

List of publications

Book Chapters

- [1] **Rabczuk T., Bordas S., Askes H.:** Meshfree discretization methods for solid mechanics, in: Encyclopedia of Aerospace Engineering, Editors: R. De Borst, Wiley & Sons, 2010 (invited)
- [2] **Huerta A., Belytschko T., Fernandez-Mendez S., Rabczuk T.:** Meshfree Methods, in: Encyclopedia of Computational Mechanics, Editors: E. Stein, R. De Borst, T.J.R. Hughes, Wiley & Sons, 2004 (invited)

Publications in peer-reviewed International (ISI) Journals

2013

- [1] **Jiang J.W., Rabczuk T.:** Mechanical Oscillation of Kinked Silicon Nanowires: a Natural Nanoscale Spring, *Applied Physics Letters*, 2013, in press
- [2] **Jiang J.W., Rabczuk T.:** Modulation of Thermal Conductivity in kinked Silicon Nanowires: Phonon interchanging and pinching effects or Reduction of thermal conductivity in kinked silicon nanowire superlattices, *Nano Letters*, 2013, in press
- [3] **Areias P., Rabczuk T., Dias-da-Costa D.:** Asymmetric Shell Elements Based on a Corrected Updated-Lagrangian Approach, *CMES-Computer Modeling in Engineering & Sciences*, 2013, in press
- [4] **Khosravani M.R., Rabczuk T.:** Determination of shear modulus for double and multi-walled Carbon Nanotubes, *Mechanics of Composite Materials*, in press
- [5] **Areias P., Rabczuk T.:** Finite strain fracture of plates and shells with configurational forces and edge rotation, *International Journal for Numerical Methods in Engineering*, in press
- [6] **Joshi S., Hildebrand J., Aloraier A.S., Rabczuk T.:** Characterization of material properties and heat source parameters in welding simulation of two overlapping beads on a substrate plate, *Computational Materials Science*, 2013, in press
- [7] **Nguyen-Xuan H., Nguyen Thanh N., Bordas S., Rabczuk T.:** Isogeometric analysis of laminated composite plates using the higher-order shear deformation theory, *Mechanics of Advanced Materials and Structures*, 2013, in press
- [8] **Kerfriden P., Schmidt K.M., Rabczuk T., Bordas S.:** Statistical extraction of process zones and representative subspaces in fracture of random composites, *International Journal for Multiscale Computational Engineering*, 2013, in press
- [9] **Talebi H., Silani M., Bordas S. P. A., Kerfriden P., Rabczuk T.:** Molecular Dynamics/XFEM Coupling by a Three-Dimensional Extended Bridging Domain with Applications to Dynamic Brittle Fracture, *International Journal for Multiscale Computational Engineering*, 2013, in press
- [10] **Talebi H., Silani M., Arnold D., Ziaei-Rad S., Rabczuk T.:** On the coupling of a commercial finite element package with lammmps for multiscale modeling of materials, *Steel Research International*, 2013, in press

