zu folgendem Vortrag wird herzlich eingeladen:

Normal form for pairs of matrices and applications

Olivier Verdier

Mathematical Institute, University of Cologne

I will discuss a new way of deriving the normal form of a pair of matrices. In particular it allows to prove the Kronecker decomposition theorem and the regular pencil theorem in a simple manner. It may also be used to characterize the observability/controllability indices. It also has consequences on the invariants of differential algebraic equations. In particular, it brings together the notions of ßtrangenessänd tractabilityïndices. I will discuss those invariants (the index is just one of them) in linearised mechanics and electrical circuits. If time allows, I will present a program that computes those invariants. Only knowledge of elementary, finite dimensional linear algebra is required to follow the talk.

SDT

Prof. Dr.–Ing. habil. Sven Klinkel
Fachgebiet
Statik und Dynamik der Tragwerke
TU Kaiserslautern

Dr.–Ing. Sigrid Leyendecker
Emmy Noether Group
Computational Dynamics and Control
TU Kaiserslautern

LTM

Prof. Dr.–Ing. habil. Ralf Müller
Lehrstuhl für Technische Mechanik
TU Kaiserslautern