Mathematisches Seminar

des Sonderforschungsbereichs 393

Numerische Simulation auf
massiv parallelen Rechnern

Zeit:	Freitag, 23.07.1999, 10:45 Uhr
Ort:	Reichenhainer Straße 70, B202
Vortragender:	**S.V. Nepomnyaschikh**
Thema:	**Finite Element Trace Theorems for Parameter Dependent Sobolev Spaces**

The theorems on traces of functions from Sobolev spaces play an important role in studying boundary value problems of mathematical physics. These theorems are commonly used for a priori estimates of the stability with respect to boundary conditions. The trace theorems play also very important role to construct and to investigate effective domain decomposition methods. The main focus of this talk is to study the case when norms of functions given in some domain dependent on parameters. Corresponding Sobolev spaces with parameter dependent norms are generated, for instance, by elliptic problems with disproportional anisotropic coefficients. The main goal is to introduce parameter dependent norms of traces of functions on the boundary such that the corresponding constants in the trace theorems are independent of the parameters. In the finite element case (finite element functions in the domain and finite element traces on the boundary) the corresponding constants should be independent of the mesh step too.

Interessenten sind herzlich eingeladen.

A. Meyer