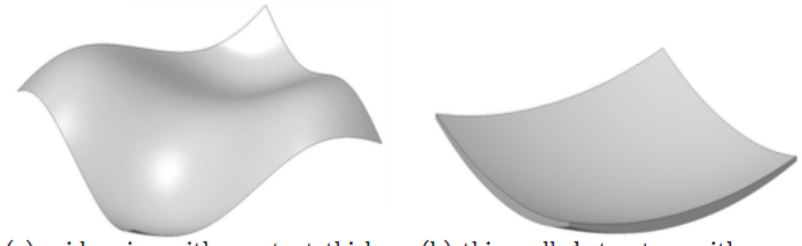
Professor Alexander Düster



(a) mid-region with constant thickness parameter.

(b) thin-walled structure with varying thickness.

Figure 1. Geometric models of thin-walled structures.

From: C. Sorger, A. Duester and E. Rank, "Generation of curved high-order hexahedral finite element meshes for thin-walled structures", Proceedings of the 11th ISGG Conference, January 2009 (ISGG = International Society for Geometry and Graphics")

See:
https://www.researchgate.net/profile/Alexander_Duester
https://www.tuhh.de/alt/skf/staff/prof-a-duester.html
https://scholar.google.de/citations?user=Oq_j_HsAAAAJ&hl=en

School of Mechanical Engineering
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Research Interests:
Coupled problems: Fluid-structure interaction, electro-thermo-mechanical coupling; Nonlinear finite element methods; Finite cell method; Numerical homogenization methods

Selected Publications:
A. Duester, E. Rank, G. Steinl and W. Wunderlich, "A combination of an h- and a p-version of the finite element method for elastic-plastic problems", European Conference on Computational Mechanics (ECCM '99), August 31-September 3, Munich, Germany, 1999
A. Duester. High order finite elements for three-dimensional, thin-walled nonlinear continua. PhD thesis, Lehrstuhl fuer Bauinformatik, Fakultaet fuer Bauingenieur- und Vermessungswesen, Technische Universitaet Muenchen, http://www.inf.bv.tum.de/duester, 2001.
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A. Duester, A. Niggl and E. Rank, "Thermo-elastic computations of geometrically non-linear three-dimensional thin-walled continua based on high order finite elements", Fifth World Congress on Computational Mechanics (WCCM V), July 7-12, 2002, Vienna, Austria, H.A. Mang, F.G. Rammerstorfer and J. Eberhardsteiner (Editors)
E. Rank, A. Niggl and A Duester, "A high-order finite element approach to non-linear thin-walled solids", Publisher and date not given in the pdf file; most recent reference is dated 2003

A. Düster, S. Hartmann and E. Rank. p-FEM applied to finite isotropic hyperelastic bodies. Comput. Methods Appl. Mech. Engrg., 192: 5147-5166, 2003
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Stefan Diebels, Tobais Ebinger, Holger Steeb, Alexander Duester and Ernst Rank, "Modeling materials with lattice microstructure by an higher order FE approach", International Conference on Computational Methods for Coupled Problems in Science and Engineering (Coupled Problems 2005), M. Papadrakakis, E. Onate and B. Schrefler (Editors), CIMNE, Barcelona, 2005
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