

Cardiology Science Lunch Berlin

A Regular Exchange of Insights and Ideas in Cardiovascular Medicine

Computational Cardiology: Measuring and Modelling the Heart

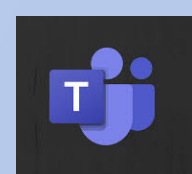
Prof. Steven Niederer

**Cardiac Electromechanics Research Group, Biomedical Engineering
Department, King's College London, London, United Kingdom**

The ability to measure the heart, its shape, its structure and its function across multiple spatial and temporal scales continues to grow. Computational biophysical models of the heart allow to quantitatively link and interpret these large disparate data sets within the context of known cardiac physiology and invariable physical constraints. Within these models, we can infer unobservable states, propose and test new hypotheses and predict how systems will respond to challenges increasing our ability to interrogate and understand biological systems.

In this presentation, Prof. Niederer will give an overview on how we can model the heart, quantitatively linking proteins to whole organ heart function. Prof. Niederer will describe our process of extracting information from clinical data sets to inform patient specific models rapidly and robustly. Finally, Prof. Niederer will describe how we are using these models to better understand patient physiology, pathology and response to treatment.

Wednesday, 25. May 2022, 12:00 – 13:00h



MS Teams

Discuss Live Online

live.sciencelunch.de



CLSB Lunch Boxes
for online participants

at Mittelallee 11, room 2.2439
(„Frühbesprechungsraum“)
available for pick-up
from 10:30h

Meet the presenter:

Bibliothek

Deutsches Herzzentrum Berlin

please pre-register by email info@sciencelunch.de

Organization/Scientific lead:
Prof. Dr. med. Frank R. Heinzel, PhD
Klinik für Innere Medizin m.S. Kardiologie
Charité – Universitätsmedizin Berlin
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