

CURRICULUM VITAE

ODED FARAGO

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Personal Information

Date of birth : April 17, 1970
Place of birth : Tel Aviv, Israel
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Higher Education

1996-2001 Tel Aviv University, Israel
Ph.D. studies in physics — condensed matter.
Research subject: Elasticity of Entropy-Dominated Systems.
Supervisor: Prof. Yacov Kantor.
2001 – **Ph.D.** in Physics — *with distinction*.

1993-1996 Tel Aviv University, Israel
Graduate studies in physics — condensed matter.
Thesis: Directed Chaotic Motion.
Supervisor: Prof. Yacov Kantor.
1997 – **M.Sc.** in Physics — *Summa Cum Laude*.

1988-1991 Tel Aviv University, Israel
Undergraduate studies in physics and mathematics.
1992 – **B.Sc.** in Physics and Mathematics — *Magna Cum Laude*.

Professional Experience

2005-present Biomedical Engineering Department, Ben Gurion University
2005-present Senior Lecturer, *2005* Lecturer.

2001-2004 Materials Research Laboratory, University of California,
Santa Barbara. Post-doctoral research associate.

2002-2004 Also with the Department of Physics, Korea Advanced Institute of Science
and Technology (KAIST), Daejeon, South Korea.

2002 Boulder Summer School for Condensed Matter and Materials Physics,

University of Colorado, Boulder.
 1994-2001 Tel Aviv University, Israel
 1999-2001 Instructor, 1994-1999 Research and teaching assistant.
 1999 NATO Summer School on Soft and Fragile Matter, St. Andrews, UK.
 1991-1994 Israel Defense Forces, Israel.

Teaching Experience

2005-present Ben Gurion University, Beer Sheva.
 1. *Biomaterials* (undergraduate)
 2. *Mechanical Properties of Living Tissues* (undergraduate)
 3. *Statistical Thermodynamics* (undergraduate)
 4. *Complex Fluids* (graduate)
 2004 University of California, Santa Barbara. Lectures in an undergraduate course, *Electromagnetism*.
 2004 University of California, Santa Barbara. Lectures in a graduate course, *Complex Fluids*.
 2002 University of California, Santa Barbara. Lectures in a graduate course, *Concepts and Phenomena of Condensed Matter Physics*.
 1996-2001 Tel Aviv University. Teaching assistant in two undergraduate courses, *Numerical Methods in Physics* and *Physics for Engineering Students*.
 1994-1996 Tel Aviv University. Undergraduate physics lab instructor.

Fellowships and Awards

2001 Caltech Prize Fellowship in Theoretical Physics (declined).
 2000 The Shenkar Foundation Award for Academic Achievement.
 1999 Tel Aviv School of Physics and Astronomy Award for Excellence in Teaching.

Invited and Contributed Talks

2006 Third International Conference on Multiscale Materials Modeling, Freiburg, Germany
Meso-scale computer modeling of lipid-DNA complexes for gene therapy. (Invited).
 2006 Biophysics of the cell. Mini-Symposium at Ben Gurion University. *Meso-scale computer modeling of lipid-DNA complexes for gene therapy. (Invited)*.
 2005 Multiscale Modeling of Macromolecule/Membrane interactions. CECAM - Centre Europeen de Calcul Atomique et Molculaire, Lyon, France. *"Solvent-free" computer modeling of lipid-DNA complexes for gene therapy. (Invited)*.
 2005 Biological Membranes: Current Challenges, Benasque Center for Science, Benasque, Spain. *Implicit solvent coarse-grained modeling of membranes*
 2003 American Physical Society Annual Meeting, Austin, Texas. *"Water-free" computer model for fluid bilayer membranes*.
 2002 4th KAIST-UCSB Invitation Workshop on Soft-Matter and Bio-Molecular Materials, Daejeon, South Korea. *Elasticity of polymers - beyond the basic models. (Invited)*.
 2001 4th Minerva Student Symposium on Molecular, Interfacial and Biological Aspects of Mesosstructures. Mashabei-Sade, Israel. *Elasticity of entropy-dominated systems*.

LIST OF PUBLICATIONS

1. O. Farago and Y. Kantor
Directed chaotic motion in a periodic potential
Physica A **249**, 151–155 (1998).
2. O. Farago and Y. Kantor
Pseudo-boundaries in discontinuous 2-dimensional maps
J. Phys. A: Math. Gen. **31**, 445–451 (1998).
3. O. Farago and Y. Kantor
Fluctuation formalism for elastic constants in ‘hard-spheres-and-tethers’ systems
Phys. Rev. E **61**, 2478–2489 (2000).
4. O. Farago and Y. Kantor
Entropic elasticity of two-dimensional self-avoiding percolation systems
Phys. Rev. Lett. **85**, 2533–2536 (2000).
5. O. Farago and Y. Kantor
The elastic behavior of entropic “fisherman’s net”
Eur. Phys. J. E **3**, 253–258 (2000).
6. O. Farago and Y. Kantor
Elasticity of Gaussian and nearly Gaussian phantom networks
Phys. Rev. E **62**, 6094–6102 (2000).
7. O. Farago and Y. Kantor
Entropic elasticity of phantom percolation networks
Europhys. Lett. **52**, 413–419 (2000).
8. O. Farago and Y. Kantor
Entropic elasticity at the sol-gel transition
Europhys. Lett. **57**, 458–463 (2002).
9. O. Farago and P. Pincus
Solute effects on the helix-coil transition
Eur. Phys. J. E **7**, 393–396 (2002).
10. O. Farago, Y. Kantor, and M. Kardar
Pulling knotted polymers
Europhys. Lett. **60**, 53–59 (2002).
11. O. Farago
“Water-free” computer model for fluid bilayer membranes
J. Chem. Phys. **119**, 596–605 (2003).
12. O. Farago and P. Pincus
The effect of thermal fluctuations on Schulman area elasticity
Eur. Phys. J. E **11**, 399–408 (2003).
13. O. Farago and P. Pincus
Statistical mechanics of bilayer membrane with a fixed projected area
J. Chem. Phys. **120**, 2934–2950 (2004).
14. O. Farago and C. D. Santangelo
Pore formation in fluctuating membranes
J. Chem. Phys. **122**, 044901 (2005).

15. O. Farago, N. Grønbech-Jensen, and P. Pincus
Meso-scale computer modeling of lipid-DNA complexes for gene therapy
Phys. Rev. Lett. **96**, 018102 (2006).
16. O. Farago and N. Grønbech-Jensen
Computational and Analytical Modeling of Cationic Lipid-DNA Complexes
Submitted to Biophys. J. (2006).
17. C. D. Santangelo and O. Farago
Membrane fluctuations around inclusions
Proceedings of Third International Conference on Multiscale
Materials Modeling, Ed. Peter Gumbsch, pp. 644-650 (2006) .