Coarctation of the aorta (CoA) is a congenital cardiovascular disease characterized by a severe stenosis of the main artery delivering blood from the heart to the body. CoA affects 5,000 to 8,000 births annually in the U.S. Treatments exist, but treated CoA patients often have a reduced life expectancy from morbidity, most notably hypertension. This talk will highlight studies we are conducting to characterize vascular changes that occur with CoA using novel experimental approaches and a molecular mechanism involving natriuretic peptide receptor-C (NPR-C). The presentation will also discuss translation of our results clinically to propose new criteria for surgeries and long-term treatment of CoA patients.

ABOUT the SPEAKER

John LaDisa was a postdoc at Stanford University for 2.5 years after earning his PhD in Biomedical Engineering. He previously directed the Visualization Laboratory and Laboratory for Translational, Experimental and Computational Cardiovascular Research at Marquette University. He now serves as Director of the Computational Engineering and Visualization Program for the Section of Cardiology in the Department of Pediatrics at the Medical College of Wisconsin. Dr. LaDisa’s lab is supported by grants to study cardiovascular disease, engineer treatments, and uniquely visualize results, while training the next generation of scientists. Dr. LaDisa’s accolades include: Milwaukee Business Journal 40 Under 40 (2015), STEM Forward Young Engineer of the Year (2012), Sigma Xi Rising Star (2010), and Milwaukee Magazine’s Next Generation of Leaders (2009). He has published over 60 peer-reviewed articles and raised ~$4M in extramural funding.

Monday, November 15 at noon
1003 Engineering Centers (Tong Auditorium)