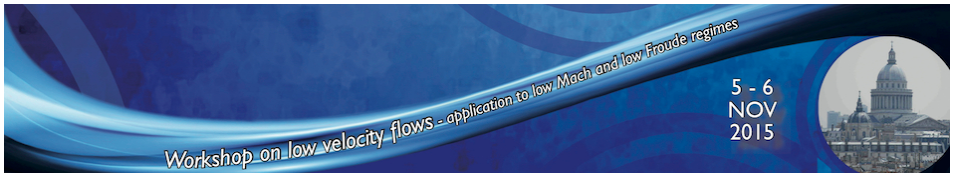

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High temperature thermalhydraulics modeling of a Molten salt: application to the molten salt nuclear reactor

jeudi 5 novembre 2015 11:45 (45 minutes)

An overview of the ongoing efforts in the area of the thermal-hydraulics modeling of a Molten Salt Fast Reactor (MSFR) is presented. The MFSR employs a flowing liquid fuel based on a high temperature lithium fluoride salt. A molten fuel salt flow can be considered in many situations as an incompressible flow (low Match). However, several phenomena intrinsic to a molten fuel salt flow posse unique challenges (radiative heat transfer, volumetric heat source, phase change, strong neutronics feedbacks, etc.). To study some of these phenomena and to improve current CFD models an experimental facility called SWATH (Salt at WAll: Thermal ExcHanges) will be built as part of the European project SAMOFAR (2015-2019).

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