



# PHILOSOPHY

department

UC San Diego Department of Philosophy and  
Co-Sponsor Halicioglu Data Science Institute  
Present

## DAVID DANKS

Carnegie Mellon University  
“Handling Complexity”

**FRIDAY, APRIL 27, 2018**

**4:00 – 6:00 PM**

**HSS ROOM 7077**

REFRESHMENTS TO FOLLOW

It is utterly banal to observe that the world is a complex place. The more challenging question is what to do in the face of that complexity. In this talk, I will address this question along two different lines. First, I will consider how we humans cognitively handle the world's complexity. I will argue, on both theoretical and empirical grounds, that one way we succeed (when we do) is through rapid, dynamic, goal-driven attention allocation. I then explore the numerous philosophical implications of this aspect of our cognition, particularly in the philosophy of science. Second, I will consider our use of technology—particularly, computational technologies—to handle the world's complexity on our behalf. As an example, I will briefly describe some of the causal discovery algorithms that we have developed for complex types of data. I will then turn more generally to AI, robotic, and other technologies with autonomous capabilities. Our use of these systems requires that we have appropriate trust in them, and I will present a series of challenges for the development of such trust (at least, in the near-future). This relative lack of appropriate trust raises a number of ethical and policy concerns, and I will conclude my talk by considering ways to ethically develop and deploy AI and other autonomous technologies, in light of the world's complexity.

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