

## **EINLADUNG**

zum Gastvortrag

von

***Professor Thomas J.R. HUGHES***

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am

**Dienstag, 18.11.2014, 11.00 (c.t.) Uhr**

Technische Universität Wien, Karlsplatz 13, 1040 Wien  
**Boecklsaal** (Stiege 1, 1. Stock)

# **Isogeometric Analysis**

Isogeometric Analysis [1,2] was created to address the major impediment in engineering product development, namely, the conversion of Computer Aided Design (CAD) descriptions to analysis-suitable formats for Finite Element Analysis (FEA). The key concept utilized is a new paradigm for FEA, based on rich geometric descriptions originating in CAD, resulting in one geometric model that is suitable for both design and analysis. Since its inception, Isogeometric Analysis has become a focus of research within both FEA and CAD. I will describe areas in which progress has been made in developing new and improved methodologies within FEA, current topics of intense activity, and problems that remain open, representing opportunities for future research.

## **REFERENCES**

[1] T.J.R. Hughes, J.A. Cottrell and Y. Bazilevs, *Isogeometric Analysis: CAD, Finite Elements, NURBS, Exact Geometry and Mesh Refinement*, Computer Methods in Applied Mechanics and Engineering, 194, (2005) 4135-4195.

[2] J.A. Cottrell, T.J.R. Hughes and Y. Bazilevs, *Isogeometric Analysis: Toward Integration of CAD and FEA*, Wiley, Chichester, U.K., 2009.