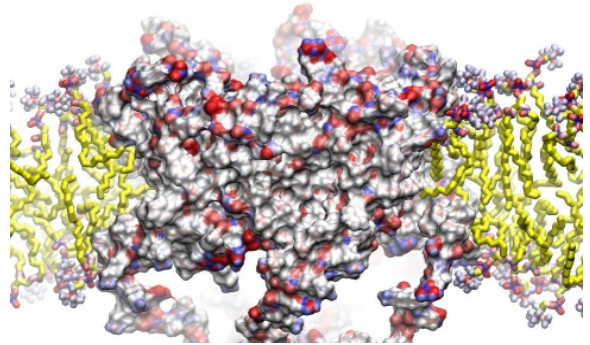


# Biophysics at College Park - The First Workshop

## Advances in Membrane Biophysics

Organizers:  
Sergei Sukharev  
Marco Colombini



The purpose of the workshop is to bring together leading researchers in Membrane Biophysics not only to present the most recent discoveries and technical advances in the field but also to demonstrate the growing conceptual framework in life sciences cemented by the unifying principles of physics. Membranes are rich and complex. They are multi-phase and multi-component systems, involving interfacial phenomena, domain formation, mechanical stresses and strong electric fields. It takes an array of approaches to understand membrane structural dynamics and processes such as transport, signaling and energy transduction. We start this series of workshops with topics in membrane research as a vivid illustration of the depth and power of biophysics in understanding the phenomenon of life.

The one-day workshop is anticipated to be a series of informal 40-min talks addressed to a diverse audience of physicists, biologists, biochemists, and material scientists. Ample time (at least 15 min) will be allocated to discussions after each talk.

**Time: Thursday, April 21, 8:50am-5pm,**  
**Location: 2324 Computer & Space Science Bldg (#224)**

### PROGRAM

8:50 AM Devarajan Thirumalai: Introduction to Biophysics at Maryland

#### Morning Session

9:00 Michael Edidin (Johns Hopkins University) "Cell membrane bilayers - complicated in spite of themselves"

10:00 Marco Colombini (University of Maryland) "Organized assemblies of lipid channels: pathways for protein flux and the initiation of apoptosis"

11:00 David Cafiso (University of Virginia) "Molecular Mechanisms of Membrane Solute Transport Studied using Site-Directed Spin Labeling"

#### Afternoon Session

2:00 Sergey Bezrukov (NICHD, NIH) "Selectivity of 'non-selective' channels: Bacterial porins"

3:00 Frederick Sachs (SUNY at Buffalo) "Mechanosensitive channels; from bench to bedside"

4:00 Sergei Sukharev (University of Maryland) "Vapor as channel gate"