1117-92-280 **Julie C Mitchell*** (jcmitchell@wisc.edu), 480 Lincoln Dr, Madison, WI 53706. *Data Driven Approaches to Molecular Biophysics.*

The data science revolution is transforming the field of molecular modeling. In this talk, we present several examples from our work that demonstrate the value of machine learning in predictive modeling of biomolecules. Using features derived from domain knowledge combined with supervised learning, one can achieve highly accurate models for important biophysical questions, such as the prediction of nucleic acid binding sites and the impact of amino acid substitutions on protein-protein interaction. (Received January 16, 2016)