

Keynote (Tuesday January 11th, 8:30 am)

Data, Decisions, and Intelligence: Amidst the Foothills of a Revolution **Eric Horvitz, Microsoft Research**

Systems that learn and reason from streams of data promise to provide extraordinary value to people and society. A confluence of advances has led to an inflection in our ability to collect, store, and harness large amounts of data for generating insights and guiding decision making. Given the long-term possibilities, we have been trekking through the foothills of a larger revolution--and have much to learn. Beyond the core goal of providing valuable services, fielding systems in the open world is critical for testing the sufficiency of existing algorithms and models, and often frames new directions for research. I will discuss efforts on learning and inference in the open world, highlighting key ideas in the context of projects in transportation, energy, and healthcare. Finally, I will discuss opportunities for creating systems with new kinds of competencies by weaving together multiple data sources and models.

Eric Horvitz is a Distinguished Scientist at Microsoft Research. His interests span theoretical and practical challenges with developing systems that perceive, learn, and reason. His contributions include advances in principles and applications of machine learning and inference, search and retrieval, human-computer interaction, bioinformatics, and e-commerce. He has been elected a Fellow of the Association for the Advancement of Artificial Intelligence (AAAI) and of the American Association for the Advancement of Science (AAAS). He currently serves on the NSF Computer & Information Science & Engineering (CISE) Advisory Board and on the council of the Computing Community Consortium (CCC). He received his PhD and MD degrees at Stanford University. More can be found at <http://research.microsoft.com/~horvitz>.