MSS
MATERIALS SCIENCE AND SIMULATION

ICAMS
INTERDISCIPLINARY CENTRE FOR ADVANCED MATERIALS SIMULATION

Lecture announcement

Continuum Mechanics

Students will gain extended knowledge of continuum mechanics. They furthermore gain practical skills and learn different solution techniques for mechanical problems as a prerequisite forcomputer-oriented structural analysis.

Starting with an introduction to the advanced analytical techniques of linear elasticity theory, the coursemoves on to the continuum-mechanical concepts of the nonlinear elasticity and ends with the discussion of material instabilities and microstructures. Numerous examples and applications will be given.

Literature:

Pei Chi Chou, Nicholas J. Pagano, Elasticity, Dover, 1997

T.C. Doyle, J.L. Ericksen, Nonlinear Elasticity

Advances in Appl. Mech. IV, Academic Press, New York, 1956

C. Truesdell, W. Noll, The nonlinear field theories

Handbuch der Physik (Flügge, Hrsg.), Bd. III/3, Springer-Verlag, Berlin, 1965

J.E. Marsden, T.J.R. Hughes, Mathematical foundation of elasticity, Prentice Hall, 1983

R.W. Ogden, Nonlinear elastic deformation, Wiley & Sons, 1984

Semester	Summer Semester 2015
Modul	6-MS4
Hold by	Prof. Dr. rer. nat. K.Hackl, Prof. Dr. rer. nat. K.C. Le
Time	Tuesday 8.30-10.00 am & Thursday 14.15-15.45 pm
Room	IC 04/410
First Lecture	07.04.2015
Contact	Prof. Dr. Rer. Nat. Klaus Hackl, IA 3/125, Phone +49 234 32 26025