



Project description

It is already shown that the accumulated turbulent stresses in blood flow generated due to the interaction of the leaflets of a mechanical heart can result in a large range of anomalies in blood properties and its circulation. This project will utilise CFD and advanced PIV experiments to develop a relationship between the geometry of leaflets and turbulent stresses in the blood flow.

Primary aim

The primary aim of this project is to understand the effect of the geometry of mechanical heart valves on the fluid mechanics of blood.

Secondary aim

The secondary aim of this project is to conduct a FIV study on heart valves.

Student attributes

Applicants with a strong background in fluid mechanics with a Bachelor (honours H2A or higher) or Masters Degree in Mechanical, Aerospace or BioMechanical Engineering are encouraged to apply. Familiarity with CFD and experimental fluid mechanics is an advantage.

For further enquiries

Associate Professor Maziar Arjomandi

School of Mechanical Engineering
The University of Adelaide
SA 5005 Australia

Email: maziar.arjomandi@adelaide.edu.au

Telephone: +61 8 8313 8128

Free-call: 1800 061 459

Online enquiries: adelaide.edu.au/student/enquiries

