



**Česká společnost pro mechaniku a Ústav termomechaniky AV ČR, v.v.i.**

v rámci přednáškového cyklu **Seminář Ústavu termomechaniky**

si Vás dovoluje pozvat na přednášku

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s názvem

## **Rotation-free parametrization and isogeometric analysis of shear deformable plates and shells**

Structural theories for static and dynamic analysis of shear deformable plates and shells (Reissner-Mindlin type) usually employ independent degrees of freedom for displacements and rotations. It is shown how equivalent models can be developed based on displacement degrees of freedom only. In the context of finite element formulations this has the advantage that transverse shear locking can be intrinsically avoided within a standard displacement-based concept, regardless of the underlying function spaces used for discretization.

As in this context higher continuity of the shape functions is required, a natural way is to incorporate such theories into the isogeometric concept, using NURBS (non-uniform rational B-splines) as shape functions. Corresponding shear-deformable shell finite element formulations for geometrically linear and non-linear applications are presented and their performance is demonstrated with the help of numerical examples.

**Přednáška se bude konat  
ve středu 17. srpna 2016 od 10:00 hodin  
v budově Ústavu termomechaniky (posluchárna B)  
Dolejškova 5, 182 00 Praha 8**