

## 3rd GAMM Juniors' Summer School

### Geometric Methods in Multi-Body and Structural Dynamics Modeling, Simulation and Control

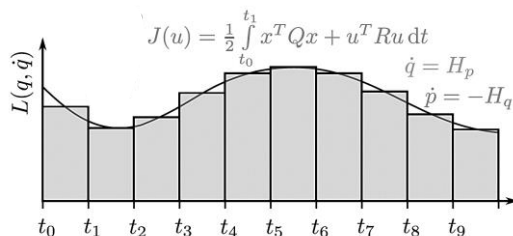
This summerschool introduces variational integrators and Lie-group integrators from the basics, emphasizing their geometrical properties.

Then, optimal control is combined with these structure preserving integrators, in order to exploit the natural coupling between mathematical modeling, numerical integration and control.

These methods are exemplarily applied to mechanical multi-body systems. The extensions to structural dynamics, non-smooth systems (e.g. elastic collisions) and electrical systems are outlined.

**Homepage: [www.samm2016.de](http://www.samm2016.de)**

The purpose of the SAMM is to support interdisciplinary exchange between young engineers, especially mechanical, and mathematicians, and to help (PhD) students facilitate their entry into the world of research. The SAMM will consist of five days of activities.



The SAMM will take place in the "**Wilhelm-Ostwald-Park**" near **Leipzig** (Germany) from **September 5 – 9, 2016**. The cost for the hotel including full board is EUR 355 for a double room.

Due to financial support of the IAV – Automotive Engineering, the International Association for Applied Mathematics and Mechanics (GAMM e.V.) and the Institut für Mechatronik Chemnitz a limited number of scholarships is available. Because of the restricted number of such scholarships, we ask students to preferentially use funds available at their home institutions.

The **lecturers** of the GAMM Juniors' summer school on Geometric Methods in Multi-Body and Structural Dynamics are



**Kathrin Flaßkamp**



**Dominik Kern**

**Guest speakers** on special topics are



**Martin Arnold**  
Model Based Simulation and Optimization



**Sina Ober-Blöbaum**  
Optimal Control, Mechanical and Electrical Systems