Overview

The group of the Thermal Hydraulics & Multiphase Laboratory (THEMLAB) has a very diversified field of interest, from nuclear safety and nanotechnology to health sciences. We are interested in flow of particles in the aforementioned systems. and we study theses flows by either developing tools for the numerical simulation of multiphase flows or by using commercially available softwares. We are primarily engaged in software development for modelling of bioflows ranging from modelling of particle biodistribution and doses in target organs to modelling of blood flow in complex geometries.

Overall our research activities include:

- Exposure and Particle dosimetry (e.g. micro-nano-particles, inhalable medicines e.t.c.)
- Patient specific modelling
- Computational Fluid-particle Dynamics
- Behaviour of micro-nano-Particles in Biofluids
- Nanoparticle Toxicology
- Fluid-structure interaction in bioflows.

 Link toThermal Hydraulics & Multiphase flows Laboratory site