

Deepa Gupta

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RESEARCH INTERESTS

- Numerical Analysis and Scientific Computing.
- Mathematical Modeling.
- Statistics and Stochastic Processes.
- Optimization.

EDUCATION

- University of Minnesota Twin Cities, Institute of Technology, Minneapolis, MN
Ph.D. in School of Mathematics. (Aug 2002 - Present). GPA: 4.0/4.0.
MS in Industrial Engineering with Statistics minor. (Jul 2000 - Aug 2002). GPA: 3.8/4.0.
- University of Delhi, Delhi, India.
Masters in Operations Research. (Jul 1998 - May 2000) GPA 84.2 on the scale of 100. Class Rank 1 in the class of 40.
Bachelors of Mathematics. (Jul 1995 - May 1998). GPA 82 on the scale of 100. Class Rank 1 in the class of 40.

RESEARCH EXPERIENCE

- Research Assistant
Working on solving partial differential equations in curved domains using simplexes only : RESEARCH ADVISORS : Prof. Fernando Reitich, Prof. Bernardo Cockburn. (Sept 2005 - Present).
- Research Assistant
Worked on a **Defense project with emphasis on decision support system** with Prof. Caroline C. Hayes . (Jan 2001 - May 2002).

TEACHING EXPERIENCE

- Teaching Assistant at the University of Minnesota for the following:
Undergraduate level Mathematics courses. (Aug 2002-Aug 2005, Aug 2006-Present).
Engineering Optimization in the division of Industrial Engineering, Sept 2000.
Manufacturing System in the division of Industrial Engineering, Sept 2000.

INDUSTRIAL EXPERIENCE

- **Boston Scientific, CRM**, Arden Hills, MN (May 2007 - August 2007)
Developed mathematical models for patient management.
- **Schlumberger Doll Research**, Ridgefield, CT (Jun 2006 - Aug 2006).
Testing of commercial simulation software, **ECLIPSE**. It simulates fluid flow problems in porous media.
- Technical Aide at **3M**, Maplewood (Jun 2003 - Aug 2003).
Implemented various Optimization methods for the multi-layer thin films developed by 3M.
- **National Building Construction Corporations Limited (NBCC)**, New Delhi, India (Sept 1999 - Mar 2000)
Used **MS project to predict** “Optimal Cost Time Schedule ” for Delhi Metro Rail Project.

PROJECTS COMPLETED

- Project “**Order Relations in $G/M/1$ Queueing Systems**”. (Dec 2002-Oct 2003).
- Project “**Dependence of TpmC (Transactions per minute) on various hardware and software parameters**”. (Fall 2001).
- Project “**Operational Analysis of a Silicon Wafer Production Facility**” in Polar Fab. (Jan 2001 - May 2001).
- **Simulated a banking system using Arena**. (Sept 2000 - Dec 2000).

COMPUTER SKILLS

Platforms: Unix/Linux, Windows.
User Interface: Java Swings.
Languages: Fortran 90, Pascal.
Computing Packages: Matlab, Mathematica
Simulation tool: Arena, ECLIPSE, GeNIe.
Optimization tool: iSight, MS Project.
Statistical tools: Arc, Macanova, R.

REFERENCES

1. Prof. Fernando Reitich, School of Mathematics, University of Minnesota, **reitich@math.umn.edu**
2. Prof. Bernardo Cockburn, School of Mathematics, University of Minnesota, **cockburn@math.umn.edu**