Program Chair: Dr. Eric Holder
* Society Annual Meeting Program Chair Designates: Dr. Erin Chiou and Dr. Joseph Lyons
* Secretary/Treasurer/Newsletter Editor: Dr. Tristan Endsley
* Society Newsletter Editor: Ruikun Luo

**Other:**

* HART TG Advisory Committee: Dr. Nancy Cooke, Dr. Jessie Chen, Marc Steinburg

**Due for joining this TG: $5**

**Updated: 02/15/2020**