

SURYA P. N. SINGH

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OBJECTIVE

Seeking a research position in the fields of mechanical engineering, computing/visualization, controls, and/or the application of these sciences to study and develop novel manufacturing and control technologies and systems.

EDUCATION

- | | | |
|----------------|--|--------------------------|
| 2000 – Present | Carnegie Mellon University | Pittsburgh, Pennsylvania |
| | <i>Working towards a Masters of Science in Robotics</i> | |
| | <ul style="list-style-type: none">Member of the Robotics Institute | |
| 1996 – 2000 | University of Tennessee, Knoxville | Knoxville, Tennessee |
| | <i>Bachelor of Science in Mechanical Engineering</i> | |
| | <ul style="list-style-type: none">GPA: 4.0 / 4.0Graduated With Honors (<i>Summa Cum Laude</i>) and a minor in Economics | |
| 1993 – 1996 | Bearden Senior High School | Knoxville, Tennessee |
| | <i>Honors High School Diploma</i> | |
| | <ul style="list-style-type: none">GPA: 3.9 / 4.0Graduated in the top 5 % of graduating class | |

PROFESSIONAL EXPERIENCE

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|----------------|---|--------------------------|
| 2000 – Present | Carnegie Mellon University | Pittsburgh, Pennsylvania |
| | <i>Research Intern & Graduate Research Fellow</i> | |
| | <ul style="list-style-type: none">Refined sensing apparatus and constructed algorithms necessary to perform the world's first intraoperative tremor quantification experimentsResearched issues associated with micron precision metrology at the MRCAS and Field Robotics Centers of the Robotics Institute | |
| 1993 – 2000 | Euphoria Systems | Knoxville, Tennessee |
| | <i>President and Head of Development</i> | |
| | <ul style="list-style-type: none">Founded and operated companyComputer consulting and application programmingFounded after work with <i>The Edison Project</i> on the application of PCs in education | |

RESEARCH EXPERIENCE

- Pioneering intraoperative quantification of tremor associated with microsurgical procedures. This work is part of a larger enabling technology that will allow critical, hitherto impossible, surgical procedures
- The development of an integrated, user-friendly robotics system for rapid analysis, modeling, planning, and execution for use in decommissioning of hazardous, rad environments via robotic systems.
- The application of advanced NMR (Nuclear Magnetic Resonance) and computational techniques to improve MRI imaging to relate information about biochemistry and cellular function.
- The development and demonstration of a system to control zebra mussels via a network of electrically charged plates

AWARDS AND HONORS RECEIVED

- Selected as a Barry Goldwater Scholar and Fellow for 1998
- Tennessee Scholar and member of the UTK Honors Program
- Honored by Tau Beta Pi (Engineering Honor Society) and selected as a General Electric (No.1) Fellow
- Honored by Georgia Tech as a President's Scholar (the school's most prestigious incoming graduate student award/fellowship program)
- Co-authored multiple papers on robot modeling and analysis
- Selected as a Alternate National Defense Science & Engineering Graduate Fellow
- Former charter member of UTK's TAB (Technology Assessment Board)
- Former student representative to Dean's Computing & Internet Panel
- Invited to and a member of Pi Mu Epsilon (Math Honor Society)
- Recipient of the Engineering Science Award
- Invited to join the Golden Key Honor Society
- Engineer in Training (i.e., passed the nationwide Fundamentals of Engineering Exam)
- Nationally recognized by the AACE for scholarship and service

PROFESSIONAL MEMBERSHIPS

- AACE - American Association of Cost Engineers
- ACM - Association for Computer Machinery
- ASME - American Society of Mechanical Engineers
- BMES - Biomedical Engineering Society
- ETCS - East Tennessee Computer Society
- IEEE - Institute of Electrical and Electronics Engineers

VOLUNTEER EXPERIENCE

- Guest Columnist for the APCUG (a nationwide consortium of PC User Groups)
- Technology Columnist for the *Daily Beacon*
- New User Leader with the ETCS (East Tennessee Computer Society)
- Volunteer Researcher/Intern at UTMCK's Pathology Laboratory
- Volunteer New User Instructor with KORRNet (Knoxville Oak Ridge Regional Network)
- Volunteer with various PBS (Public Broadcasting Service) activities
- Beta (pre-release) software tester for Berkeley Systems, Corel, Lotus (IBM), Microsoft, and others

COMPUTER / TECHNOLOGY EXPERIENCE

- Experienced with various operating systems (DOS, Windows {3.11, 95, and NT}, MacOS, Unix {terminal and X-Windows}).
- Technical/Development packages (BASIC, C++, Maple V, Matlab, etc.)
- Internet navigation and authoring (Netscape, HTML, JavaScript, etc.)
- Office software packages (WordPerfect, Microsoft Office, etc.)
- Graphical packages (Mechanical Desktop, SolidWorks, PhotoShop, etc.)