

AMERICAN CHEMICAL SOCIETY CLEVELAND SECTION
MEETING IN MINIATURE

KEYNOTE SPEAKER

CHARLES BROOKS III

UNIVERSITY OF MICHIGAN

WEDNESDAY

3/19/08

5 PM

CRAIG LECTURE HALL

*“Springs and Things:
Exploring the Origins of Robustness
in Nature’s Molecular Machines
with Multi-Scale Models”*

In the talk I will introduce the functions and motions involved in those functions for the ribosome, viral capsid maturation and a DNA helicase and then demonstrate how these functionally important motions can be described as low energy collective deformations of the molecule, conforming to the simple principles of continuum elastic physics. I will then provide a "deconstructed" view of the functioning of the molecular motors associated with AAA+ helicases by examining the helicase that translocates along single stranded helical DNA.