Post Doctoral Position in Computational Fluid Dynamics applied to Coronary Artery Disease

The research group of Prof. Piero Triverio at the University of Toronto is seeking candidates for a post-doctoral position in computational fluid dynamics applied to coronary artery disease. The position is for 1 year, with option to extend to a second year.

Project rationale: In Canada, about 1 person out of 7 dies because of coronary artery disease (CAD). Coronary arteries play a vital role, bringing oxygen-rich blood to the heart, but can become occluded. With graft surgery, new vessels are created to increase blood flow to the heart and prolong life. However, graft failure is quite common, and we still do not know exactly *why* grafts fail and, consequently, how to prevent their failure.

Goal: The project goal is to better understand why graft fails and improve the treatment of coronary artery disease, which is one of the leading causes of death worldwide. To gain new insights into graft failure, we will use computational fluid dynamics simulations guided by the latest advancements in CT and MRI imaging. The project is in collaboration with a cardiovascular radiologist and a cardiovascular surgeon at the Sunnybrook Health Sciences Centre in Toronto, and with the International School for Advanced Studies (Trieste, Italy). Technical support is provided by SciNET (Canada's largest supercomputing facility), Siemens Healthineers and Canon Medical Systems.

Required qualifications: Ph.D. in engineering, computational biology or computational mathematics; significant experience with computational fluid dynamics.

Desired qualifications: Experience in some of the following areas would be an asset: cardiovascular simulations, vascular biomechanics, high-performance computing, medical imaging.

Institution and environment: The University of Toronto consistently ranks first in Canada and among the top universities in the world. Conveniently located in downtown Toronto, the university enjoys the lively and vibrant atmosphere of the city. With nearly all of the world's culture groups represented, and more than 100 languages spoken, Toronto is one of the most diverse and multicultural cities in the world.

To apply: Email your CV, statement of interest and transcripts to `piero.triverio@utoronto.ca` Only short-listed candidates will be contacted.

Contact: Piero Triverio, Associate Professor and Canada Research Chair
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