

CURRICULUM VITA

Ido Golding

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Personal Information

Marital status: Single
Nationality: Israeli
Date of birth: June 20th, 1969
Place of birth: Herzlia, Israel
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High Education

- 1997-2001* Tel Aviv University, Israel
Ph.D. studies in physics - condensed matter.
Research subject: Modeling of bacterial cooperative behaviour.
Supervisor: Prof. Eshel Ben-Jacob.
2002 – Ph.D. in Physics.
- 1994-1996* Tel Aviv University, Israel
Graduate studies in physics - condensed matter.
Research subject: Statistical physics of polymers.
Supervisor: Prof. Yacov Kantor.
1997 - M.Sc. in Physics - Magna Cum Laude.
- 1988-1991* Technion - Israel Institute of Technology, Israel
Undergraduate studies in physics.
1991 - B.Sc. in Physics - Summa Cum Laude.

Professional Experience

- 2001-present* Princeton University, USA
Department of Molecular Biology

Lewis Thomas Research Fellow.

- 1997-2001 Tel Aviv University, Israel
Research and teaching assistant.
- 1997-1998 School of Education, Tel Aviv University, Israel
Youth science teacher.
- 1991-1997 Israel Defense Forces, Israel
Military service. Actual rank: Captain in reserves.

Fellowships and Awards

- 2001 Lewis Thomas Bristol-Myers Squibb Fellowship.
- 2000 The Dothan Foundation Award for Academic Achievement.

Talks and Seminars

- 2005 Interdisciplinary School on Noise and Robustness in Transcriptional Regulatory Networks,
Coquelles, France
"Real-time Kinetics of Gene Activity in Individual Bacteria"
- 2005 Molecular Genetics of Bacteria & Phages Meeting,
University of Wisconsin - Madison
"Real-time Kinetics of Gene Activity in Single Bacteria"
- 2005 Princeton University, Physics Department
Condensed Matter Physics Seminar
"Real-time Kinetics of Gene Expression in Bacteria"
- 2005 Princeton University, Department of Molecular Biology
Developmental Colloquium
"Real-time Kinetics of Gene Expression in Bacteria"
- 2004 Israel Physical Society Annual Meeting,
Technion – IIT
"RNA dynamics in live cells"
- 2004 ASM Conference on the New Phage Biology,
Key Biscayne, Florida
"A multi-level study of Phage Lambda / *E. coli* interactions"

- 2004 The First International Meeting on Synthetic Biology,
Massachusetts Institute of Technology
“Tracking RNA dynamics in live *E. coli* cells”
- 2002 Bristol-Myers Squibb Fellowship Program Seminar, Lawrenceville
“The Lambda switch: Bridging the gap between molecular structure and phenotype”
- 2001 Computations in Science Seminar,
The James Franck Institute, University of Chicago
“Studies of bacterial cooperative organization using reaction-diffusion models”
- 2001 Physics of Biological Systems and Computational Neuroscience Seminar,
Tel Aviv University
“A first glance at bacterial adaptive mutations”
- 1999 Department of Condensed Matter Physics, Tel Aviv University
Seminar: “Studies of bacterial cooperative organization using
reaction-diffusion models”
- 1998 IMA workshop: Immune System Modeling and Cell Signaling,
University of Minnesota, Minneapolis
Talk: “A study of colonial development of bacteria”
- 1997 Department of Condensed Matter Physics, Tel Aviv University
Seminar: “A two-dimensional lattice model of polymers with random short-range
interactions”

