

BIOENGINEERING

PRESENTS

“Advanced Cardiopulmonary Evaluations with CT”



THURSDAY, February 25th, 2021

12:00 – 1:00 PM

Zoom Link:

<https://ucla.zoom.us/j/97216069429>

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ABSTRACT:

Cardiovascular disease remains the leading cause of the death in the US and imaging plays a critical role in the early detection of disease, in the development of novel therapies, and in aiding our understanding of physiology. However, our ability to assess the heart and lungs can be limited by imaging constraints or physiologic confounders. In my talk, I will present our work on CT techniques to improve imaging efficiency, visualization, and quantification. First, I will outline how we can reduce imaging dose by improving patient positioning. Next, I will show how a shared convolutional neural network architecture can be used to delineate the blood chambers and provide anatomic visualization of the heart. Lastly, we present an automated approach to assess regions of pulmonary hypoperfusion.

BIOGRAPHY:

Francisco Contijoch is currently an Assistant Professor in the Bioengineering and Radiology Departments of the University of California San Diego. He received his Ph.D. from the University of Pennsylvania and was then a University of California President’s Post-Doctoral Fellow in the Cardiology Division at UC San Diego. His main research areas are cardiovascular imaging and cardiac physiology. Specifically, he has developed data acquisition, image reconstruction and analysis strategies for clinical imaging modalities to improve diagnosis, evaluation, and treatment of disease.