Cardiovascular Simulation and Device Development

A close collaboration between clinicians and biomedical engineering enables patient specific planning for complex cardiac procedures, and simulation to improve device design and delivery.

Competitive advantage

- Closely link engineering and clinical team
- Well developed cardiovascular simulation focused on improving outcome
- Experience with multimodal cardiac imaging techniques

Impact

- Improved and accelerated device design
- Increased certainty of procedural planning for early stage device implementation
- Improved device sizing for complex procedures
- Clinician education/skills simulation

Successful outcomes

- Cardiovascular 3D printing for early-stage device development and testing
- Patient specific simulation for first-in-man and early stage cardiovascular device deployment
- Complex surgical and cardiovascular intervention planning

Capabilities and facilities

- Cardiac segmentation and analysis
- Cardiovascular simulation: COMSOL/Matlab
- 3D Printing

More Information

Dr Socrates Dokos

Graduate School of Biomedical Engineering

T: +61 2 9385 9406
E: s.dokos@unsw.edu.au

Cardiovascular Simulation and Device Development

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61 (2) 9385 5008