

PERSONAL DATA

Kevin Lister
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EDUCATION

- **Doctor of Philosophy (Ph.D.) in Mechanical Engineering**
University of Maryland, College Park, MD
January 2007 – May 2001 (anticipated)
Research Topic: Surgical Simulation – Needle Insertion
Research Advisor: Dr. Jaydev Desai
- **Bachelor of Science (B.S.) in Mechanical Engineering**
University of Maryland, College Park, MD
September 2002 – December 2006
GPA: 3.5/4.0

WORK EXPERIENCE

- **Arnold Engineering Development Center**
Mechanical Engineering Intern
September 2006 – December 2006
 - Developed new approach for model placement inside hypervelocity wind tunnel utilizing a portable CMM machine to reduce set up time.
- **Science Applications International Corporation (SAIC)**
Summer Internship Student
May 2006 – September 2006
 - Fabricated new components for large scale electronic pulse firing networks including the design and manufacture of solid state switch housing.
 - Trained personnel in 3D CAD design and proper machine shop techniques.
- **SAE Mini Baja Design Team**
Student Designer
September 2005 – June 2006
 - Designed and fabricated the steering system and subsystems for the 2005-06 University of Maryland Mini Baja vehicle.

- **Kop-Flex Inc.**
Co-op Student
 December 2004 – May 2006
 - Constructed 2D and 3D CAD drawings for the manufacture of couplings and related components.
 - Studied and tested composite material with the potential use in future high performance coupling applications.
 - Worked on projects evaluating the cost/benefit relationship of upgrading drawing and organization systems.
 - Contacted customers to provide proper coupling selection and answered questions pertaining to engineering, design and application.

- **Laboratory of Protein Dynamics and Signaling, National Cancer Institute**
Student Researcher
 September 2000 – September 2004
 - Collaborated with industry colleagues to set up an array system that tests binding of proteins to illustrate specific low level interactions needed in health cells.
 - Instructed new technicians in experimental techniques.
 - Investigated a model protein in the ubiquitin system by using state of the art molecular biology research techniques.

TEACHING EXPERIENCE

- **Teaching Assistant**
 Department of Mechanical Engineering
 University of Maryland, College Park, MD
 - Spring, 2007: ENES 222 Dynamics (for Professor Henry Haslach)

ARCHIVAL PUBLICATIONS

- R. Kokes, K. Lister, R. Gullapalli, B. Zhang, H. Richard, J. P. Desai, “Design and Development of a MRI Compatible Robot: Application to Radiofrequency Ablation of Breast Tumors under Continuous Imaging,” Submitted to *Medical Image Analysis*, 2007.

CONFERENCES

- Zhan Gao, Kevin Lister, Jaydev P. Desai, “Constitutive Modeling of Liver Tissue: Experiment and Theory, *Second biennial IEEE/RAS-EMBS International Conference on Biomedical Robotics and Biomechanics – BioRob*, October 2008.
- Kevin Lister, Rebecca Kokes, Bao Zhang, Rao Gullapalli, Jaydev P. Desai, “MRI Compatible Robotic System with Haptic Feedback for RF Ablation/Biopsy under Continuous MRI”, *The International Society for Magnetic Resonance in Medicine (ISMRM)*, Toronto, Canada, 2008.

- Rebecca Kokes, Kevin Lister, Rao Gullapalli, Bao Zhang, Howard Richard, Jaydev P. Desai, “Towards a Needle Driver Robot for Radiofrequency Ablation of Tumors under Continuous MRI”, *IEEE International Conference on Robotics and Automation*, Pasadena, CA, USA, 2008.
- Kevin Lister and Jaydev P. Desai, “Soft-Tissue Characterization during Monopolar Electrocautery Procedures”, *The 16th Annual Medicine Meets Virtual Reality Conference*, Long Beach, CA, 2007.

ORIGINAL DESIGNS, INVENTIONS AND/OR PATENTS

- *Teleoperated Robotic System for Image Guided Radiofrequency ablation and Biopsy*
Inventors – Jaydev P. Desai, Rao Gullapalli, Rebecca Kokes, Kevin Lister,
Howard M. Richard III, Bao Zhang
Provisional Patent Files - 2007

RELEVANT COURSE WORK

- Analytical Dynamics
- Finite Element Analysis (FEA)
- Computer Aided Design
- Advanced Mechanisms and Robot Manipulators
- Kinematics and Dynamics of Robotic Manipulators
- Continuum Mechanics
- Computer Graphics
- Image Processing

COMPUTER SKILLS

- Software: Matlab, Pro Engineer, Solid Works, Solid Edge, Abaqus, Ansys, AutoCAD, DSpace, Labview, Engineering Equation Solver, Visual Analysis, C, C++, OpenGL.

HONORS AND MEMBERSHIPS

- 2008 National Science Foundation Graduate Research Fellowship Honorable Mention.
- American Society of Mechanical Engineers, Society of Automotive Engineers, Institute of Electrical and Electronics Engineers.
- National Society of Collegiate Scholars, Phi Sigma Theta, Phi Eta Sigma, Alpha Lambda Delta.