Publications

1. I. Golding
“A study of a two-dimensional lattice model of polymers with short-range interactions”
M.Sc. Thesis, Tel-Aviv University (1996).
2. I. Golding and Y. Kantor
“Two-dimensional polymers with random short-range interactions”
Phys. Rev. E **56** (2) R1318-R1321 (1997).
3. I. Golding, Y. Kozlovsky, I. Cohen and E. Ben-Jacob
“Studies of bacterial branching growth using reaction-diffusion models of colonial development”
Physica A **260** (3-4) 510-554 (1998).
4. Y. Kozlovsky, I. Cohen, I. Golding and E. Ben-Jacob
“Lubricating bacteria model for branching growth of bacterial colonies”
Phys. Rev. E **59** (6) 7025-7035 (1999).
5. I. Cohen, I. Golding, Y. Kozlovsky and E. Ben-Jacob
“Continuous and discrete models of cooperation in complex bacterial colonies”
Fractals **7** (3) 235-247 (1999).
6. I. Golding, I. Cohen and E. Ben-Jacob
“Studies of sector formation in expanding bacterial colonies”
Europhys. Lett. **48** (5) 587-593 (1999).
7. I. Golding, I. Cohen and E. Ben-Jacob
“Studies of bacterial cooperative organization”
in *Traffic and Granular Flow '99: SOCIAL, TRAFFIC, AND GRANULAR DYNAMICS*
(D. Helbing, H. J. Herrmann, M. Schreckenberg and D. E. Wolf, Eds.),
Springer-Verlag, Berlin (2000).
8. I. Cohen, I. Golding, I.G. Ron and E. Ben-Jacob
“Biofluidynamics of lubricating bacteria”
Math. Meth. Appl. Sci. **24** (17-18) 1429-1468 (2001).
9. I. Golding, I. Cohen, I.G. Ron and E. Ben-Jacob
“Adaptive branching during colonial development of lubricating bacteria”
in *Branching in Nature* (V. Fleury, J.F. Gouyet and M. Leonetti, Eds.),
EDP Sciences, Les Ulis (2001).
10. E. Ben-Jacob, I. Cohen and I. Golding
“Modeling branching and chiral colonial patterning of lubricating bacteria”
in *Mathematical Models for Biological Pattern Formation*

- (H. Othmer and P. Maini, Eds.), Springer-Verlag, Berlin (2000).
11. E. Ben-Jacob, I. Cohen, I. Golding, D.L. Gutnick, M. Tcherpakov, D. Helbing and I.G. Ron
“Bacterial cooperative organization under antibiotic stress”
Physica A **282** (1-2) 247-282 (2000).
 12. I. Golding and E. Ben-Jacob
“The artistry of bacterial colonies and the antibiotic crisis”
in *Coherent Structures in Complex Systems*
(D. Reguera, L.L. Bonilla, and J.M. Rubi, Eds.),
Springer-Verlag, Heidelberg (2001).
 13. I. Golding, B. Drossel, Y. Shapira and E. Ben-Jacob
“A Quantitative Study of the Dynamics of Adaptive Mutation Appearance”
Physica A **294** (1-2) 195-212 (2001).
 14. I. Golding
“Studies of Bacterial Cooperative Organization Using Continuous Models”
Ph.D. Thesis, Tel-Aviv University (2001).
 15. O. Shefi, I. Golding, R. Segev, E. Ben-Jacob and A. Ayali
“Morphological characterization of in-vitro neuronal networks”
Phys. Rev. E. **66** (2) 021905 (2002).
 16. I.G. Ron, I. Golding, B. Lifshitz-Mercer and E. Ben-Jacob
“Bursts of sectors in expanding bacterial colonies as a possible model for tumor growth and metastases”
Physica A **320** 485-496 (2003).
 17. U. Nevo, J. Kipnis, I. Golding, I. Shaked, A. Neumann, S. Akselrod and M. Schwartz
“Autoimmunity as a special case of immunity: removing threats from within”
Trends in Molecular Medicine **9** (3) 88-93 (2003).
 18. U. Nevo, I. Golding, A. U. Neumann, M. Schwartz and S. Akselrod
“Autoimmunity as an immune defense against degenerative processes: a primary mathematical model illustrating the bright side of autoimmunity”
Journal of Theoretical biology **227** (4) 583-592 (2004).
 19. I. Golding and E. C. Cox
“RNA dynamics in live *E. coli* cells”
Proc. Natl. Acad. Sci. USA **101** (31) 11310-11315 (2004).
 20. Y. Chen, I. Golding, S. Sawai, L. Guo and E. C. Cox
“Population fitness and the regulation of *Escherichia coli* genes by bacterial viruses”
PLoS Biol. **3**(7): e229 (2005).

21. Y. M. Wang, J. O. Tegenfeldt, W. Reisner, R. Riehn, X.-J. Guan, L. Guo, I. Golding, E. C. Cox, J. Sturm, and R. H. Austin
“Single-molecule studies of repressor-DNA interactions show long-range interactions”
Proc. Natl. Acad. Sci. USA **102** (28) 9796-9801 (2005).
22. I. Golding, J. Paulsson, S. M. Zawilski and E. C. Cox
“Real-time kinetics of gene activity in individual bacteria”
Cell, in press.