Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

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Institut für Fluiddynamik: Prof. P. Jenny, Prof. T. Rösgen
Computational Science & Engineering Laboratory: Prof. P. Koumoutsakos

27/02/2015

E I N L A D U N G

zu einem Vortrag im Rahmen des

Kolloquiums Thermo- und Fluiddynamik

Datum: **Mittwoch, 18. März 2015**

Zeit: **16:15 Uhr**

Ort: Maschinenlaboratorium ETH Zürich
Hörsaal ML H 44

Referent: **Prof. Markus Holzner**
Institute of Environmental Engineering, ETH Zürich

Titel: **Turbulence in Environmental Systems**

Turbulent flow is ubiquitous in nature as well as in technical applications. Often it is desired, for example to increase efficiency of industrial mixers. However, it can also be detrimental, for example in the human body where it has been associated with onset and progression of aortic diseases. In this talk I will present recent progress in our understanding of turbulence in environmental, biological and industrial applications. In particular, I will touch upon (i) interactions between turbulent flow and transported matter such as polymers, inertial particles and plankton, (ii) aortic flow and (iii) porous medium flow. Our results are based on theory, modeling and experiments using a Lagrangian frame of reference, where particle trajectories are used to investigate phenomena such as mixing, aggregation and collective behavior.

Host: Prof. P. Jenny

Gäste sind willkommen!