Michiko Feehan

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EDUCATION

University of Rochester, Rochester, NY   *August 2014 - May 2018*

- · Candidate for Bachelor of Science in Biomedical Engineering
- · Biomedical Engineering concentration: Biomechanics
- · Cluster in Psychology

SKILLS

Programming	Java, Python, HTML/CSS
Software	MATLAB, Mimics Innovation Suite, Autodesk Meshmixer, Microsoft Office, Eclipse, Abaqus
Languages	English (fluent), Japanese (fluent), French (elementary proficiency)
Coursework	Intro. to Object-Oriented Programming, Data Structures & Algorithms, Differential Equations, Multivariable Calculus, Linear Algebra, Discrete Math, Biosystems and Circuits, MATLAB for Biomechanics, Biostatistics, Fluid Dynamics, Thermodynamics, Physics I-II, Biomaterials, Solid Mechanics, Biosolid Mechanics, Neurobiology, Sensory and Motor Neuroscience

WORK EXPERIENCE

Simulation and Innovation Lab (Ghazi Lab), University of Rochester Medical Center
Technical Associate   *February 2018 - Present*

- · Created replica of patient specific models for full procedural simulation of surgery using medical image processing and 3D printing.
- · My project focused on creating a hysterectomy model and kidney model for percutaneous nephrolithotomy (PCNL).

Center for Translational Neuromedicine (Goldman Lab), Strong Hospital   *May 2017 - Present*
Lab Technician

- · Performed genotyping, specifically running PCR gels and performing DNA purification.
- · Freezing of mice brains and used cryostat to slice mice brain for imaging.
- · Worked with vivarium staff to feed and maintain birds being used for research.

University of Rochester Department of Physics (Quillen Lab)   *May 2017 - September 2017*
Physics REU

- · Designed experiments to understand the robotic physics of non-biological locomotion strategies of miniature crawlers in complex media
- · Built miniature locomotive robot and ran hybrid (granular/hydro/soft matter/fluid) simulations. Designed and manufactured and studied low- cost miniature robotic mechanisms. Completed a speaking presentation in front of Physics department faculty and peers.

University of Rochester Department of Biology (Larracuente Lab)   *September 2015 - January 2017*
Undergraduate Researcher

- · Researched the impact of satellite DNA on genome evolution with Professor Larracuente.

PROJECTS

Design Project: Vibrational Touch Sensor for 3D Printed Prosthetic Hand   *April 2017 - May 2017*
Group Members: Michiko Feehan, Kelly Tighe
Aimed to simulate sense of touch for a prosthetic hand model, using a vibrational motor, capacitor sensor and the application of pressure. Over the course of two months, a circuit was designed, tested, and modified in OrCAD, implemented on a breadboard, and then soldered to produce a final product. Other goals for the project included making the model cost-effective and safe.

Robotic Rehabilitation Design using MATLAB GUI   *November 2015*
Group Members: Michiko Feehan, Emily Grey, HyeMi Kim
This project designed a game using MATLAB GUI providing an interactive game for the patient to improve functional and motor recovery of the arm by pressing a target that moves locations on the screen after each click with variations in difficulty and timing.

ACTIVITIES

Member, **University of Rochester Baja Society of Automotive Engineers (SAE) Team**   August 2014-January 2015
Used 3-D CAD design software Solidworks to design pieces for the car. Teamwork in maintaining, repairing, and welding parts for the car. Trained in safety procedures for safe hands-on use of machinery.