KRISHNA C. VEDULA

414 Erie Street. Apt # 2
Minneapolis, MN 55414
USA

Email: vedu0002@umn.edu
Cell: 612-940-1808

EDUCATION

Master of Science in **Mechanical Engineering**, expected graduation: May 2008
Institute of Technology, University of Minnesota –Twin Cities campus
Minneapolis, MN

Bachelor of Science in **Biomedical Engineering**, graduation: May 2006
Institute of Technology, University of Minnesota, Twin Cities campus
Minneapolis, MN

EXPERIENCE

Research Assistant, Department of Mechanical Engineering, University of Minnesota, Sep 2006 - present
Topic: Design of a new Ureteral Stent
Advisor: Prof. William K. Durfee

- Optimize and build prototypes of a new axially expandable Ureteral Stent as described in the patent by Prof. Durfee, Dr. Monga and Krishna Vedula.

Teaching Assistant, Department of Mechanical Engineering, University of Minnesota, Sep 2006 - present
Course: Design and Manufacturing I
Advisor: Prof. Sue Mantell

- Hold Recitation sessions and lab sessions, grade exams & homework, and hold office hours.

Summer Intern, C.R. Bard Urological Inc., Covington, GA, Jun - Aug 2006.
Topic: Male & Female UI Problems, Research & Development
Supervisor: Frank Bimbo

- Research the possible new product lines using professional search resources and internet.
- Quality and evaluation testing of novel products and existing product lines.

Undergraduate Research Opportunities Program, University of Minnesota, Minneapolis, MN. Jan - May 2006
Topic: Design of a Ureteral Stent with radial and axial flexibility
Advisors: Dr. Manoj Monga and Dr. William K. Durfee

- Performed literature study, patent search for suitable stent design models, create Pro/E, FEA models; built a prototype and performed preliminary prototype testing.

Research Assistant, Dept. of Urology, University of Minnesota, Minneapolis, MN. Sep 2004 - May 2006.
Advisor : Dr. Manoj Monga

- Performed mechanical (tensile and compression) testing through carefully designed *in vitro* and *in vivo* methods in the following projects:
  - Buckling of Ureteral Stents under varying pressures.
  - Kinking of Ureteral Stents under varying pressures.

Equipment Used: MTS material testing system with Testworks software and Continuous Urine flow apparatus built in Prof. Ephraim Sparrow's lab at Dept. of Mechanical Engineering, University of Minnesota.

Research Associate, Dept. of Emergency Medicine, Mayo Clinic, Rochester MN. Jun - Aug 2003 and Jun- Aug 2004.
Supervisors: Dr. Latha Stead and Dr. Raquel Schears

- Performed Medline searches, wrote topic summaries, created and maintained databases for each of the following studies:
  - Role of blood pressure fluctuation in patients with acute stroke
  - Advanced directives and nutritional status of nonagenarians accessing the Emergency Department
  - Electrocardiographic interval variability in the geriatric population

Student Library Assistant, University of Minnesota Libraries, University of Minnesota, MN. Sep 2003 – May 2006
Supervisor: Lynn Tran

- Assist supervisor in the patron service, communicate with patrons via telephone, email and fax. Hold responsibility of the library during the absence of the supervisor.

Class Projects

- Senior Design Project: Implantable Tubular Occluding Device
- Advanced Biomechanics: Arterial Tissue Mechanics
- Biomechanics: Strength and Moment Arm calculations using force gauge and potentiometer (LabVIEW software)
- Advanced Biomaterials: Tissue and Osteoblast adhesion to Hydroxyapatite coated implant surfaces.
- Biomaterials: L-Polycaprolactone application in Biomedical Engineering
- Computer Aided Engineering: Menu driven Animation of Boom Truck based on user entered parameters.

Skills

Computer Skills

- Operating Systems: Windows 2000/XP, UNIX (beginner level), MAC OS X
- Software Packages: Microsoft Word, Excel, PowerPoint, FrontPage, Access
- Languages: Fortran, C++
- Engineering Software Matlab, Pro/E , ANSYS, CFX

Honors

- Deans List: Fall 2002, Spring 2003.
- Member of Association of Mechanical Engineers
- Member of Biomedical Engineering Society Minnesota Chapter.
- Member of Engineering World Health, Minnesota Chapter. (Publicity Chair, 2005)
- Member of Engineering Without Borders, Minnesota Chapter.
- Coffman Scholarship for Science Students, Spring 2003.
- National Distinction Certificate, International Cyber Olympiad.
- National Talent Search Examination Distinction Certificate, Roorke University, Roorke, India.
- Certificate of Distinction, University of New South Wales, Australia, for good performance in the International talent search tests.

Volunteer Activities

- Institute of Technology Mentor for High School Students interested in Engineering
- Volunteer for Dolphin Nature & Conservative Society
- Member of AID-MN (Association for India Development-MN Chapter).
- Tutor for academically challenged students
- Took part in rehabilitation of Government Orthopedic Hospital in Visakhapatnam.
- Worked to preserve endangered species of fish on Visakhapatnam coastline

PUBLICATIONS & PRSENTATIONS

1. Vedula KC, Varadachari CJ, Vukov LF, Decker WW, Stead LG. Electrocardiographic intervals in Nonegenarians- what are the "normals?" *Ann Emerg Med* 2004; (44)4:S70-71 (Presented (self) at American College of Emergency Physicians, San Francisco, 2004.)
2. Vedula KC, Ganti SN, Schears RM. Advanced Directives in an Emergency Department Nonagenarian Population. *Ann Emerg Med* 2004;(44)4:S68 (Presented (self) at American College of Emergency Physicians, San Francisco, 2004.)
3. Vedula KC, Varadachari CJ, Vukov LF, Decker WW, Weaver A, Stead LG. Impact of Acute Blood Pressure Variability on Ischemic Stroke Outcome. Neurology, 2006.
4. Schears RM, Vedula KC, Ganti SN, Tung E, Nimishikavi S, Decker W. Nutrition Status in Emergency Department Nonagenarians. Presented at the British Association for Emergency Medicine, York, U.K., March 2005.
5. Stead LG, Gilmore RM, Vedula KC, Weaver AL, Decker WW, Brown RD Jr. Continuous Emergency Department Blood Pressure Monitoring in Acute Ischemic Stroke. Presented at the American Academy of Neurology, Miami Beach, FL, April 2005.
6. Stead LG, Vedula KC, Impact of Blood Pressure Variability in the first 3 hours of acute Ischemic stroke. *Acad Emerg. Med. 2005:12(5).* Presented at the Society for Academic Emergency Medicine, New York, NY. May 2005.
7. Stead LG, Gilmore RM, Vedula KC, Weaver AL, Brown RD, Decker WW. Impact of Acute Blood Pressure Variability on Ischemic Stroke Outcome. Submitted to *Neurology*, August 2005.
8. Monga M, Hendlin K, Vedula K. Horn C. In vitro Evaluation of Ureteral Stent Compression. Presented at World Congress of Endourology, Amsterdam. Manuscript submitted to *Urology* August 2005.
9. Monga M, Hendlin K, Vedula K, Horn C. Compression of Ureteral Stents. Presented at AUA 2006, Atlanta, GA