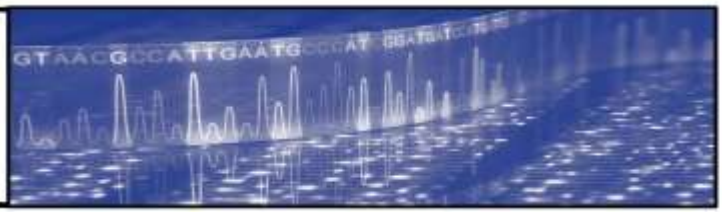
Yale Center for
Biomedical Data Science



Using Cloud Computing to make more kidneys available for transplant: A collaboration between the Tietjen Lab, Yale IT, and Microsoft
Speakers: Gregory Tietjen, Jenna DiRito, and John Eberhart

Wednesday, September 22 at 1:00-2:00 PM
Zoom Link: https://zoom.us/j/93303675373

The Center for Biomedical Data Science (CBDS) will be hosting an informational session on a collaboration between, The Tietjen Lab, Yale IT's Research Support Group, and Microsoft. This collaboration—which also included a Microsoft-solutions-partner named Terawe—allowed the Tietjen lab to automate the analysis and visualization of cell death in human kidney samples. What used to take weeks to complete manually can now be done in less than an hour with a "hands off processing" automated workflow. This talk will walk through the problem of manually computing 60,000 images, the challenges and assumptions we all confronted when working to migrate this process to the cloud, and what were the outcomes for the lab's processes once we made the migration. Finally we will talk about how we want to reproduce and deploy these kinds of cloud automations for researchers across the university.

SPEAKER BIOS

Dr. Gregory Tietjen earned his PhD in Biophysics at the University of Chicago before completing Postdoctoral training in the Department of Biomedical Engineering at Yale University. At all levels of his training, Dr. Tietjen's emphasis has been on integrating multiple diverse disciplines to forge new scientific pathways. Dr. Tietjen now applies his expertise in molecular biophysics and biomedical engineering within a clinical context as an Assistant Professor in the Yale School of Medicine Department of Surgery, Section of Transplantation and Immunology. The focus of Dr. Tietjen's current research is on utilizing non-transplanted human organs to understand mechanisms of human pathophysiology in order to guide the rational design of new precision therapies.

Dr. Jenna DiRito is a postdoctoral associate in the Tietjen Lab at the Yale School of Medicine Department of Surgery, Section of Transplantation and Immunology. She was recently awarded her PhD in Surgery from the University of Cambridge after earning an intensive B.S. degree in Molecular, Cellular, & Developmental Biology from Yale University. Throughout her training, Dr. DiRito has been focused on developing new therapeutic strategies to make marginal kidneys viable for transplant. Currently, she is studying why kidneys deteriorate throughout prolonged periods of preservation. Dr. DiRito leads the Tietjen Lab's human organ research program and is actively working to translate the lab's findings to the clinic.

John Eberhart earned a Bachelor of Science degree in Architecture at the Ohio State University prior to receiving a Masters in Architecture at Yale University. After graduation he joined the faculty at the Yale School of Architecture where over a 17 year span he taught a number of courses around technology, digital fabrication, architectural representation, and design. During this time he was the Study Area Coordinator for the Design and Representation curriculum and was the Director of Digital Media, where he was responsible for all technologies as well as the IT staff at the school. In 2017 Mr. Eberhart moved to the Health Science Information Services IT group at Yale and is currently the Director of Research Support for the Yale School of Medicine where he works with YSM research faculty who need to engage with advanced technology. Mr. Eberhart is also responsible for developing the strategic vision around emerging technologies and compute environments at the School of Medicine.