JARED RIFKIN

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University of Virginia, Center for Applied Biomechanics
4040 Lewis and Clark Drive, Charlottesville, VA, 22911

EDUCATION

2020 – present — *Ph.D., Department of Mechanical and Aerospace Engineering (GPA: 4.0)*
University of Virginia, Center for Applied Biomechanics
Expected Graduation Date: 2024

2016 – 2019 — *B.S.E, M.S.E, Department of Bioengineering (GPA: 3.89, 3.91)*
University of Pennsylvania

2015 – 2016 ***(transferred)*** — *B.E., Department of Biomedical Engineering (GPA: 4.000)*
Stony Brook University

HONORS & AWARDS

2022 — National Neurotrauma Society: Trainee Travel Award

2022 — University of Virginia: Engineering-in-Medicine Seed Grant

2021 — University of Virginia: UVA Engineering is Beautiful Dean's Research Art Contest, 1st Place, Graduate Student Category

2021 — National Science Foundation: Graduate Research Fellowship Program Honorable Mention

2019 — University of Pennsylvania: Graduated *summa cum laude*

2016 – 2019 — University of Pennsylvania: Dean's List

2015 – 2016 — Stony Brook University: Dean's List

2015 — Stony Brook University: Presidential Scholarship

2015 — Stony Brook University: Honor's College

RESEARCH ACTIVITIES

2022 - present — *Differential brain network response to simulated lesion*
Lesioning brain networks according to strain distributions from finite element simulated impacts.

2021 - present — *Neuro-endovascular surgery simulator*
Developing computational finite element model for rapid simulation of catheters in neuro-endovascular surgery.

2021 - present — *Pediatric skull surgical screw characterization*
Determining the strength of surgical screw integration in pediatric skull samples.

2019 - 2022 — *Brain network architecture typing*
Identifying distinct patterns of structural connectivity networks and simulated neural dynamics within a population of brains.

2020 - 2021 — *Risk function development of skin response to blunt impact*
Characterizing skins response to blunt impact over a parametric sweep of impactor shape, size, and speed.

WORK EXPERIENCE

2020 – present — *University of Virginia, Center for Applied Biomechanics*
Position: Graduate Research Assistant
Mentor: Matthew B. Panzer, Ph.D.

2019 – 2020 — *University of Pennsylvania, Meaney Lab*
Position: Research Specialist

2017 – 2019 — *University of Pennsylvania, Department of Bioengineering*
Position: Undergraduate Research Specialist
Mentor: David F. Meaney, Ph.D.

TEACHING & MENTORSHIP

2021 – present *University of Virginia, Mechanical and Aerospace Engineering Department*
Position: Graduate Teaching Assistant
Class: Finite Element Analysis, Professor: Matthew Panzer, Ph.D.
Class: Constitutive Modeling of Biosystems, Professor: Jason Kerrigan, Ph.D.

2021 *University of Virginia, School of Engineering*
Position: Engineering Graduate School Mentor

2019 – 2020 *University of Pennsylvania, Department of Bioengineering*
Position: Teaching Assistant
Class: Bioengineering Senior Design, Instructor: Sevile Mannickarottu

SERVICE & LEADERSHIP

2022 – present *University of Virginia, Mechanical and Aerospace Engineering Department*
Position: Graduate Student Board Social Chair
Position: Graduate Student Board Website Designer, Webmaster

2021 – present *University of Virginia, Center for Applied Biomechanics*
Position: Lab Social Media Communications Manager

PUBLICATIONS & PRESENTATIONS

Journal Publications

Taotao Wu, **Jared A. Rifkin**, Adam C. Rayfield, Erin D. Anderson, Matthew B. Panzer, David F. Meaney. **Concussion Prone Scenarios: A Multi-Dimensional Exploration in Impact Directions, Brain Morphology, and Network Architectures Using Computational Models.** (2022). ABME

Jared A. Rifkin, Taotao Wu, Adam Rayfield, Erin D. Anderson, Matthew B. Panzer, David F. Meaney. **Brain architecture-based vulnerability to traumatic injury.** (2022). Frontiers in Bioengineering

Taotao Wu, **Jared A. Rifkin**, Adam Rayfield, Matthew B. Panzer, David F. Meaney. **An Interdisciplinary Computational Model for Predicting Traumatic Brain Injury: Linking Biomechanics and Functional Neural Networks.** (2022). NeuroImage

Daniel F. Shedd, Parker R. Berthelson, **Jared A. Rifkin**, Justin McMahon, J. Sebastian Giudice, Jason L. Forman, Matthew B. Panzer. **The Risk of Skin Injury Caused by High-Rate Blunt Impacts to the Human Thorax.** (2022). Hum Factors Mech Eng Def Saf

Parker R. Berthelson, Daniel F. Shedd, **Jared A. Rifkin**, Justin McMahon, J. Sebastian Giudice, Jason L. Forman, Matthew B. Panzer. **Evaluation of an In Situ Ovine Model as a Surrogate for Human Skin Injury Caused by High-Rate Blunt Impact.** (2022). Hum Factors Mech Eng Def Saf

David Gabrieli, Nick Vigilante, Rich Scheinfield, **Jared A. 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

Conference Publications

Jared A. Rifkin, Taotao Wu, Adam Rayfield, David F. Meaney, Matthew B. Panzer. **Brain architecture types experience differential response to structural lesions from simulated impacts.** (2022). National Neurotrauma Society Symposium

Other Publications

Network Neuroscientist Jr.: Brain architecture-based vulnerability to traumatic injury. Written and illustrated by **Jared A. Rifkin.** Self-published (2022).