

## **Day 1 Keynote Information**

**Bio:** Jenna Wiens is an Associate Professor of Computer Science and Engineering (CSE), Associate Director of the AI Lab, and co-Director of Precision Health at the University of Michigan in Ann Arbor. Her primary research interests lie at the intersection of machine learning, data mining, and healthcare. Wiens received her PhD from MIT in 2014, was named to the MIT Tech Review's list of Innovators Under 35 in 2017, and recently was awarded a Sloan Research Fellowship in Computer Science.

**Title:** From Diagnosis to Treatment - Augmenting Clinical Decision Making with Artificial Intelligence

**Abstract:** Though the potential of artificial intelligence (AI) in healthcare warrants genuine enthusiasm, meaningful impact will require careful integration into clinical care. AI tools are susceptible to mistakes and rarely capable of capturing all of the nuances pertaining to a complex clinical situation. Thus, we propose approaches designed to augment, rather than replace, clinicians during clinical decision making. In this talk, I will highlight two related research directions in which we propose i) a transfer learning approach for mitigating potentially harmful shortcuts when making diagnoses and ii) a novel reinforcement learning approach for matching patients to treatments. In summary, there's a critical need for machine learning in healthcare; however, the safe and meaningful adoption of these techniques will require collaboration between clinicians and AI.