

Varun Rai

Objective	Solving important problems through quality research
Education	Stanford University MS in Mechanical Engineering (ME) (September 2002 – March 2004) Towards Ph.D. in ME (March 2004 – present) GPA – 4.01 / 4 Indian Institute of Technology (IIT), Kharagpur B.Tech (Bachelors) in Mechanical Engineering (ME) CGPA – Major-8.8/10; Overall- 8.48/10
Tests	GRE Overall: 2360 / 2400 Break up: Quants: 800, Verbals: 780, Analytical: 780
Academic Achievements	<ul style="list-style-type: none">• Franklin P. and Caroline M. Johnson Student Fellowship, Summer 2003.• GSPB Service Award, Stanford University, 2003.• Among the only 45 scholars invited to attend the International Mathematical Olympiad Training Camp (IMOTC) at the Indian Institute of Science (IISc), B'lore, India 1995 and Bhabha Atomic Research Center (BARC), India 1997.• Recipient of the INMO Award (1995 and 1997).• Recipient of Merit Scholarship awarded by the Central Board of Secondary Education (CBSE) for “<i>outstanding performance</i>” in mathematics (1996).• 1st at the Regional Mathematical Olympiad (RMO) from the eastern zone, India (1995).
Work Experience	Research Assistant in Pitsch Group, Mechanical Engineering, Stanford University <ul style="list-style-type: none">• Modeling and Simulation of PEM Fuel Cells (Fall'03-present) Teaching Assistant, ME grad level math series (ME 300-A-C), Stanford University <ul style="list-style-type: none">• Linear Algebra (Fall'02), PDEs (Winter'03), Numerical Methods (Spring'03) Research Assistant in PED Lab, IIT Kharagpur (August 2001- May 2002) <ul style="list-style-type: none">• Mathematical Modeling and Design of Mass flow meters. Flenders Gearworks Ltd., Kharagpur (Summer Internship: May-June 2001) <ul style="list-style-type: none">• Cryo-treatment of cutting tools especially end mill cutters.• Found an optimal cooling rate for improved wear resistance. Aztec Software Public Ltd, Bangalore (Summer Internship: May-June 2000) <ul style="list-style-type: none">• Designed and implemented a network-based “goal sheet” management system• Built an employees' database management system (ASP, SQL)
Other Projects & Publications	<ul style="list-style-type: none">• “PEMFC Electrochemistry: Simulation of non-equilibrium surface chemistry on 3-dimensional geometries”, JIM, Quebec City, Canada, May 2005• “DMC simulations of PEM Fuel Cell Electrochemistry”, Intl. Conference on Numerical Conference, Arizona, USA, May 2004• “Disassembly Sequence Generation: A Petri Net Based Heuristic Approach” International Journal of Production Research (IJPR), (2002)
Extra-curricular and other skills	<ul style="list-style-type: none">• Proficiency in C, C++, ASP, HTML, JavaScript etc.• Softwares: MATLAB, GAMBIT, FLUENT• Member, Steering Committee, Ideon-2k+2, IIT Kharagpur, (2002).• Second Senate Member of the R.K. Hall of Residence (2001-2002).• Head of Robotix-2k+1, Tech Festival, IIT Kharagpur, (2001).• School Captain, High School (1997-1998)