

Kolloquium Angewandte Mathematik
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Vortragsankündigung

Am Montag, den **3.07.2017**, hält um **14:00 Uhr**

Ernst P. Stephan
(Leibniz U Hannover)

einen Gastvortrag über das Thema

Boundary Elements with Mesh Refinements for the Wave Equation

Der Vortrag findet im **Raum 1301** in **Gebäude 33** statt.

Vortragszusammenfassung

Time domain Galerkin boundary elements provide an efficient tool for the numerical solution of boundary value problems for the homogeneous wave equation. We review recent advances in time domain boundary elements with mesh refinements for 3D problems. We present an a priori error analysis for graded meshes to resolve geometric edge and corner singularities. On the other hand, an a posteriori error analysis gives rise to adaptive mesh refinement procedures based on error indicators of residual type. Applications include nonlinear dynamic contact problems and engineering problems in the sound emission of car tires. Numerical experiments underline our theoretical results.

Alle Interessierten sind dazu herzlich eingeladen.