

Understanding and improving complex flows found in biomedical processes and devices

Pr. Dominique THÉVENIN

*Lab. of Fluid Dynamics & Technical Flows
Univ. of Magdeburg "Otto von Guericke"*

Lieu : Amphithéâtre II - Bâtiment Eiffel - CentraleSupélec

Date : jeudi 16 janvier 2020 - 15h

After a generic description of our research activity, the focus will be set on biomedical applications involving complex blood and air flows. The tools needed to obtain sufficiently accurate numerical predictions and the associated validation procedure by comparison with experimental measurements will be described, opening finally the door for Data Assimilation and for the Genetic Optimization of biomedical devices. Following aspects will be discussed: aneurysms, medical implants, hemolysis, assistance devices for blood transport, thrombosis, support of therapy planning for cerebral interventions and for the ablation of cancerous tissues in the airway.

