Jared Rifkin

rifkin@virginia.edu
(631) 626-3153
Center for Applied Biomechanics
Charlottesville, VA

Objective

A graduate bioengineering student simultaneously pursuing a BSE and MSE with knowledge in a variety of subjects from finite element modeling to computer science seeking employment and further experience related to biomechanics.

Education

University of Pennsylvania
Bioengineering
2016-2019 BSE, MSE
GPA: 3.89, 3.91 Dean's List 2016-2019

University of Virginia
Mechanical and Aerospace Engineering
2020-present PhD
Center for Applied Biomechanics

Skills

Biomechanical Modeling
Finite element ◆ Multibody ◆ LS-DYNA
Brain and neck deformation models

Programming
MATLAB ◆ Python ◆ C# ◆ HTML
Raspberry Pi ◆ Arduino ◆ Unity

3D Printing and Design
SolidWorks ◆ Creo Parametric

Human-Cockroach Prosthetic Interface
Processed human EMG inputs to control cockroach leg

Statistical Analysis
Causality ◆ Significance testing

Mechanical Testing
Material characterization
Tensile and compressive testing

Experience

Panzer Lab | Graduate Research Assistant | August 2020 – Present
University of Virginia Center for Applied Biomechanics
Research focuses: traumatic brain injury | cerebrovasculature | finite element modeling
Conducts material characterization tests for development of protective headwear ◆ Studies the material properties of brain vasculature ◆ Performs finite element analysis

Meaney Lab | Researcher | March 2017 – July 2020
University of Pennsylvania Bioengineering
Research focuses: traumatic brain injury | multibody brain model development | brain networks
Performed multidimensional optimization of biomechanical parametric space ◆ Laboratory animal care ◆ Website design ◆ Studied neural dynamics models to understand how brain architectures can be grouped

BE Senior Design | Teaching Assistant | August 2019 – May 2020
University of Pennsylvania
Mentored students working on capstone project ◆ Acted as conduit between professors and students ◆ Graded students and provided feedback for improvement ◆ Aided professors in future course development

Publications

David Gabrieli, Nick Vigilante, Rich Scheinfield, **Jared Rifkin**, Samantha Schumm, Taotao Wu, Lee F. Gabler, Matthew B. Panzer, David F. Meaney. **A multibody model for predicting spatial distribution of human brain deformation following impact loading.** (2020). JBME

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Processed and analyzed EMG signals to determine muscle activation levels ◆ Performed finite element simulations using LS-DYNA and LS-PrePost ◆ Designed rat housing for injury delivery

Pohlschroeder Lab | Lab Maintenance | September 2016 - February 2017
University of Pennsylvania Biology
Weekly lab upkeep ◆ Autoclaved and sterilized glassware ◆ Stocked shelves ◆ Webmaster

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