

Elasticity with $H(\text{curl})$ elements

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joint work with Astrid Pechstein, Michael Neunteufel

In the first part of the talk we discuss old and new results on the TDNNS method for linear elasticity, its relation to the Hellan-Herrmann-Johnson method, and its application to plates and shells. In the second part we study geometric non-linear elastodynamics, and see that the covariant transformation of $H(\text{curl})$ -conforming methods fit well to the nonlinearity arising from the change between global and body frames.