

Supervisor: Prof. Cristina Amon dean.engineering@ecf.utoronto.ca

Title: Measurement of coefficient of friction between stent grafts and the aortic wall

Description:

Stent grafts are medical devices used to treat abdominal aortic aneurysms. Our lab is currently working on computational and experimental models of stent graft delivery and deployment to understand and predict how stent grafts interact with the vasculature. Friction plays an important role in this process. The goal of this project is to use an existing custom-made experimental apparatus to measure the coefficient of friction between the stent graft components and porcine aortic wall tissue.

Supervisor: Prof. Cristina Amon dean.engineering@ecf.utoronto.ca

Title: Development of a computational library of fenestrated stent graft models

Description:

Fenestrated stent grafts are custom-made medical devices used to treat abdominal aortic aneurysms. Our lab is currently working on computational methods to design and simulate the deployment of these devices. As part of this project, the goal of this study is to develop a semi-automated method for generating 3-D CAD models of these devices in SolidWorks that can be used in our computational models. This method will start from an existing CAD model of a representative device and allow for the customization of the device diameter and length as well as the placement of the fenestrations.