KARAN SHARMA
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EDUCATION:

- **University of Pennsylvania**, School of Engineering & Applied Science, Philadelphia, PA
  Master of Science in Engineering, Mechanical Engineering and Applied Mechanics, May 2014. GPA: 3.83/4.00
  Coursework: Numerical methods and modeling, Project Management, Optimization, Transport Process, Energy Engineering, Thermodynamics, Finite Element Analysis, Mechatronics, Design for Manufacturability
- **Manipal University,** Manipal, India
  Bachelor of Engineering, Mechanical Engineering, May 2010. CGPA: 8.67/10

WORK EXPERIENCE:

- **University of Pennsylvania,** *Research Assistant, School of Arts & Science,* Philadelphia, USA, *AY 2013-2014,*
  - ***Industry:*** *Research and Academia*
  - Southern Ocean deep water formation slowdown over the 21st century and relationship with freshwater fluxes and carbon uptake using FERRET and MATLAB
- **ABB Sp. z o.o.,** *Intern, Corporate Research Center,* Krakow, Poland, June 2013-August 2013
  - ***Industry:*** *Energy & automation*
  - Simulating Microencapsulated phase change material slurry using *FLUENT, MATLAB and C*
- **University of Pennsylvania,** *Intern, School of Arts & Science,* Philadelphia, USA, *May 2013-June 2013*
  - ***Industry:*** *Research and Academia*
  - Estimating future global carbon uptake by world ocean and southern sea using *MATLAB*
- **Larsen & Toubro Ltd.,** *Executive SCM(Projects)*, Faridabad, India, *August 2010-August 2012*
  - ***Industry:*** *Energy & Utilities*
  - Negotiated, procured and expedited various items required for the erection of a supercritical boiler
- **Jai Bharat Maruthi (JBM),** *Intern, Research & Development,* Faridabad, Haryana, India, *June 2008-July 2008*
  - ***Industry:*** *Manufacturing*
  - Designed CNG tank for Maruti Suzuki India Ltd using *AutoCAD*.

RESEARCH & PROJECTS:

- **Electro-chemical flow Capacitors,** University of Pennsylvania, October 2012 – May 2013
  - Predicting time for electrolyte cluster formation via Diffusion Limited Aggregation
  - Predicting time for electrolyte cluster formation under the influence of magnetic field
- **Design of self-sensing actuator capable of adjusting pad of tilting pad bearing,** Manipal University, January 2010-May 2010
  - Monitored change in the performance of various typed of bearings due to change in fluid film thickness
  - Designed a bearing with piezoelectric pad capable of generating charge when subjected to variation in stress
- **SAE Baja Rochester 2010 Competition,** Manipal University, August 2009-May 2010
  - Designed suspension of the vehicle capable of enduring various loads encountered during the race
  - Obtained sponsorships and managed a budget of USD 25,000 (INR 1.2 million)
- **SAE Baja Wisconsin 2009 Competition,** Manipal University, August 2008-May 2009
  - Designed and manufactured a roll cage
  - Obtained sponsorships and managed a budget of USD 17,000 (INR 0.8 million)

SKILLS & CERTIFICATIONS:

- **Computer:** ANSYS, AutoCAD, COMSOL, MATLAB, FLUENT, PRO-E, Solid Works, SAP (Production server), Project Management tool (PMT), MS Word, MS PowerPoint, MS Excel, C++, C, Linux, Ferret, Lotus Notes, LINDO
- **Certifications:** German Level 1; ANSYS; Power Plant Familiarization (NTPC Ltd.)

LEADERSHIP ROLES

- **Director,** 17th Wharton India Economic Forum 2013, Infrastructure Panel
- **Team Captain**, Team Manipal Racing'10, August 2009 – May 2010
- **Roll Cage head and Management Captain,** Team Manipal Racing, August 2008 – May 2009

EXTRA CURRICULAR ACTIVITIES:

- **Sports-** Member of school & company cricket team, school soccer, volleyball and athletics team
- **Social:** Member of Disha, a social wing of Red-X, Manipal University, August 2006 – May 2010
- **Automobile-** Member of SAE India Club, August 2006 – May 2010