

Mitul Shah

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Objective

To pursue a career in computational biomechanics, develop better computational and testing methods.

Qualification

- Rensselaer Polytechnic Institute, PhD Biomedical Engineering. Present.
 - Drexel, Master's in Biomedical Engineering, Present. GPA – 3.6
 - Mumbai University, Bachelors, Biomedical Engineering, June – 2008. GPA – 3.8
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Projects

- Study the effects of static loading on degeneration of nutritional pathways in the intervertebral disc (Present)
 - Segmentation of MRI data to develop accurate 3D computational knee models (2010-12)
 - Simulating the impact of concentrated force on the spinal cord using finite element methods. (2010).
 - Programming an optical microscope to perform auto-focusing (2009-10)
 - Simulation of impact of a concentrated force on the head protected with a helmet in 2-D, using Finite Element software, Tochnog and GiD (March 2009)
 - Simulation of plastic deformation of an stent in 3-D, using Finite Element Software, Abaqus (December 2009)
 - A prototype built was a therapeutic device for stroke victims (2007)
 - Mechanical Simulation of the human arm using motors, pulleys and strings (2007)
 - Infra-red remote controlled car. (Pacemaker 2006)
 - Half duplex communication system (Pacemakers 2006)
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Skill Set

- Finite Element Software (Comsol, ABAQUS, Tochnog, GiD)
- Medical Image Processing - Analyze
- CAD software (Geomagic, Solidworks)
- MATLAB
- Visual basic, C and C++
- Assembly language programming for a micro-controller
- Circuit Designing

Software Development

- Programmed a micro-scope to perform optimized auto-focusing – Optimization of the existing code, increasing the speed 3 folds while maintaining the same accuracy, GUI also included.
 - Programmed a micro-controller system to drive a stepper motor
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Posters and Presentations.

- Patient Specific 3D Knee Model (Northeastern Bioengineering Conference, RPI 2011)
 - Optimization of a novel high resolution, wide field microscopy system for histology slide and fresh tissue imaging using polarized light (Drexel Research Day, 2009)
 - Biomaterials for Stents
 - Intravascular Ultrasound
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Work Experience

- Teachers Assistant, Rensselaer Polytechnic Institute (2010-12)
- Research Assistant, Drexel University. (2009 - 2010)
- Physics TA, Drexel University. (2009 – 2010)
- Meditronics Asia Pvt Ltd, Thane, Maharashtra, June-December 07 **Service Engineer**

Extra Curricular Activites

- President, Indian Graduate Student Association - GradISA, RPI 2011
 - President of Annual Cultural Festival NASHA' 10 – Drexel.
 - Photographer for the school paper, The Triangle – Drexel.
 - Secretary, Indian Graduate Student Association – Pragathi, Drexel University 2009
 - Head of Logistics, Pacemakers Committee, Biomedical Engineering Department, D J Sanghvi College of Engineering 2007
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