Abstract: In order for a computer to answer a question like "What’s a Chinese dish that’s not so hot," it needs to incorporate multiple types of semantic knowledge. Specifically, it must understand sense distinctions -- Chinese dish here refers to food, not pottery; hypernymy -- sweet & sour pork IS-A Chinese dish; and adjective intensity -- mild is less intense than hot. Previously, these three types of semantic knowledge have been acquired manually, or via automatic methods based on distributional similarity or lexico-syntactic patterns in text corpora. In this talk, I will propose ways that we can derive these three types of semantic structure from a different source: a large, noisy collection of paraphrase pairs. In each case, I will discuss how the paraphrase-based information can complement existing methods for automatically acquiring semantic information.

Bio: Anne Cocos is a final-year PhD student in computer science at the University of Pennsylvania, where she is advised by Chris Callison-Burch. Her main research interests focus on how to automatically learn semantic information from text, and how to represent text in a way that encodes semantic relationships. Anne also works within the Department of Biomedical and Health Informatics at The Children’s Hospital of Philadelphia, where she looks at ways that NLP can address challenges in pediatric medical research. Her research has been supported by the Google PhD Fellowship, the AI2 Key Scientific Challenges award, and the National Physical Sciences Consortium graduate research fellowship. Anne received her undergraduate degree from the U.S. Naval Academy, and masters degrees from Royal Holloway University of London and Oxford University, where she was a Marshall Scholar. Prior to starting her PhD, she spent several years in the U.S. Navy as an intelligence officer.