- [11] **Jiang J.W., Zhao J., Rabczuk T.:** Size-Sensitive Young's Modulus of Kinked Silicon Nanowires, *Nanotechnology*, 2013, 24, 185702, doi:10.1088/0957-4484/24/18/185702
- [12] **Nguyen-Thoi T., Phung-Van P., Rabczuk T., Nguyen-Xuan H., Le-Van C.:** Free and forced vibration analysis using the n-sided polygonal cell-based smoothed finite element method (nCS-FEM), *International Journal of Computational Methods*, 2013, 10(1), art. no. 13400082
- [13] **Le C.V., Nguyen-Xuan H., Askes H., Rabczuk T., Nguyen-Thoi T.:** Computation of limit load using edge-based smoothed finite element method and second-order cone programming, *International Journal of Computational Methods*, 2013, 10(1), art. no. 13400045
- [14] **Nguyen-Thoi T., Phung-Van P., Rabczuk T., Nguyen-Xuan H., Le-Van C.:** An application of the ES-FEM in solid domain for dynamic analysis of 2D fluid-solid interaction problems, *International Journal of Computational Methods*, 2013, 10(1), art. no. 13400033
- [15] **Phan-Dao H., Nguyen-Xuan H., Thai-Hoang C., Nguyen-Thoi T., Rabczuk T.:** An edge-based smoothed finite element method for analysis of laminated composite plates, *International Journal of Computational Methods*, 2013, 10(1), art. no. 13400057
- [16] **Bakar I., Kramer O., Bordas S.P.A., Rabczuk T.:** Optimization of Elastic Properties and Weaving Patterns of Woven Composites, *Composite Structures*, 2013, 100, 575-591
- [17] **Zhao J., Wang L., Jiang J.W., Wang Z., Guo W., Rabczuk T.:** A comparative study of two molecular mechanics models based on harmonic potentials, *Journal of Applied Physics*, 2013, 113, 063509
- [18] **Zhao J., Wei N., Fan Z., Jiang J.W., Rabczuk T.:** Mechanical properties of three types of carbon allotropes, *Nanotechnology*, 2013, 24(9), 09570
- [19] **Zhao J., Jiang J.W., Jia Y., Guo W., Rabczuk T.:** A theoretical analysis of cohesive energy between carbon nanotubes, graphene and substrates, *Carbon*, 2013, 57, 108-119
- [20] **Kerfriden P., Gouy O., Rabczuk T., Bordas S.:** A partitioned model order reduction approach to rationalise computational expenses in nonlinear fracture mechanics, *Computer Methods in Applied Mechanics and Engineering*, 2013, 256, 169-188
- [21] **Valizadeh N., Natarajan S., Gonzalez-Estrada O.A., Rabczuk T., Tinh Quoc Bui, Bordas S.P.A.:** NURBS-based finite element analysis of functionally graded plates: static bending, vibration, buckling and flutter, *Composite Structures*, 2013, 99, 309-326
- [22] **Areias P., Rabczuk T., Dias-da-Costa D.:** Assumed-metric spherically-interpolated quadrilateral shell element, *Finite Elements in Analysis and Design*, 2013, 66, 53-67
- [23] **Zhang Y., Zhao J., Wei N., Jiang J.W., Rabczuk T.:** Effects of the dispersion of polymer wrapped two neighbouring single walled carbon nanotubes (SWNTs) on nanoengineering load transfer, *Composites Part B: Engineering*, 2013, 45(1), 1714-1721

- [24] **Nguyen-Xuan H., Liu G.R., Bordas S., Natarajan S., Rabczuk T.:** An adaptive singular ES-FEM for mechanics problems with singular field of arbitrary order, *Computer Methods in Applied Mechanics and Engineering*, 2013, 253, 252-273

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- [25] **Jiang J.W., Park H.S., Rabczuk T.:** Enhancing the mass sensitivity of graphene nanoresonators via nonlinear oscillations: The effective strain mechanism, *Nanotechnology*, 2012, 23(47), art. no. 475501
- [26] **Nguyen-Xuan H., Nguyen Vinh H., Bordas S., Rabczuk T., Duflot M.:** A cell-based smoothed finite element method for three-dimensional solid structures, *KSCCE-Journal of Civil Engineering*, 2012, 16(7), 1230-1242
- [27] **Zhao J., Guo W., Rabczuk T.:** An analytical molecular mechanics model for the elastic properties of crystalline polyethylene, *Journal of Applied Physics*, 2012, 112(3), Article number 033516, DOI: 10.1063/1.4745035
- [28] **Thai C.H., Nguyen-Xuan H., Nguyen-Thanh N., Le T.H., Nguyen-Thoi T., Rabczuk T.:** Static, free vibration and buckling analysis of laminated composite Reissner-Mindlin plates using NURBS-based isogeometric approach, *International Journal for Numerical Methods in Engineering*, 2012, 91(6), 571-603
- [29] **Natarajan S., Chakraborty S., Thangavel M., Bordas S., Rabczuk T.:** Size-dependent free flexural vibration behavior of functionally graded nanoplates, *Computational Materials Science*, 2012, 65, 74-80
- [30] **Nguyen-Vinh H., Bakar I., Msek M.A., Song J.-H., Muthu J., Zi G., Le P., Bordas S., Simpson R., Natarajan S., Lahmer T., Rabczuk T.:** Extended Finite Element Method for Dynamic Fracture of Piezo-Electric Materials, *Engineering Fracture Mechanics*, 2012, 92, 19-31
- [31] **Talebi H., Zi G., Silani M., Samaniego E., Rabczuk T.:** A simple circular cell method for multi-level finite element analysis, *Journal of Applied Mathematics*, 2012, Article ID 526846, 15 pages, doi:10.1155/2012/526846
- [32] **Jiang J.-W., Wang B.S., Rabczuk T.:** Acoustic and breathing phonon modes in bilayer graphene with Moire-acute patterns, *Applied Physics Letters*, 2012, 101(2), 023113, doi: 10.1063/1.4735246
- [33] **Jiang J.-W., Zhao J., Zhou K., Rabczuk T.:** Superior thermal conductivity and extremely high mechanical strength in polyethylene chains from ab initio calculation, *Journal of Applied Physics*, 2012, 111(12), 124304, doi: 10.1063/1.4729489
- [34] **Areias P., Rabczuk T., Dias-da-Costa D., Pires E.B.:** Implicit solutions with consistent additive and multiplicative components, *Finite Elements in Analysis and Design*, 2012, 57, 15-31
- [35] **Nguyen-Xuan H., Rabczuk T., Nguyen-Thoi T., Tran T., Nguyen-Thanh N.:** Computation of limit and shakedown loads using a node-based smoothed finite element method, *International Journal for Numerical Methods in Engineering*, 2012, 90(3), 287-310

