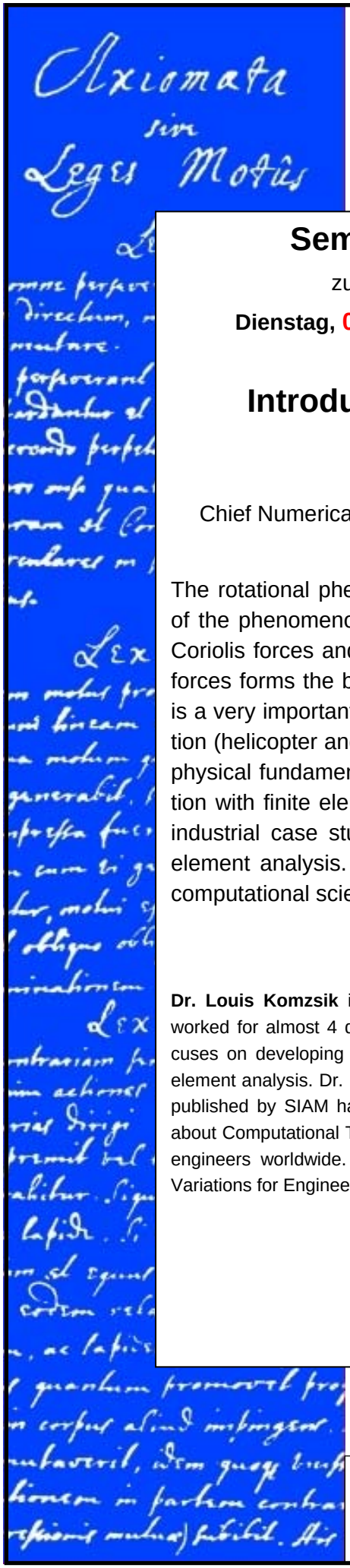

Friedrich-Alexander-Universität
Erlangen-Nürnberg

Seminar über Fragen der Mechanik

zu folgendem Vortrag wird herzlich eingeladen

Dienstag, 05.04.2011, 14:00 Uhr, Egerlandstr. 5, Raum 0.044

Introduction to industrial rotor dynamics

Dr. Louis Komzsik

Chief Numerical Analyst of Siemens Industry Division, PLMS in California

The rotational phenomenon is instrumental in our everyday lives. The effects of the phenomenon range from the well known centrifugal force, through the Coriolis forces and to the Euler force. The modeling and computation of such forces forms the basis of rotor dynamics. Rotor dynamics of elastic structures is a very important topic of the energy (turbines and windmills) and transportation (helicopter and airplane propellers) industry. The talk will briefly review the physical fundamentals of rotating phenomenon and its computational formulation with finite elements. It will also present a demonstration example and an industrial case study from NASTRAN, the world leader in commercial finite element analysis. It is aimed at undergraduate and graduate engineering or computational science students, but well suited for interested faculty as well.

Dr. Louis Komzsik is a graduate of the Technical University of Budapest in Hungary and worked for almost 4 decades in the industry, the last three in the United States. His work focuses on developing computational techniques for industrial applications in commercial finite element analysis. Dr. Komzsik is the author of several books; one on them on Lanczos method published by SIAM has also been published in Japanese, Hungarian and Chinese. His book about Computational Techniques of Finite Element Analysis is in its second edition and used by engineers worldwide. His Approximation Techniques for Engineers and Applied Calculus of Variations for Engineers books are used at several universities in the US and in Europe.

Prof. Dr.-Ing. P. Steinmann
Lehrstuhl für Technische Mechanik
Universität Erlangen-Nürnberg
Egerlandstraße 5, 91058 Erlangen

Dipl.-Math. techn. G. Possart
Tel. +49 9131 8528506
possart@ltm.uni-erlangen.de