A posteriori error estimates for anisotropic discretizations of singularly perturbed model problems

Thomas Apel[1]   Serge Nicaise[2]

Anisotropic meshes are characterized by elements with large or even asymptotically unbounded aspect ratio. Such meshes are known to be particularly effective for the resolution of directional features of the solution, like edge singularities and boundary layers.

In the talk we present a posteriori error estimates for discretizations with anisotropic meshes. We focus on results obtained in joint work with Serge Nicaise and Sergey Grosman for singularly perturbed model problems: an anisotropic diffusion model equation and a simplyfied shell model.

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[1] Universität der Bundeswehr München, Institut für Mathematik und Bauinformatik, 85577 Neubiberg,
thomas.apel@unibw.de
[2] Université de Valenciennes et du Hainaut Cambrésis,
Serge.Nicaise@univ-valenciennes.fr