

ROBERT D. LYCHEV

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OBJECTIVES

- ◇ obtain a doctoral degree in computer science
- ◇ gain a research position at a university or a national laboratory

RESEARCH INTERESTS

- ◇ applied game theory, applied cryptography, network security and accountability

EDUCATION

Georgia Institute of Technology	09/2008-present
title:	Ph. D.
concentration:	computer science
cumulative GPA:	4.00
University of Massachusetts Amherst	09/2006-05/2008
title:	Master of Science
concentration:	computer science
cumulative GPA:	3.82
University of Massachusetts Amherst	09/2001-05/2006
title:	Bachelor of Science Summa Cum Laude
concentration:	computer science, mathematics, physics
cumulative GPA:	3.87

RESEARCH EXPERIENCE

Georgia Institute of Technology	09/2008-present
Designing contracts and mechanisms for providing incentives to selfish network AD's to fulfill their obligations with respect to quality of service of routing traffic in the context of various network quality of service accountability frameworks with Nick Feamster and Sasha Boldyreva	
University of Massachusetts Amherst	09/2005-05/2008
Studied and implemented in Python applications of the All-or-Nothing Transform to data entanglement; designed, implemented in Java and tested a compact e-cash scheme in the context of privacy-preserving protocols for public transportation with electronic ticketing under supervision of Dr Kevin Fu and Dr Siman Wong	
University of Massachusetts Amherst	06/2007-09/2007
Studied and implemented in JAVA option investment strategies by extending KNIME eclipse plug-in functionality under supervision of Dr Nikunj Kapadia and Dr Mila Sherman from the department of finance	
University of Houston	06/2006-08/2006
Designed, implemented in C/C++, and tested various stepping-stone detection techniques under the supervision of Dr Stephen Huang and Dr Jianhua Yang supported by REU grant from NSF	
Texas A&M University	06/2005-08/2005
Designed and implemented in C/C++ a distributed P2P computing network at Internet Research Laboratory under the supervision of Dr Dmitri Loguinov and Derek Leonard supported by REU grant from NSF	

Studied relationships of velocity distribution and diffusion coefficient w. r. t. coefficient of restitution in granular gases as well as thin-sheet crumpling at a non-equilibrium physics laboratory under the supervision of Dr Narayanan Menon and Klebert Feitosa

PUBLICATIONS

- ◇ Shou-Hsuan S. Huang, R. Lychev, J. Yang, "Stepping-Stone Detection via Request-Response Traffic Analysis," *Proc. 4th International Conference ATC 2007, LNCS 46100*, pp. 276-285, 2007.
- ◇ WORK IN PROGRESS:
R. Lychev, N. Feamster, Designing Enforceable Network Contracts, submitted to *SIGCOMM '09*.

POSTERS

- ◇ R. Lychev, H. King, N. Menon, "The Force-Displacement Relation in Crumpling Cylindrical Sheets," *Five-College Undergraduate Physics Symposium*, University of Massachusetts Amherst, October 2005.
- ◇ R. Lychev, D. Leonard, D. Loguinov, "Distributed Peer-to-Peer Computing of Monte Carlo Simulations," *Undergraduate Summer Research Grants Poster Presentation*, Texas A&M University, August 2005.
- ◇ R. Lychev, K. Feitosa, N. Menon, "Tuning Inelasticity," *Five-College Undergraduate Physics Symposium*, Mount-Holyoke College, October 2003.

PRESENTATIONS

- ◇ R. Lychev, Shou-Hsuan S. Huang, J. Yang, "Stepping-Stone Detection via Request-Response Traffic Analysis," *4th International Conference, ATC 2007*, Hong Kong, China, July 2007.
- ◇ R. Lychev, J. Yang, Shou-Hsuan S. Huang, "Stepping-Stone Detection via Request-Response Traffic Analysis," *Computer Science Research Experience for Undergraduates*, University of Houston, August 2006.
- ◇ R. Lychev, N. Menon, "Fluctuations in Granular Gas," *Five-College Undergraduate Physics Symposium*, Smith College, September 2004.

TECHNICAL SKILLS

- ◇ Programming Languages: Java 6 yrs, C/C++ 2 yrs, Python 1 yr

TEACHING ASSISTANT

- ◇ CS 591D Applied Cryptography, Spring 2007 and 2008
- ◇ CS 311 Introduction to Algorithms, Fall 2007 (11-12)
- ◇ CS 187 Programming with Data Structures, Fall 2007(9-10)
- ◇ CS 311 Introduction to Algorithms, Fall 2006