

Karlsruher PDE-Seminar

Interfacing FEM and BEM for transient acoustic equations

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This seminar presents a simple numerical strategy to discretize a transmission problem in scattering of acoustic waves by non-homogeneous obstacles. The method uses a traditional Finite Element scheme with time-stepping for the interior of the obstacles and Convolution Quadrature Boundary Element Methods for the unbounded exterior domain. After presenting the method and stating the main results, I will spend some time trying to convey the mathematical techniques used for the analysis: they are based on simple results on the theory of evolution equations and on some exotic transmission conditions that describe variationally the effect of Galerkin FEM-BEM discretization. This is joint work with Matt Hassell.

Termin: Montag, 15. Juni 2015, 14:00 Uhr

Ort: Gebäude 20.30 SR 1.067

Gastgeber: Die Dozenten des Schwerpunkts Partielle Differentialgleichungen