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

JARED RIFKIN

EDUCATION

2020 - present *Ph.D., Department of Mechanical and Aerospace Engineering*
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

HONORS & AWARDS

2022 NNS 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

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 *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 - present *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.

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

PUBLICATIONS & PRESENTATIONS

Journal Publications

Jared A. Rifkin, Taotao Wu, Adam Rayfield, Erin D. Anderson, Matthew B. Panzer, David F. Meaney. Brain architecture-based vulnerability to traumatic injury. (under review). 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, pre-published). 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