Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

ALUMNI

Dr. Hélène Mathis
Dr. Hélène Mathis is assistant professor at University of Nantes and is a member of the Laboratoire de Mathématiques Jean Leray. She received Ph.D. at the University of Strasbourg in 2010. Her advisors were Philippe Helluy (University of Strasbourg) and Jean-Marc Hérard (EDF, Chatou).

Research Areas:

- Thermodynamics of liquid-vapor phase transition
- Two-phase flows
- Hyperbolic systems of conservation laws
- Finite volume schemes

Which changes affect your scientific area in particular and how do you deal with this challenge in terms of operationalizing changes and predict future developments?
My research concerns the simulation of liquid-vapor flows that arise in pressurized water reactor (PWR). The aim is to build robust models which depict accurately the phase transition phenomenon in the flow.

How accurate do your models and ideas reveal current changes and how much do they help us predicting upcoming future events?
Providing accurate phase transition models is a challenge since they must be able to describe for instance the lost of coolant accident in cooling circuit of PWR.