Café Scientifique Headingley

Monday 14 February 2022
Computational Imaging & Simulation Technologies in Biomedicine
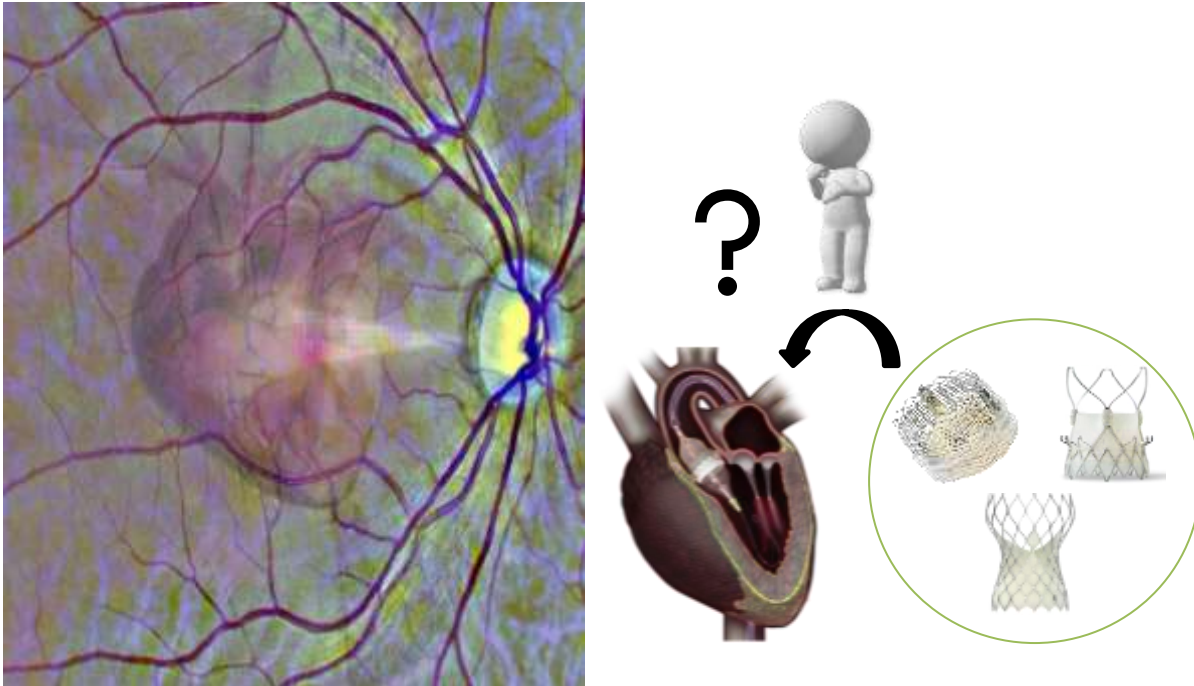
by Nishant Ravikumar

Figure on the left: Can your eyes provide a window to your heart? Figure on the right: If there is something wrong with your heart, how can we figure out what the best course of treatment is or indeed which is the best medical device on the market for you?

Outline: Recent advances in Machine Learning have opened the doors to significantly improving the quality of healthcare delivered to patients worldwide. Ranging from early identification of patients at risk of developing diseases in the future, to designing personalised treatment strategies, machine learning is steadily transforming the patient care pathway. In this talk I will describe current efforts underway at the University of Leeds to improve patient care using Machine Learning and computational modelling and simulation technologies. Specifically, we will look at recent work focused on - identifying patients at risk of cardiovascular disease in a cost-effective manner; and the new paradigm of *in-silico* trials and its potential to enhance the medical device development pathway.

Nishant Ravikumar is a lecturer in the School of Computing at the University of Leeds. His background is in Machine Learning for medical image analysis. He is part of the Centre for Computational Imaging and Simulation Technologies in Biomedicine (CISTIB). The focus of his work and that of his group is on developing innovative techniques using machine learning and biomechanistic modelling to enable timely diagnosis of diseases and inform medical device design and treatment delivery through so-called in-silico trials.

Venue: via Zoom
 Time: Waiting room opens7.30, talk begins promptly at 7:45pm