

Institut für Strömungsmechanik, Professur für Strömungsmechanik

## Vortrag



## Listen to the Volcano

Prof. Dr. sc. techn. habil. Joern Sesterhenn ISTA, TU Berlin

Volcanic hazards are a permanent risk, even in central Europe. Directly, as we learned a few years ago in the Eyjafjallajökull eruption, but also in the impact of the ash clouds on the atmosphere and our climate system.

In both cases it is crucial to estimate the amount of ash particles ejected by an eruption. Key parameters are of course vent diameter, flow velocity and particle loading of the flow. Unfortunately measuring these seemingly simple parameters isn't that easy during an eruption for obvious reasons. One simply can not go close and measurement devices brought to the vent for example by drones are quickly destroyed. Fortunately sound comes to us. Therefore volcano acoustics gained much attention in the last years since the well documented recordings of the Mnt. St. Helens eruption. The goal is to relate the measured acoustics of the usually supersonic particle laden jet to it's primary features. In this talk I'll show results from DNS of starting particle laden jets and compare its structure to what can be observed on Stromboli or in lab experiments.

Termin: 14. Februar 2014, 11:30 Uhr

Ort: **ZEU 150A** 

Kontakt: Prof. Dr.-Ing. habil. Jochen Fröhlich

Sekretariat: 0351/463-34736, claudia.wiegand@tu-dresden.de