- [36] **Chen L., Rabczuk T., Bordas S., Liu G.R., Zeng K.Y., Kerfriden P.:** Extended finite element method with edge-based strain smoothing (Esm-XFEM) for linear elastic crack growth, *Computer Methods in Applied Mechanics and Engineering*, 2012, 209-212(4), 250-265
- [37] **Talebi H., Samaniego C., Samaniego E., Rabczuk T.:** On the Numerical Stability and Mass- Lumping Schemes for Explicit Enriched Meshfree Methods, *International Journal for Numerical Methods in Engineering*, 2012, 89(9), 1009-1027
- [38] **Chau-Dinh T., Zi G., Lee P.S., Song J.H., Rabczuk T.:** Phantom-node Method for Shell Models with Arbitrary Cracks, *Computers & Structures*, 2012, 92-93, 242-256
- [39] **Simpson R., Bordas S., Trevelyan J., Kerfriden P., Rabczuk T.:** An Isogeometric Boundary Element Method for elastostatic analysis, *Computer Methods in Applied Mechanics and Engineering*, 2012, 209-212, 87-100

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- [40] **Zhao J., Zhang Z., Guo W., Rabczuk T.:** Size-dependent elastic properties of crystalline polymers via a molecular mechanics model, *Applied Physics Letters*, 2011, 99(24), 241902, doi:10.1063/1.3668110
- [41] **Baiz P.M., Natarajan S., Bordas S., Kerfriden P., Rabczuk T.:** Linear Buckling Analysis of Cracked Plates by SFEM and XFEM (SmXFEM), *Journal of Mechanics of Materials and Structures*, 2011, 6(9-10), 1213-1238
- [42] **Nguyen-Thanh N., Kiendl J., Nguyen-Xuan H., Wüchner R., Bletzinger K.U., Bazilevs Y., Rabczuk T.:** Rotation free isogeometric thin shell analysis using PHT-splines, *Computer Methods in Applied Mechanics and Engineering*, 2011, 200(47-48), 3410-3424
- [43] **Bacht T., Chase J.G, MacRae G., Rodgers G.W., Rabczuk T., Dhakal R.P., Desombre J.:** HF2V dissipator effects on the performance of a 3 story moment frame, *Journal of Constructional Steel Research*, 2011, 67(12), 1843-1849
- [44] **Natarajan S., Baiz P.M., Bordas S., Rabczuk T., Kerfriden P.:** Natural frequencies of cracked functionally graded material plates by the extended finite element method, *Composite Structures*, 2011, 93(11), 3082-3092
- [45] **Moosavi M.R., Delfanian F., Khelil A., Rabczuk T.:** Orthogonal meshless finite volume method in elastodynamics, *Thin-Walled Structures*, 2011, 49(9), 1171-1177
- [46] **Vu Bac N., Nguyen-Xuan H., Chen L., Bordas S., Kerfriden P., Simpson R.N., Liu G.R., Rabczuk T.:** A Node-based Smoothed extended Finite Element Method (NSXFEM) for Fracture Analysis, *CMES-Computer Modeling in Engineering & Sciences*, 2011, 1898(1), 1-25
- [47] **Thai-Hoang C., Nguyen-Thanh N., Nguyen-Xuan H., Rabczuk T.:** An alternative alpha finite element method with discrete shear gap technique for analysis of laminated composite plates, *Applied Mathematics and Computation*, 2011, 217(17), 7324-7348

