

JARED RIFKIN

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

EDUCATION	2020 – present	<i>Ph.D., Department of Mechanical and Aerospace Engineering (GPA: 4.0)</i> University of Virginia, Center for Applied Biomechanics Expected Graduation Date: 2024
	2016 – 2019	<i>B.S.E, M.S.E, Department of Bioengineering (GPA: 3.89, 3.91)</i> 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 <i>summa cum laude</i>
	2016 – 2019	University of Pennsylvania: Dean's List
RESEARCH ACTIVITIES	2022 – present	<i>Differential brain network response to simulated lesion</i> Lesioning brain networks according to strain distributions from finite element simulated impacts.
	2021 – present	<i>Endovascular surgery simulator</i> Developing computational finite element model for rapid simulation of catheters in neuro-endovascular surgery.
	2021 – present	<i>Pediatric skull surgical screw characterization</i> Determining the strength of surgical screw integration in pediatric skull samples.
	2019 – 2022	<i>Brain network architecture typing</i> Identifying distinct patterns of structural connectivity networks and simulated neural dynamics within a population of brains.
	2020 – 2021	<i>Risk function development of skin response to blunt impact</i> Characterizing skins response to blunt impact over a parametric sweep of impactor shape, size, and speed.
WORK EXPERIENCE	2020 – present	<i>University of Virginia, Center for Applied Biomechanics</i> Position: Graduate Research Assistant Mentor: Matthew B. Panzer, Ph.D.
	2019 – 2020	<i>University of Pennsylvania, Meaney Lab</i> Position: Research Specialist
	2017 – 2019	<i>University of Pennsylvania, Department of Bioengineering</i> Position: Undergraduate Research Specialist Mentor: David F. Meaney, Ph.D.
TEACHING & MENTORSHIP	2021 – present	<i>University of Virginia, Mechanical and Aerospace Engineering Department</i> Position: Graduate Teaching Assistant Class: Finite Element Analysis, Professor: Matthew Panzer, Ph.D. Class: Constitutive Modeling of Biosystems, Professor: Jason Kerrigan, Ph.D.
	2021	<i>University of Virginia, School of Engineering</i> Position: Engineering Graduate School Mentor
SERVICE & LEADERSHIP	2022 – present	<i>University of Virginia, Mechanical and Aerospace Engineering Department</i> Position: Graduate Student Board Social Chair

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 Scheinfeld, **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