

SEMINAR SERIES

Supported by The Department of Biomechanics and
The Center for Research in Human Movement Variability (MOVCENTR)



Predictive Computational Modeling Tools for Cardiovascular Biomechanics and Disease Diagnostics

Featuring Dr. Lucas Timmins
University of Utah



Friday, Feb. 11 | 12:00 - 1:15 pm | H&K 112

PRESENTATION ABSTRACT

Advances in computational technology and imaging modalities have enabled detailed in-silico investigations of cardiovascular mechanics and biomedical devices. However, despite these advances, the use of computational tools in clinical practice remains scarce. Predictive computational models, that can integrate imaging data and be readily translated to routine clinical workflows, can truly revolutionize biomedical research and innovation via high-resolution, non-invasive, in-silico analyses of complex biomechanical processes. In this talk, I will present our research on the development of robust, computationally efficient, medical image-based modeling tools and their combination with routinely acquired clinical data for risk-stratification in aortic dissection patients.

ABOUT DR. NAMA

Nitesh Nama is an Assistant Professor in the Department of Mechanical & Materials Engineering at University of Nebraska-Lincoln. Prior to joining UNL, he was an American Heart Association postdoctoral fellow in the Department of Surgery at University of Michigan and earned a Ph.D. in Engineering Science and Mechanics, an M. A. in Mathematics, and a Ph.D. Minor in Computational Sciences, all from Pennsylvania State University. His research lies at the intersection of continuum mechanics, applied mathematics, medical imaging, and biomedical technologies with the broad goal to develop clinically-relevant, predictive computational capabilities in biomedical and cardiovascular systems. His research has been highlighted by several scientific news outlets and has featured as cover articles on prominent journals. His research has also been recognized by the Greenfield Research Award (2020) and the Robert A. Sebrosky Fellowship (2016).

more info at cobre.unomaha.edu

*This seminar was supported by the National Institutes of General Medical Sciences of the National Institutes of Health under Award Number P20GM109090
Center for Research in Human Movement Variability. | The University of Nebraska at Omaha shall not discriminate based upon age, race, ethnicity, color,
national origin, gender identity, sex, pregnancy, disability, sexual orientation, genetic information, veteran's status, marital status, religion, or political affiliation.

UNIVERSITY OF
Nebraska
Omaha