- [48] **Nguyen-Thanh N., Nguyen-Xuan H., Bordas S., Rabczuk T.:** Isogeometric analysis using polynomial splines over hierarchical T-meshes for two-dimensional elastic solids, *Computer Methods in Applied Mechanics and Engineering*, 2011, 200(21-22), 1892-1908
- [49] **Bordas S., Natarajan S., Dal Pont S., Rabczuk T., Kerfriden P., Mahapatra D.R., Noel D., Gao Z.:** On the performance of strain smoothing for enriched finite element approximations (XFEM/GFEM/PUFEM), *International Journal for Numerical Methods in Engineering*, 2011, 86(4-5), 637-666
- [50] **Desombre J., Rodgers G.W., MacRae G.A., Rabczuk T., Dhakal R.P., Chase J.G.:** Experimentally validated FEA models of HF2V damage free steel connections for use in full structural analysis, *Structural Engineering and Mechanics*, 2011, 37(4), 385-399
- [51] **Nguyen-Thanh N., Rabczuk T., Nguyen-Xuan H., Bordas S.:** An alternative alpha finite element method with discrete shear gap technique for analysis of Mindlin-Reissner plates, *Finite Elements in Analysis and Design*, 2011, 47(5), 519-535
- [52] **Thai-Hoang C., Nguyen-Thanh N., Nguyen-Xuan H., Rabczuk T., Bordas S.:** A cell-based smoothed finite element method for free vibration and buckling analysis of shells, *KSCE-Korean Journal of Civil Engineering*, 2011, 15(2), 347-361

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- [53] **Nguyen-Thoi T., Vu-Do H.C., Rabczuk T., Nguyen-Xuan H.:** A node-based smoothed finite element method (NS-FEM) for upper bound solution to visco-elastoplastic analysis of solids using triangular and tetrahedral meshes, *Computer Methods in Applied Mechanics and Engineering*, 2010, 199(45-48), 3005-2027
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- [55] **Le Phong B.E., Rabczuk T., Mai-Duy Nam, Tran-Cong Thanh:** A Moving Local IRBFN based Galerkin meshless method, *CMES-Computer Modeling in Engineering and Sciences*, 2010, 66(1), 25-52
- [56] **Akbari, A., Bagri, R., Bordas S.P.A., Rabczuk T.:** Analysis of thermoelastic waves in a two-dimensional functionally graded materials domain by the Meshless Local Petrov Galerkin (MLPG) method, *CMES-Computer Modeling in Engineering and Sciences*, 2010, 65(1), 27-74
- [57] **Rabczuk T., Bordas S., Zi G.:** On three-dimensional modelling of crack growth using partition of unity methods, *Computers & Structures*, 2010, 88(23-24), 1391-1411 (invited)
- [58] **Bordas S., Rabczuk T., Nguyen-Xuan H., S. Natarajan, T. Bog, Nguyen.V. P., Q. Do Minh, H. Nguyen Vinh:** Strain Smoothing in FEM and XFEM, *Computers & Structures*, 2010, 88(23-24), 1419-1443 (invited)

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- [60] **Le Phong B.E., Rabczuk T., Mai-Duy Nam, Tran-Cong Thanh:** A Moving IRBFN based integration-free meshless method, *CMES-Computer Modeling in Engineering and Sciences*, 2010, 61(1), 63-109
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- [62] **Rabczuk T., Zi G., Bordas S., Nguyen-Xuan H.:** A simple and robust three-dimensional cracking-particle method without enrichment, *Computer Methods in Applied Mechanics and Engineering*, 2010, 199(37-40), 2437-2455
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- [64] **Rabczuk T., Gracie R., Song J.H., Belytschko T.:** Immersed particle method for fluid-structure interaction, *International Journal for Numerical Methods in Engineering*, 2010, 81(1), 48-71
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- [68] **Nguyen-Thanh N., Rabczuk T., Nguyen-Xuan H., Bordas S.:** A smoothed finite element method for shell analysis, *Computer Methods in Applied Mechanics and Engineering*, 2008, 198(2), 165-177
- [69] **Rabczuk T., Zi G., Gerstenberger A., Wall W.A.:** A new crack tip element for the phantom node method with arbitrary cohesive cracks, *International Journal for Numerical Methods in Engineering*, 2008, 75(5), 577-599
- [70] **Nguyen-Xuan H., Rabczuk T., Bordas S., Debongnie J.F.:** A smoothed finite element method for plate analysis, *Computer Methods in Applied Mechanics and Engineering*, 2008, 197(13-16), 1184- 1203

