Stanford



Patrick Jurney

Visiting Scholar, Chemical and Systems Biology Operations

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Patrick Jurney is the Kordestani Endowed Chair and an Associate Professor of Biomedical Engineering at San Jose State University. A Fellow of the American Heart Association (FAHA), his research focuses on the intersection of fluid dynamics and cellular mechanics, with a particular emphasis on cardiovascular health and disease..

Dr. Jurney completed his Ph.D. in Thermal Fluid Systems at the University of Texas at Austin, where he designed and built microphysiological systems to investigate the role of nanoparticle properties in targeted drug delivery. Following his doctoral studies, he was a T-32 Fellow in Translational Engineering at Oregon Health & Science University (OHSU). During his fellowship, he worked with cardiovascular biomaterials and characterized how biomaterial properties influence endothelialization and thrombogenesis.

Currently, his research laboratory at SJSU investigates the role of fluid shear stress mechanotransduction on endothelial metabolic structure and function. Dr. Jurney is a pioneer in using holotomographic microscopy to study sub-cellular organelles in cardiovascular disease. He is also collaborating in the laboratory of Dr. Daria Mochly-Rosen to characterize the role of mitochondrial structure and dynamics in metabolic function in response to ischemia/reperfusion and other models of cardiovascular health and disease.

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