

# GAURAV SHUKLA

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## EDUCATION

### Medical Scientist Training Program (MSTP), University of Pittsburgh

*Expected Graduation: 5/2011 with M.D. and Ph. D.*

#### University of Pittsburgh Department of Bioengineering, Pittsburgh, PA

*Thesis Advisor: George Stetten, M.D., Ph. D.*

#### University of Pittsburgh School of Medicine, Pittsburgh, PA

*Relevant Coursework: Medical Anatomy, Biochemistry, Cell Biology, Microbiology, Immunology, Physiology, Pathology, Medical Ethics, Patient Interviewing, Physical Diagnosis*

### Duke University, Durham, NC

Pratt School of Engineering, GPA 3.624

*Graduation: 5/2004 with BSE in Biomedical Engineering and Electrical Engineering*

*Relevant Coursework: Principles of Chemistry, Computational Methods in Engineering, Elementary Differential Equations, Biomaterials, Technical Physics, Organic Chemistry, Cell Biology and Molecular Genetics, Linear Algebra, Linear Systems Theory, Integrated Circuits, Experimental Methods in Genetics and Cell Biology, Digital Logic, Computer Architecture, Statistics, Biochemistry, Electrobiolgy, Biomedical Measurements, Medical Instrument Design, Neuroscience*

## EXPERIENCE

### Scientific Research

MSTP Rotation, University of Pittsburgh/Carnegie Mellon University (George Stetten, M.D., Ph. D.) 6/2005 – 8/2005.

- *Organized clinical trials assessing use of "sonic flashlight" in intravenous catheterization*

MSTP Rotation, University of Pittsburgh/Carnegie Mellon University (George Stetten, M.D., Ph. D.) 6/2004 – 8/2004.

- *Designed a miniature model of a real-time tomographic reflection device, a "sonic flashlight," which captures high-resolution ultrasound images and creates a virtual in situ image in the patient.*

Pratt Fellowship, Pratt School of Engineering, Duke University (Craig Henriquez, Ph. D.) 1/2003 – 5/2004.

- *Designed and constructed a neural network model using MATLAB for use in controlling simulated limbs as part of a brain-machine interface project, and presented work at numerous symposia*

Physician Scientist Training Program Fellowship, Univ. of Cincinnati Med. Center (James Herman, Ph. D.) 6/2002 – 8/2002.

- *Conducted own experiments to determine the role of glucocorticoid receptors against quinolinate toxicity in a rat model, and presented findings at a research symposium*

Research Assistant, University of Cincinnati Medical Center (Christy Holland, Ph. D.) 6/2001 – 8/2001.

- *Assisted with design and construction of a prototype ultrasound transducer for use in thrombolysis experiments*

### Publications

Shukla, G., Wu, B., Schwartzman, D., and Stetten, G., 2005. "The sonic flashlight for guidance of superficial subdermal access," Medical Image Computing and Computer-Assisted Intervention Conference. (Abstract, Poster Presentation)

### Teaching Assistance / Instruction

Computational Methods Using Matlab (Michael Gustafson, Ph. D.) 8-10 hours/week. Fall 2002, Fall 2003, Spring 2004.

- *Lectured and provided individual and group instruction for engineering freshmen*

Electronic Devices (Richard Fair, Ph. D.) 8 hours/week. Spring 2001.

- *Instructed students in laboratory experiments and coordinated evaluation process*
- *Reinforced classroom concepts and taught circuit-building skills*

Electric Circuits (Michael Gustafson, Ph. D.) 6 hours/week. Fall 2001.

- *Held weekly office hours for personalized instruction of students*
- *Organized review sessions prior to examinations for large classes*

### Leadership Activities

Hindu Students Association, Duke University. 6-10 hours/week. 9/2000 -- 5/2004.

- *Served as President / Co-President for three years*
- *Developed a small group of students into a large campus organization with over 100 members*
- *Organized and executed regular service activities, religious festivals, a national conference, and off-campus retreats*

Residential Government, Duke University. 2-5 hours/week. 9/2000 – 5/2002

- *Served as President for two years*

- *Organized dorm- and quad-wide activities, intramural teams, and study breaks and managed a large budget of several thousand dollars*

### **Service**

Health Careers Internship Program, Duke University. 3-4 hours/week. Fall 2002.

- *Attended to patients with long stays in Duke Hospital, spending time with them to make them more comfortable*

### **SKILLS**

MATLAB, C, HTML, LaTeX, SPICE, Microsoft Office, UNIX, Windows 9x/2000/XP, Mac OS X, Microprocessor Programming, MIPS, LabVIEW, Fluent Hindi, Proficient Spanish

### **INTERESTS AND HOBBIES**

Recreational Sports (Basketball, Softball), Dancing (Latin, Indian, Ballroom), Fantasy Sports, Card Games (Poker, Euchre, Spades)