

Aminur Rahman

Department of Mathematical Sciences
New Jersey Institute of Technology

ar276@njit.edu
<http://web.njit.edu/~ar276>

RESEARCH INTERESTS

- Dynamical Systems
- Mathematical Physics
- Quantum Logic
- Mathematical Biology

EDUCATION

- 2006-Present **BS Student in Applied Mathematics, minor in Applied Physics**, *New Jersey Institute of Technology, Department of Mathematical Sciences*, Newark, NJ.
Expected Graduation: May 2010, GPA: 3.784, Academic Advisor: David Hornthrop Research Advisor: Denis Blackmore.
- Summer 2008 **Additional Education**, *United States Particle Accelerator School, University of Maryland*, Annapolis, MD.
One semester particle accelerator physics course condensed into ten - ten hour classes spanning two weeks. (Part of the Lee Teng Internship program)

Coursework

- Undergraduate Coursework: Dynamical Systems, Numerical, Discrete, and Complex Analysis, Linear Algebra, Calculus, Circuitry, Mechanics, Electricity and Magnetism, and Relativity
- Graduate Coursework: Real and Complex Analysis

RESEARCH INTERNSHIPS

- Summer 2008 **Lee Teng Particle Accelerator Physics Internship**, *Argonne National Laboratory, University of Chicago*, Argonne, IL.
Security Clearance from June 1, 2009 to August 8, 2009. Worked closely with Nicholas Sereno in using the Beam Instability code for the APS ERL concept that resulted in a Department of Energy technote publication.

RESEARCH PUBLICATIONS

- D. Blackmore, A. Rahman, J. Shah, Discrete dynamical modeling and analysis of the R-S flip-flop circuit, *Chaos, Solitons and Fractals*, (2009), doi:10.1016/j.chaos.2009.02.032
- A. Rahman, N. Sereno, H. Shang, Benchmarking the Multipass Beam-Breakup Simulation Code BI, OAG-TN-2008-029, (2008)

RESEARCH PRESENTATIONS

- April 19, 2009 **NJIT Experience Day**, *New Jersey Institute of Technology*, Newark, NJ.
Discrete Dynamical Modeling and Analysis of the R-S flip-flop circuit

- April 8, 2009 **Dana Knox Student Research Showcase**, *New Jersey Institute of Technology*, Newark, NJ.
Discrete Dynamical Modeling and Analysis of the R-S flip-flop circuit
- March 29, 2009 **Garden State Undergraduate Mathematics Conference**, *Monmouth University*, Monmouth, NJ.
Discrete Dynamical Modeling and Analysis of the R-S flip-flop circuit
- May 19 - 21, 2008 **Frontiers in Applied and Computational Mathematics 2008**, *New Jersey Institute of Technology*, Newark, NJ.
Chaos of the R-S flip-flop circuit
- April 5, 2008 **NJIT Experience Day**, *New Jersey Institute of Technology*, Newark, NJ.
Chaos of the R-S flip-flop circuit

HONORS AND AWARDS

- Member of Albert Dorman Honors College
- Scholarships: Bauder, Hopper, Peter Homack, Presidential, Ahluwalia, and ADHC scholarships
- Member of the Pi Mu Epsilon Mathematical Honor Society
- Member of the National Honor Society
- Contests: Winner of the Top Gun Programming Contest (Java) (first to earn perfect score). Second place in Hopper Scholarship essay contest.
- Varsity Letter Winner

TEACHING EXPERIENCE

- NJIT math tutor (Pre Calculus, Calculus, Ordinary and Partial Differential Equations, Numerical Analysis, Linear Algebra, Probability and Statistics, Dynamical Systems, Real Analysis, Complex Analysis, and Discrete Analysis), helping students understand what they are learning instead of telling them how to do a particular problem.
- Center for Pre College Programs Physics, Pre Calculus, and Calculus Teaching Assistant, helping underprivileged high school students realize their potential.
- NJIT Calculus Teaching Assistant (ECE facilitator)

ACTIVITIES

- Math Club President and Webmaster
- Mathematical Sciences Student Advisory Board member
- Member of Highlander Soccer Club
- Former Astro Club Secretary and Webmaster
- Former Electrical and Computer Engineering Student Advisory Board member

Professional Affiliations

- Society for Industrial and Applied Mathematics (student member)

TECHNICAL SKILLS

Languages MATLAB, C++, Java

Packages MATLAB

Operating Systems UNIX, Linux, Windows

Tools LaTeX, Microsoft Office, Open Office

Miscellaneous SSH, FTP, AFS, Integrated Circuits,
and ammeters

Languages

English	Fluent	<i>Adopted Language</i>
Bengali	Fluent	<i>Native Language</i>
Hindi	Beginner	<i>I can only understand it, but not speak it</i>
Spanish	Beginner	<i>I only know high school level spanish</i>

Extracurricular Interests

Soccer	I love the sport, played in high school, and I come from a town that boasts scores of players who have gone to the world cup
Running	I have to keep healthy
Chess	Helps stimulate the mind
Photography	Not the best, but I enjoy it
Music	Can anyone imagine a world without music?

REFERENCES

David Horntrop **Department of Mathematical Sciences, New Jersey Institute of Technology, Newark, NJ.**
email: david.horntrop@njit.edu, faculty page: <http://math.njit.edu/people/horntrop.php>

Denis Blackmore **Department of Mathematical Sciences, New Jersey Institute of Technology, Newark, NJ.**
email: denis.l.blackmore@njit.edu, faculty page: <http://math.njit.edu/people/blackmore.php>

Roy Goodman **Department of Mathematical Sciences, New Jersey Institute of Technology, Newark, NJ.**
email: goodman@njit.edu, faculty page: <http://math.njit.edu/people/goodman.php>