



**Universität Stuttgart**

Institut für Chemische Verfahrenstechnik

## Guest Lecture:

assoc. Prof.

**Matteo Maestri**

**Politecnico di Milano**

**Laboratory of Catalysis and  
Catalytic Processes**

**21.11.2018  
13:00 – 14:00  
Room M 78.21  
Böblinger Str. 78**

Preliminary schedule, times and topics may be subject to change. Current schedule on [www.icvt.uni-stuttgart.de](http://www.icvt.uni-stuttgart.de)

Lecture is held at ICVT as part of a colloquium on multiscale aspects of heterogeneous catalytic processes

We kindly ask you to give prior notice until 15.11.2018 if you plan to attend

Further Information:  
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and on [www.icvt.uni-stuttgart.de](http://www.icvt.uni-stuttgart.de)

### **Structure-dependent microkinetic analysis of heterogeneous catalytic processes: methodology and applications**

- Development of a methodology for the analysis of structure-activity relations in heterogeneous catalysis
- Effect of the catalyst structure on reactivity and selectivity is at present neglected in state-of-the-art microkinetic analysis
- Multiscale analysis based on structure-dependent microkinetic modelling is essential for a detailed mechanistic understanding of catalyst functionality
- Novel experimental tools and first-principles analysis
- Application to selected examples in the context of CH<sub>4</sub> activation and NO oxidation

### **Short CV:**

- Associate Professor of Chemical Engineering at the Politecnico di Milano, Italy
- Main research interests:
  - fundamental analysis of catalytic kinetics
  - multiscale modeling of catalytic processes
- Ph. D. at Politecnico di Milano (2008)
- University of Delaware, USA (2006-2007)
- Fritz-Haber-Institut, Berlin, Germany (2009-2010)
- TUM, Munich, Germany (2011)