

## Mechanik-Seminar

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Referent: **Olivier Doaré**  
ENSTA-Paristech, Unité de Mécanique, Palaiseau Cedex, France

Datum: Donnerstag, 07.02.2013  
Uhrzeit: 15:45-17:15 Uhr  
Ort: Seminarraum I, Raum 104, Geb. 10.23

Thema: **Axial flow instabilities in fluid-structure interactions, local/global instabilities, damping effects, confinement effects and energy harvesting**

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**Abstract:** Slender structures such as pipes, flags or compliant panels may be subjected to flutter or buckling instabilities when they interact with an axial flow. Two approaches are classically considered to study these systems. When the stability properties of waves propagating in an infinite medium is addressed, the approach is referred to as local. When the stability analysis of modes of a finite system is performed, the approach is said to be global. In this talk, stabilizing/destabilizing effects of damping and the influence of flow confinement will be addressed using the local and global points of view. Recent work on energy harvesting of fluttering piezoelectric plates will also be reported. Analyses of the linear and nonlinear harvesting efficiencies will be presented using again these local and global approaches.

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Alle Interessenten sind herzlich eingeladen.

Prof. Dr.-Ing. Wolfgang Seemann