

**Invitation to the second seminar and plenary assembly
of the GAMM Student Chapter at TU Dortmund University**

Place: Pavillon 8/0.21, South Campus, TU Dortmund ([Campus Navigation](#))
Date: Tuesday, 19 November 2019
Time: 6:00pm - 8:00pm

Preliminary agenda

TOP 1: General information of the GAMM Student Chapter at TU Dortmund University

- Nomination of the new chairmen board
- Recap of the past year

TOP 2: Welcoming of Prof. Dr.-Ing. Ingo Münch and team

TOP 3: Seminar talk by Prof. Dr.-Ing. Ingo Münch (see abstract below)

TOP 4: Miscellaneous

TOP 5: Closing*

Abstract

Stress field analysis for higher order continuum theories

Ingo Münch

Couple stress theories drop the principle of local action and account for higher gradients in deformation or introduce non-local kinematics. Then, in the contiguity of a continuum point the stress tensor field becomes a nonlinear function and its power series expansion has higher order terms. In this lecture we discuss these terms on the surface of a small cube such that an algebraic formula for a couple stress tensor appears. An internal length scale parameter appears from integration of couples on the cubes surface. Then, it is found that the nonlocal balance of angular momentum incorporates the curl of the stress field.

* You are cordially invited to end the evening in a cosy get-together. For this purpose we consider to order pizza. For better planning of the amount, we ask you to register via the survey below and bring your small dues. We will order some common varieties. If you have any special needs, please send an email to jan.liedmann@tu-dortmund.de.

[>> Doodle for pizza order <<](#)