



Professor Nicolas Noiray

«Not only is research important for mankind, it's also an entertaining adventure. And when it results in unexpected findings, it's really exciting.»

Laboratory of Combustion and Acoustics for Power Systems

Institute of Energy Technology

We address problems at the interface between fluid mechanics, combustion, acoustics, and nonlinear dynamics and control. Our theoretical, experimental and numerical work is relevant for the development of sustainable technologies for power generation and aeronautic propulsion.

Focus

- Combustion physics for sustainable combustion technology
- Control of thermo- and aero-acoustic instabilities
- Noise pollution reduction
- Prediction of hydrodynamic instabilities and development of flow sensors and actuators

Tools and methods

Optical and laser diagnostics for fluid mechanics, combustion and plasma research; experimental methods for acoustics; computational fluid dynamics with large eddy simulations; acoustics and vibrations using Helmholtz solvers; numerical and theoretical methods for nonlinear stochastic dynamics

Further details online:
www.caps.ethz.ch

