

**FROM NAIVE PHYSICS TO CONNOTATION:
MODELING COMMONSENSE IN FRAME SEMANTICS**

Yejin Choi
Paul G. Allen School of Computer Science & Engineering
University of Washington

Intelligent communication requires reading between the lines, which in turn, requires rich background knowledge about how the world works. However, learning unspoken commonsense knowledge from language is nontrivial, as people rarely state the obvious, e.g., “my house is bigger than me.” In this talk, I will discuss how we can recover the trivial everyday knowledge just from language without an embodied agent. A key insight is this: the implicit knowledge people share and assume systematically influences the way people use language, which provides indirect clues to reason about the world. For example, if “Jen entered her house”, it must be that her house is bigger than her.

In this talk, I will first present how we can organize various aspects of commonsense — ranging from naive physics knowledge to more pragmatic connotations — by adapting representations of frame semantics. I will then discuss neural network approaches that complement the frame-centric approaches. I will conclude the talk by discussing the challenges in current models and formalisms, pointing to avenues for future research.

About the Speaker: Yejin Choi is an associate professor of Paul G. Allen School of Computer Science & Engineering at the University of Washington. Her recent research focuses on integrating language and vision, learning knowledge about the world from text and images, modeling richer context for natural language generation, and modeling nonliteral meaning of text using connotation frames. She was among the IEEE’s AI Top 10 to Watch in 2015 and a co-recipient of the Marr Prize at ICCV 2013. Her work on detecting deceptive reviews, predicting the literary success, and learning to interpret connotation has been featured by numerous media outlets including NBC News for New York, NPR Radio, New York Times, and Bloomberg Business Week. She received her Ph.D. in Computer Science at Cornell University.