



RCMS • IGER Seminar



“Numerical fluid mechanics research in Icube laboratory”

Lecturer : Prof. Yannick HOARAU
(Strasbourg University)
Date : Fri. 29th Sep. 13:30 – 15:00
Place: Chemistry Gallery

The Mecaflu team (<http://icube-mecaflu.unistra.fr/en/index.php/Welcome>) of the Icube laboratory mainly focuses on modelling, experimentation and computational fluid dynamic in interaction with its environment. The activity of the MecaFlu team is related to transport problems in fluid flows and in porous media. I will briefly present an overview of the team research activities and then switch to my own research activity.

My research focuses on computational fluid dynamics in many fields of application. Based on the development of the NSMB solver, I have studied unsteady turbulence modelling for detached flow, shock-wave / boundary layers interaction, fluid-structure interaction, cavitation and icing modelling. I have also worked on the numerical simulation of polymerisation reactions in a highly efficient helicoidal reactor and finally biomechanical flows (flow and particle transport and deposition in airways and blood flows). I will briefly describe the numerical software that we have developed and talk more about icing modelling and biomechanical flows.

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