## **Conjugated Polymer Actuator Performance: Where Are We Now?** Elisabeth Smela Department of Mechanical Engineering, University of Maryland smela@eng.umd.edu

Actuator performance is judged by a variety of metrics, among the most important of which are strain, stress, and speed. Before engineers can design systems using these materials, such metrics must be available. Also critical are curves that show the interrelations among metrics, such as plots of actuation stress vs. strain, or strain vs. frequency, as well as curves of performance as a function of variables such as temperature. The current state of the art will be presented, and needs for further research and material improvements identified.