

ERIC JAKOBSSON

EDUCATION

Dartmouth College, Physics, Ph.D., 1969
Columbia University, Chemical Engineering, B.S., 1960
Columbia College, Arts and Sciences, B.A., 1959

PROFESSIONAL EXPERIENCE

1/2000 - Present	Director, Bioengineering Program, University of Illinois
4/1997 - 4/2000	Director, Center for Biophysics and Comp. Biology, University of Illinois
4/1992 - Present	Professor, Beckman Institute, University of Illinois
4/1991 - Present	Professor, Dept. of Physiology and Biophysics, University of Illinois
1991 - Present	Research Scientist, National Center for Supercomputing Applications
1979 (Fall)	Visiting Associate Professor, Dept. of Physiology, Duke University
1978 - 4/1991	Associate Prof. Dept. of Physiology and Biophysics, University of Illinois
9/1972 - 8/1978	Assistant Prof., Dept. of Physiology and Biophysics, University of Illinois
1971 -1972	Res. Assoc./Visiting Asst. Prof. Dept of Physiology and Biophysics UIUC.
1969 -1971	Postdoctoral Fellow, Dept. of Physiology, Case Western Reserve University
1965 -1969	Grad Student, Department of Physics and Astronomy, Dartmouth College
1962 -1965	Engineer, Malaker Corporation
1960 -1962	Engineer, Air Products and Chemicals, Inc

PUBLICATIONS RELATED TO PROPOSED WORK:

Chiu, S. W., Subramaniam, S., & Jakobsson, E. (1999). Simulation study of a gramicidin/lipid bilayer system in excess water and lipid. I. Structure of the molecular complex. *Biophysical Journal*, 76, 1929-1938.

Chiu, S. W., Subramaniam, S., & Jakobsson, E. (1999). Simulation study of a gramicidin/lipid bilayer system in excess water and lipid. II. Rates and mechanisms of water transport. *Biophysical Journal*, 76, 1939-1950.

Jakobsson, E. G. (2000). Portals to knowledge: Information technology, research, and training. *Graduate Education in the Chemical Sciences-Issues for the 21st Century: Report of a Workshop*, National Research Council (pp. 56-72). National Academy Press: Washington, D.C.

Unwin, R., Fenton, J., Whitsitt, M., Jamison, C., Stupar, M., Jakobsson, E., & Subramaniam, S. (1998). Biology workbench: A WWW-based virtual computing and analysis environment for the biological sciences. In S. Letovsky (Ed.), *Bioinformatics*.

Scott, H. L., Jakobsson, E., & Subramaniam, S. (1998). Simulations of lipid membranes with atomic resolution. *Computers in Physics*, 12(4), 328-334.

OTHER SIGNIFICANT PUBLICATIONS:

Mashl, R. J., Scott, H. L., Subramaniam, S., and E. Jakobsson. 2001. Molecular simulation of dioleoylphosphatidylcholine lipid bilayers at differing levels of hydration. *Biophys. J.* submitted

Chiu, S. W., Jakobsson, E., and H. L. Scott. 2001. Combined Monte Carlo and molecular dynamics simulation of hydrated lipid-cholesterol lipid bilayers at low cholesterol concentration. *Biophys. J.* 80:1104-1114.

Chiu, S. W., Jakobsson, E. and H. L. Scott. 2001 Combined Monte Carlo and molecular dynamics simulation of hydrated dipalmitoyl-phosphatidylcholine-cholesterol lipid bilayers. *J. Chem. Phys.* 114:5435-5443.

Mashl, R. J., Tang, Y., Schnitzer, J. and E. Jakobsson. 2001. Hierarchical approach to predicting permeation in ion channels. *Biophys. J.* submitted

Jakobsson, E. 1998. Using theory and simulation to understand permeation and selectivity in ion channels. *Methods. A companion to methods in enzymology* 14:342-351.

SYNERGISTIC ACTIVITIES:

I was the co-developer of Biology Workbench, and I used the tool in bioinformatics courses for undergraduate and graduate students at the university.

I am a member of the International Advisory Committee to the TIMMS R 2003 Fourth International Mathematics and Science Study (survey of mathematics and science student achievement across the world)

I am the PI of the Biology Student Workbench: Inquiry Tools for the Use of Molecular Data in Undergraduate Biology grant funded by the Division of Undergraduate Education, National Science Foundation (1999-2001).

I am the co-PI of the Biology Student Workbench: An Inquiry-based Learning Environment for Pre-Service Teacher Education grant funded (sub-contract) through the United States Department of Education (2000-2002).

COLLABORATORS & OTHER AFFILIATIONS

(i) Collaborators during the past 48 months:

Richard Braatz, National Center for Supercomputing Applications

Michael Clark, University of Illinois

James K. Drackly, University of Illinois

Robert Eisenberg, Rush University

Michael Heath, University of Illinois

Peter Jordan, Brandeis University

Janet Novotny, USDA

Sandra Rodriguez-Zas, University of Illinois

Faisal Saied, National Center for Supercomputing Applications

R. Sankarakrishnam, Mt. Sinai Medical School

H.L. Scott, Illinois Institute of Technology

Chandralekha Singh, Pittsburgh University

Robert Skeel, University of Illinois

Balaji Veeraraghavan, University of Illinois

(ii) Graduate Advisor:

Doctoral Mentor: Joseph Harris, Dartmouth

Postdoctoral Mentor: Lee Moore, Texas/Galveston

(iii) Thesis Advisor and Postgraduate-Scholar Sponsor over the last 5 years

Janet Novotny, USDA

Sudhakar Pamidinghantam, NCSA

Chandralekha Singh, Pittsburgh University

Total number of graduate students advised: 3

Total number of postdoctoral scholars sponsored: 2 present, 5 former