Publications in this list are grouped according to

- Peer-reviewed Journal Papers
- Books, Book Chapters, etc.
- Published Lecture Notes
- (Reviewed) Proceedings Papers etc.

Peer-reviewed Journal Papers

Submitted papers:


Accepted / published papers:

• Meier C., Grill M.J., Popp A., Wall W.A.: Geometrically exact beam elements and smooth contact schemes for the modeling of fiber-based materials and structures. *International Journal of Solids and Structures*, accepted 2017


- Kronbichler M.; Schoeder S.; Müller C.; Wall W.A.: Comparison of implicit and explicit hybridizable discontinuous Galerkin methods for the acoustic wave equation. *International


Rasthofer U.; Burton G.C.; Wall W.A.; Gravemeier V.: An algebraic variational multiscale-


Books, Book Chapters, etc.

Books (authored) and major book chapters


¹... best selling technical textbook series in German language (all disciplines/publishers)

Books (edited), special journal issues and book chapters (incomplete):
• Hammerl G., Danowski C., Grilli M., Adams N.A., Wall W.A.: An innovative approach to thermo-
fluid-structure interaction based on an immersed interface method and a monolithic thermo-
structure interaction algorithm. *SFB/TRR 40 – Sonderforschungsbereich/Transregio 40 – Annual

coupling for non-conforming interfaces based on a dual mortar formulation. *SFB/TRR 40 -
Sonderforschungsbereich Transregio 40 – Summer Programm 2011*, Stemmer C. et al. (eds.)
Lehrstuhl für Aerodynamik und Strömungsmechanik, TU München, 2012, 139-157

- Danowski C., Gravemeier V., Küttler U., Gee M.W., Wall W.A.: A computational monolithic
approach to thermo-structure interaction in rocket nozzles. Adams, N.A. et al. (eds.). *SFB/TRR 40 -
Sonderforschungsbereich Transregio 40 - Annual Report 2011*, Lehrstuhl für Aerodynamik und
Strömungsmechanik, TU München, 2011, 245-254

- Popp A., Gee M., Wall W.A.: Finite deformation contact based on a 3D dual mortar and semi-
smooth Newton approach. in: *Trends in computational contact mechanics. Series: Lecture Notes

- Wiechert L., Comerford A., Rausch S., Wall W.A.: Advanced multi-scale modelling of the
respiratory system. *Buchreihen Notes on Numerical Fluid Mechanics and Multidisciplinary Design

interfaces based on a dual mortar formulation. Adams, N.A. et al. (eds.) *SFB/TRR 40 -
Sonderforschungsbereich Transregio 40 - Annual Report 2010*, Lehrstuhl für Aerodynamik und
Strömungsmechanik, TU München, 2010, 279-296

- Gamnitzer P., Gravemeier V., Wall W.A.: Advances in variational multiscale methods for

- Comerford A., Rausch S., Wiechert L., Gee M.W., Wall W.A.: Computational modelling of the
respiratory system for improvement of mechanical ventilation strategies. Wagner S. et al. (eds.)
267-277


- Wall W.A., Küttler U., Gerstenberger A., Gee M., Förster Ch.: Advances in computational fluid-
Formulation, Optimization and Coupled Problems, Series: CISM International Centre for


- Ramm E., von Scheven M., Förster C., Wall W.A.: Interaction of incompressible flows and thin-
walled structures. *ECCOMAS Multidisciplinary Jubilee Symposium - New Computational
Challenges in Materials, Structures, and Fluids, Computational Methods in Applied Sciences 14*,
Springer, 2009, 219-234

Springer, *ECCOMAS Multidisciplinary Jubilee Symposium - New Computational Challenges in
235-250

(eds.) Lehrstuhl für Aerodynamik, TU München, 2009, 267-284

- Wiechert L., Rabczuk T., Comerford A., Metzke R., Wall W.A.: Towards stresses and strains in
the respiratory system. *European Series in Applied and Industrial Mathematics (ESAIM) 23*,
2008, 98-113

- Lube G., Stynes M., Wall W.A. (eds.): Problems exhibiting boundary and interior layers. special
issue of *International Journal of Computing Science and Mathematics 1* (IJCSM), Nos. 2/3/4,


Proceedings (edited):


Wall W.A, (eds.): *Energy Challenges – Germany 2050*. 2nd Colloquium of the Munich School of Engineering, MSE / TUM, Garching 2012, Germany


Ramm E., Wall W.A., Bletzinger K.-U., Bischoff M. (eds.): 5th *International Conference on*
Published Lecture Notes

- Technische Mechanik II. 7. Auflage, 2017
- Technische Mechanik III. 6. Auflage, 2015
- Numerische Methoden für Ingenieure, 13. Auflage, 2017
- Finite Elemente. 12. Auflage, 2017
- Nichtlineare Kontinuumsmechanik. 10. Auflage, 2016
- Biomechanik – Grundlagen und Modellbildung. 6. Auflage, 2017

(Reviewed) Proceedings Papers etc. (incomplete)


W.A. Wall – Publications


• Srinath D.N., Wall W.A.: Shape optimization of airfoils for drag minimization over a range of operating conditions. *Proceedings ECCOMAS Thematic Conf. – CFD and Optimization*, Antalaya, Turkey, Mai 2011, CD-ROM: pdf 024


• Popp A., Gitterle M., Gee M.W., Wall W.A.: An efficient dual mortar approach for finite deformation contact including frictional sliding. Proceedings 1st International Conference on Computational Contact Mechanics (ICCCM09), Lecce, Italy, September 2009


• Rausch S., Wall W.A.: Parameter identification for modelling alveolar tissue on different scales. Proceedings 7th EUROMECH Solid Mechanics Conference, Lisbon, Portugal, September 2009,


• Klöppel Th., Wall W.A.: A finite element approach for static and dynamic simulations of human red blood cells. Nithiarasu P., Löhner R. (eds.), Proceedings 1st Int. Conf. on Mathematical and Computational Biomedical Engineering (CMBE2009), Swansea, UK, June/July 2009, 332-335


• Mayer U., Wall W.A.: A three-dimensional higher-order fluid-structure interaction approach applied to mesoscopic biophysics problems in the production process of novel spider silk material.


• Küttler U., Wall W.A.: The dilemma of domain decomposition approaches for the interaction of structures and fully enclosed incompressible fluids. Proceedings 17th DD 17, Strobl, Austria, 2006


• Ramm E., Erhart T., Wall, W.A.: Numerical modeling of transient impact processes with large deformations and nonlinear material behavior. Onate, E., Owen, D.J. (eds), Proceedings of the VIII
International Conference on Computational Plasticity (COMPLAS VIII), CIMNE, Barcelona, Spain, Sept. 2005


• Wall W.A., Ramm E.: Shell structures - consequences of the extreme slenderness for simulation or shells in advanced computational environment. *Validation of FEM Analyses - Models and Results*, NAFEMS Seminar, Wiesbaden, Germany, 2002


• Wall W.A., Gee M., Ramm E.: The challenge of a three-dimensional shell formulation — the


Wall W.A., Gee M., Bischoff M., Ramm E.: Tuning of a 3D shell model in nonlinear statics and dynamics. Extended Abstract of the 20th Int. Congress of Theoretical and Applied Mechanics, Chicago, USA, 2000


