



Institut für Grundlagen der
Bauingenieurwissenschaften
Arbeitsbereich für Technische
Mathematik und Bauinformatik



Institut für Mathematik

VORTRAGSEINLADUNG

Das Institut für Mathematik und der Arbeitsbereich für Technische Mathematik und Bauinformatik laden mit Unterstützung der *Österreichischen Mathematischen Gesellschaft* zu folgendem Gastvortrag ein:

Prof. Todor Todorov

(California Polytechnic State University, San Luis Obispo):

Introduction to Non-Standard Analysis for Non-Logicians

Abstract: The non-standard analysis (NSA for short) is a modern rigorous version of the old Leibniz-Euler infinitesimal calculus. It was invented by A. Robinson in the 1960's as a particular application of model theory (a branch of mathematical logic). It has numerous applications in different areas of mathematics, physics and mathematical economics.

An introduction to this theory in the framework of the usual (standard) real analysis and with minimum involvement of mathematical logic will be presented. The talk will be accessible for students who have taken a first real analysis course. The discussion will focus mostly on the reduction of the quantifiers in this theory: NSA uses less quantifiers than the standard real analysis: For example, the usual standard definition of a limit of a function includes three (non-commuting) quantifiers. In contrast its non-standard counterpart includes only one quantifier.

Zeit: **Dienstag, 21. März 2006, 17 Uhr c.t.**

Ort: Seminarraum 2, Institut für Mathematik, 7. Stock Viktor-Franz-Hess-Haus.

Gäste sind herzlich willkommen!

a.o. Univ.-Prof. Dr. Michael Oberguggenberger