

# ENGINEERING STRATEGIES FOR STRUCTURAL HEART DISEASE

Arash Kheradvar, M.D. Ph.D.

**March, 22<sup>th</sup>**  
Sala ACR  
IRCCS ISMETT  
h: 15:30



## ABSTRACT

Structural heart disease refers to non-coronary cardiovascular disease and includes defects or disorders in the heart's structure that are present at birth or develop later. Kheradvar lab has been focused on devising engineering strategies to mitigate a variety of structural heart disease (e.g., valvular heart disease and heart failure) through imaging, fluid dynamics, and minimally invasive technologies. In this presentation, I will go over some aspects of the structural heart disease, clinical unmet needs and discuss the research and development related to the projects currently being conducted in my laboratories.

## BIOSKETCH

Dr. Kheradvar is a Professor of Biomedical Engineering, and Medicine at the University of California, Irvine. He is a cardiovascular scientist and engineer with established track record in cardiovascular engineering, heart valves, cardiac imaging, and biomechanics. He received his M.D. from Tehran University of Medical Sciences in 2000 and his Ph.D. in Bioengineering from Caltech in 2006. With over 17 years of experience in advanced cardiovascular technology, Dr. Kheradvar's career has been focused on science and innovation driven by unmet patient needs, and with a focus on mitigating cardiovascular diseases and developing novel high impact technologies mainly for structural heart diseases and to facilitate cardiovascular imaging. His lab has been continuously funded by grants from NSF, NIH, AHA and many private foundations.

Dr. Kheradvar has driven novel and evolving innovation particularly in the field of heart valves and cardiac imaging. He has published over 70 peer-reviewed journal articles, 2 books, and is the lead inventor of over 45 issued patents and many more pending. Dr. Kheradvar has created a pipeline of successful products from the concept stage and led them into winning technologies currently at pre-clinical stages.

Dr. Kheradvar is also a Fellow of the American Heart Association and the American Institute of Medical and Biological Engineering (AIMBE).

**ATTENDANCE IS FREE**, but admission will be allowed according to maximum sitting availability of the room. Please confirm your attendance by March, 21th, 2022, filling out the registration form on Ri.MED website <http://www.fondazioneimerimed.eu/Contents/PartNews.aspx?id=1591> and choosing the desired option of attendance (in person or online).