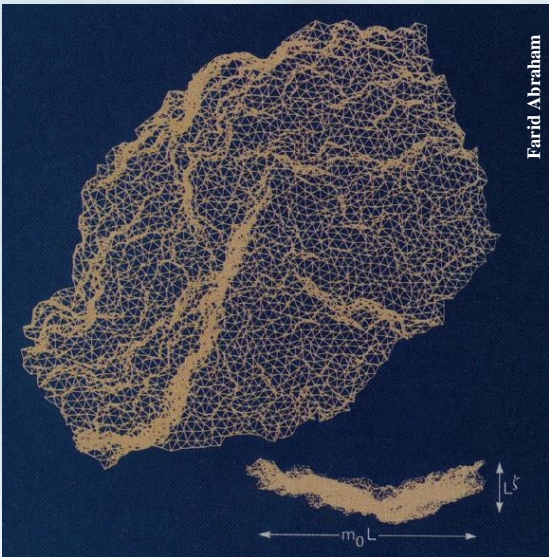


# Crumpling and Wrinkling of Polymers and Membranes

Free Public Lecture  
Tuesday, July 7th, 7pm  
Room G1B30, Duane Physics Building  
University of Colorado, Boulder

For information call (303)-492-3367

fractal polymer membrane



Motivated by a revolution in polymer science, ranging from synthetic materials to biopolymers (DNA, RNA) and their membrane generalizations (red blood cell cytoskeleton), we will discuss how entropy leads to crumpling and wrinkling of these fascinating systems characterized by fractional dimensions. The physics of thermal wrinkling, as revealed by recent experiments on free-standing atomically thin graphene sheets, leads to a 6000-fold enhancement in their bending resistance at room temperature.

## *David R. Nelson*

- *Theoretical physicist who studies the fascinating world of modern “soft” condensed matter and physical biology*
- *Fellow of National Academy of Sciences*
- *Arthur K. Solomon Professor of Biophysics and Professor of Physics and Applied Physics at Harvard University*
- *Recipient of the Bardeen Prize, Buckley Prize and a MacArthur Prize Fellowship*

