

# HASAN YARDIMCI

THE JOHNS HOPKINS UNIVERSITY  
DEPT. OF PHYSICS & ASTRONOMY  
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## EDUCATION:

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### **Ph.D. in Condensed Matter Physics** (expected in early 2006)

The Johns Hopkins University – Baltimore, MD

*Thesis Topic:* Slow Relaxational Dynamics and Aging in Supercooled Liquids and Other Disordered Systems

*Advisor:* Robert L. Leheny

### **Bachelors of Science in Physics** (May 1999)

Bogazici University – Istanbul, TURKEY

## RESEARCH & EXPERIENCE

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### **Graduate Research Assistant** – January 2001 - present

#### **Dielectric Susceptibility**

- Designed and constructed instrumentation for dielectric susceptibility measurements from 10 K to 350 K and between 1 mHz and 1 MHz.
- Performed aging studies of glass forming liquids using dielectric spectroscopy.
- Performed conductivity studies of clay suspensions.

#### **Neutron Scattering**

- Conducted small angle neutron scattering (SANS) experiments on supercooled liquids, clay suspensions and micelle forming polymers.
- Studied dynamical behavior of micelle forming polymers and supercooled liquids using neutron spin-echo (NSE) spectrometry.

### **Graduate Teaching Assistant** – September 1999- December 2003

- Teaching assistant for introductory and advanced physics courses for science and engineering majors.

## SKILLS

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### **Laboratory Skills:**

- Extensive experience in neutron scattering experiments and analysis.
- Extensive experience in dielectric susceptibility measurements.
- Experience in GPIB and analog data acquisition instrumentation and software.
- Experience in Scanning Electron Microscopy (SEM) and rheometry.
- Experience in single crystal growth using diffusion methods.

**Computer skills:**

- Five years experience with LabView graphical programming.
- Programming languages: Pascal, Fortran, C.
- Operating Systems: MS-DOS, Windows, Mac, Unix.
- Software: Igor, Latex, Mathematica, IDL.

**PUBLICATIONS:**

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- M. B. Stone, Y. Chen, J. Rittner, H. Yardimci, D. H. Reich, C. Broholm, D. V. Ferraris, T. Lectka, “Frustrated three-dimensional quantum spin liquid in CuHpCl”, *Phys. Rev. B* **65**, 64423 (2002).
- H. Yardimci, R. L. Leheny, “Memory in an Aging Molecular Glass”, *Europhys. Lett.* **62**, 203 (2003).
- R. Bandyopadhyay, D. Liang, H. Yardimci, D. A. Sessoms, M. A. Borthwick, S. G. J. Mochrie, J. L. Harden, R. L. Leheny, “Evolution of particle-scale dynamics in an aging clay suspension”, *Phys. Rev. Lett.* **93**, 228302 (2004).
- H. Yardimci, B. Chung, J. L. Harden, R. L. Leheny, “Phase Behavior and Local Dynamics of Concentrated Triblock Copolymer Micelles”, *J. Chem Phys.* **123**, 244908 (2005).
- H. Yardimci, R. L. Leheny, “Aging of The Johari-Goldstein Relaxation”, to be submitted to *Phys. Rev. B*.
- H. Yardimci, O. Theodoly, A. Faraone, J. L. Harden, R. L. Leheny, “Neutron Spin-Echo Studies of Corona Dynamics in Polystyrene – Poly(acrylic acid) Copolymer Micelles”, to be submitted to *J. Chem Phys.*

**PRESENTATIONS:**

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- “Memory in the Aging of a Structural Glass” presented at the 2001 March Meeting of the American Physical Society, Indianapolis, IN.
- “Neutron Spin-Echo Study of the Local Dynamics in a Polymer Micellar Solution” American Conference on Neutron Scattering, College Park, MD, June 2004.
- “Phase Behavior and Local Dynamics of Concentrated Triblock Copolymer Micelles” presented at the 2005 March Meeting of the American Physical Society, Los Angeles, CA.
- “Slow Dynamics in Supercooled Liquids and Other Soft Systems”, HFIR Center for Neutron Research at Oak Ridge National Laboratory, Oak Ridge, TN, November 2005.

**REFERENCES:**

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- Robert L. Leheny Johns Hopkins University – Dept. of Physics & Astronomy  
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- James L. Harden Johns Hopkins University – Dept. of Chemical and Biomolecular Engineering  
Email: harden@jhu.edu Phone: 410-516-6693
- Daniel H. Reich Johns Hopkins University – Dept. of Physics & Astronomy  
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