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- [72] **Bordas, S., Rabczuk T., Zi. G.:** Three-dimensional crack initiation, propagation, branching and junction in non-linear materials by extrinsic discontinuous enrichment of meshfree methods without asymptotic enrichment, *Engineering Fracture Mechanics*, 2008, 75(5), 943-960
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- [74] **Rabczuk T., Samaniego E.:** Discontinuous modelling of shear bands using adaptive meshfree methods, *Computer Methods in Applied Mechanics and Engineering*, 2008, 197(6-8), 641-658
- [75] **Nguyen V.P., Rabczuk T., Bordas S. Duflot M.:** Meshless methods: A review and computer implementation aspects, *Mathematics and Computers in Simulation*, 2008, 79, 763-813

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- [76] **Rabczuk T., Areias P.M.A., Belytschko T.:** A meshfree thin shell method for non-linear dynamic fracture, *International Journal for Numerical Methods in Engineering*, 2007, 72(5), 524-548
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- [78] **Rabczuk T., Areias P.M.A., Belytschko T.:** A simplified meshfree method for shear bands with cohesive surfaces, *International Journal for Numerical Methods in Engineering*, 2007, 69(5), 993-1021
- [79] **Plotzitz A., Rabczuk T., Eibl J.:** Techniques for Numerical Simulations of Concrete Slabs for Demolishing by Blasting, *Journal of Engineering Mechanics ASCE*, 2007, 133(5), 523-533
- [80] **Rabczuk T., Zi G.:** A meshfree method based on the local partition of unity for cohesive cracks, *Computational Mechanics*, 2007, 39(6), 743-760
- [81] **Rabczuk T., Belytschko T.:** A three dimensional large deformation meshfree method for arbitrary evolving cracks, *Computer Methods in Applied Mechanics and Engineering*, 2007, 196(29-30), 2777-2799
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- [83] **Rabczuk T., Bordas S., Zi G.:** A three-dimensional meshfree method for continuous multiplecrack initiation, nucleation and propagation in statics and dynamics, *Computational Mechanics*, 2007, 40(3), 473-495

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- [85] **Rabczuk T., Belytschko T.:** Application of particle methods to static fracture of reinforced concrete structures, *International Journal of Fracture*, 2006, 137(1-4), 19-49
- [86] **Rabczuk T., Areias P.M.A.:** A new approach for modelling slip lines in geological materials with cohesive models, *International Journal for Numerical and Analytical Methods in Engineering*, 2006, 30(11), 1159-1172
- [87] **Rabczuk T., Xiao S.P., Sauer M.:** Coupling of meshfree methods with finite elements: Basic concepts and test results, *Communications in Numerical Methods in Engineering*, 2006, 22(10), 1031-1065
- [88] **Rabczuk T., Areias P.M.A.:** A meshfree thin shell for arbitrary evolving cracks based on an external enrichment, *CMES-Computer Modeling in Engineering and Sciences*, 2006, 16(2), 115-130

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- [90] **Rabczuk T., Belytschko T.:** Adaptivity for structured meshfree particle methods in 2D and 3D, *International Journal for Numerical Methods in Engineering*, 2005, 63(11), 1559-1582

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- [92] **Rabczuk T., Eibl J.:** Numerical analysis of prestressed concrete beams using a coupled element free Galerkin/finite element method, *International Journal of Solids and Structures*, 2004, 41 (3- 4), 1061-1080
- [93] **Rabczuk T., Belytschko T., Xiao S.P.:** Stable particle methods based on Lagrangian kernels, *Computer Methods in Applied Mechanics and Engineering*, 2004, 193(12-14), 1035-1063
- [94] **Rabczuk T., Kim J.Y., Samaniego E., Belytschko T.:** Homogenization of sandwich structures, *International Journal for Numerical Methods in Engineering*, 2004, 61(7), 1009-1027
- [95] **Rabczuk T., Belytschko T.:** Cracking particles: a simplified meshfree method for arbitrary evolving cracks, *International Journal for Numerical Methods in Engineering*, 2004, 61(13), 2316-2343

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Invited Publications in peer-reviewed National or Non-ISI Journals

- [1] **Rabczuk T.:** Computational Methods for Fracture in Brittle and Quasi-Brittle Solids: State-of-the-art Review and Future Perspectives, *ISRN Applied Mathematics*, 2013, Article ID 849231, 38 pages, doi:10.1155/2013/849231
- [2] **Kalameh H.A., Karamali A., Anitescu C. Rabczuk T.:** High velocity impact of metal sphere on thin metallic plate using smooth particle hydrodynamics (SPH) method, *Frontiers of Structural and Civil Engineering*, 2012, 6(2), 101-110
- [3] **Dunant C.F., Bordas S.P.A., Kerfriden P., Scrivener K.L., Rabczuk T.:** An algorithm to compute damage from load in composites, *Frontiers of Architecture and Civil Engineering in China*, 2011, 5(2), 180-193
- [4] **Rabczuk T., Bordas S., Askes H.:** Meshfree Methods for Dynamic Fracture, *Computational Technology Reviews*, 2010, 1, 157-185
- [5] **Nguyen-Thanh N, Thai-Hoang C, Nguyen-Xuan H, Rabczuk T:** A smoothed finite element method for the static and free vibration analysis of shells, *Journal of Civil Engineering and Architecture*, 2010, 4(34), 13-25
- [6] **Rabczuk T., Zi G.:** Numerical Fracture Analysis of prestressed concrete beams, *International Journal of Concrete Structures and Materials*, 2008, 2(2)
- [7] **Eibl J., Rabczuk T.:** Untersuchungen zum Fragmentierungsverhalten von Beton mit Hilfe der SPH/MLSPH-Methode, *Bawingenieur*, 2004, 11, 522-527
- [8] **Rabczuk T., Belytschko T.:** An adaptive continuum/discrete crack approach for meshfree particle methods, *Latin American Journal of Solids and Structures*, 2003, 1(1), 141-166

Lecture Notes

- [1] **Rabczuk T.:** Extended Finite Element and Meshfree Methods, 2006
<http://www.uni-weimar.de/cms/bauing/forschung/institute/ism/lehre/xfem-mfm.html>

PhD-thesis

- [1] **Rabczuk T.:** Numerical analysis of concrete fragmentation using SPH (Numerische Untersuchungen zum Fragmentierungsverhalten von Beton mit Hilfe der SPH-Methode), Dissertation, Januar 2002, Institut für Massivbau und Baustofftechnologie, Heft 45, University of Karlsruhe (<http://www.ubka.uni-karlsruhe.de/cgi-bin/psview?document=2002/bau-vern/2>)

Technical reports as PhD-student or Post-Doctoral Fellow

- [1] **Belytschko T., Rabczuk T.:** A reinforced bond model and coupled particle-finite element method for modeling static fracture of reinforced concrete structures, final report, 2004, Department of Mechanical Engineering, Group of Computational Mechanics, Northwestern University

- [2] **Herrmann N., Plotzitza A., Rabczuk T., Eibl J.:** Constitutive models for concrete under shock wave loading (Stoffgesetze für Beton bei Schockwellenbeanspruchung-Hugoniotversuche), Schlussbericht (final report) zum Forschungsvorhaben BMWi 150 1014, 2002, Institut für Massibau und Baustofftechnologie, University of Karlsruhe
- [3] **Eibl J., Stempniewski L., Rabczuk T.:** Investigation of prestressed beams and plates without stirrup reinforcement (Untersuchungen zum Endbereich von im Spannbett vorgespannten Fertigteilträgern-Hohlplatten), final report (187 pages), 2001, Institut für Massibau und Baustofftechnologie, University of Karlsruhe
- [4] **Stempniewski L., Rabczuk T.:** Numerical studies to load bearing behavior of segment bridges taking into account slice opening (Numerische Untersuchungen zum Tragverhalten von Segmentbrücken unter Berücksichtigung der Fuge), