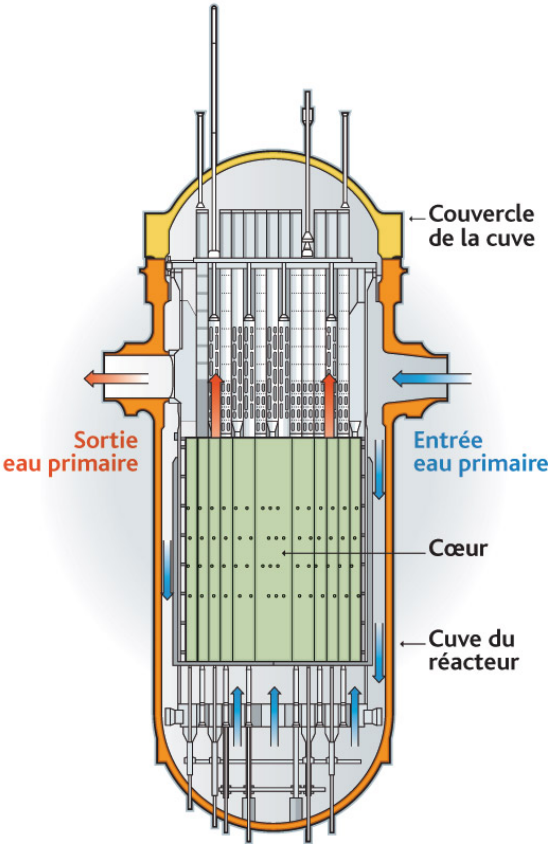
SEMINAIRE DU LABORATOIRE LIFSE

Laboratoire Ingénierie des Fluides Systèmes Energétiques

Amphithéâtre BEZIER
14h-16h

JANVIER **16**



Teddy Pichard
Maître de conférences à l'X
Laboratoire CMAP

« Mathematical and numerical analysis of a simplified model for boiling flows »

We study an homogenized model describing boiling flows. Such flows are described by an hyperbolic system of equations of Euler type with a source term that is defined as a discontinuous function of the unknown. Such source models the heat injected in the system and the creation of vapor apearing when the enthalpy reaches a threshold.

The discontinuity of the source leads to difficulties both at theoretical and numerical levels. At the theoretical level, "classic" theory is not sufficient when considering discontinuous function in the equation. At the numerical level, naive numerical schemes commonly create artifacts and fails to capture steady states. We investigate these issues on simplified models.

Arts et Métiers Sciences et Technologies

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