

RADU DOBRIN

Northwestern University

Curriculum Vitae

Name:

First: Radu

Last: Dobrin

Current Position:

Research Associate
Northwestern University
Feinberg Medical School
Department of Pathology

Title and Degrees:

- Ph.D. in Physics, Michigan State University, October 2002.
Thesis Title: "**Trees, Paths and Avalanches on Random Networks**".
Coordinator: Dr. P.M. Duxbury.
- Masters in Electrical and Computer Engineering, Michigan State University, Dec. 2001.
Adviser: Dr. D. Reinhard.
- Masters in Theoretical Physics "Babes-Bolyai" University, June 1997.
Thesis Title: "**Superconductivity and Disorder in 2d and 3d Systems Affected by Magnetic Fluctuations**".
Coordinator: Dr. Mircea Crisan.
- Bc.S. Physics "Babes-Bolyai" University, June 1996.

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Personal Dates:

Born 1974 (Sighetul Marmatiei, ROMANIA).
Romanian citizen, married.

Languages:

English.
French.

General Education:

High School "Dragos-Voda" Sighetul Marmatiei 1988 - 1992.

Scientific Education:

Michigan State University, Ph.D. in Physics Aug. 1998 - Oct. 2002.
Michigan State University, Masters in Computer Engineering Aug. 1999 - 2001.
"Babes-Bolyai" University, Masters in Physics Oct. 1996 - June 1997.
"Babes-Bolyai" University, Physics Oct. 1992 - June 1996.

Teaching Experience:

Teaching Assistant Sept. 1998 - Dec. 1998 at Michigan State University.
Teaching Assistant Aug. 1997 - April 1998 at Western Michigan University.

Scholarships:

Research Assistantship at Michigan State University, Jan. 1999 - Oct. 2002.
Teaching Assistantship at Michigan State University, Aug. 1998 - Dec. 1998.
Teaching Assistantship at Western Michigan University, Sept. 1997 - April. 1998.

Published Work:

1. **"Random Field Ising Model on Complete Graphs and Trees"**,
R. Dobrin, J.M. Meinke and P.M. Duxbury, J. of Phys. A: Math. Gen. 35, L1 (2002).
2. **"Minimum Spanning Trees on Random Networks"**,
R. Dobrin, P. M. Duxbury, Phys. Rev. Lett. **86**, 5076 (2001).
3. **"Greedy Algorithms in Disordered Systems"**,
P. M. Duxbury, R. Dobrin, PHYSICA A **270**, 263 (1999).
4. **"Localization Effects on Magnetic Excitations, Coulomb Repulsion, and Critical**

Temperature in a Quasi-3D Superconductor",
I. Grosu, R. Dobrin, J. Supercond. **9**, 531 (1996).

Papers in Preparation:

1. Organizational layers in the *E. Coli* transcriptional regulatory network (submitted to Nature Genetics).
2. Paths and Trees in Random Networks.
3. Self-organized Self-similar Random Networks.

Talks:

1. **"Trees and Paths and Avalanches in Random Networks"**,
Invited talk, Intel Corp. 2003.
2. **"Trees and Avalanches in Random Graphs"**,
Invited talk, University of Notre Dame 2002.
3. **"Spanning Trees on Random Networks"**
Invited talk, Northwestern University 2002.
4. **"Exact Results for the Random Field Ising Model on Complete Graphs and Trees"**,
APS March 2002, Indianapolis, USA.
5. **"Scaling Laws for Random Spanning Trees"**,
APS March 2001, Seattle USA.
6. **"Random Spanning Trees"**,
Brown Bag Seminar 2001, Michigan State University, USA
7. **"Greedy (invasion) Algorithms, Directed Polymers and Optimal Paths"**,
APS March 2000, Minneapolis USA.

Posters:

1. **"Universality in Random Magnets: RFIM on Complete Graphs and Trees"**,
16th Annual CFMR Symposium, March 2002 East Lansing USA.
2. **"Minimal Spanning Trees on Random Networks"**,
Dynamical Networks in Complex Systems, July 2001 Kiel Germany.

3. **"Does Universality Hold in Random Trees?"**,
15th Annual CFMR Symposium, March 2001 East Lansing USA.
4. **"An Extremal Invasion Dynamics for KPZ Interfaces"**,
14th Annual CFMR Symposium, February 2000 East Lansing USA.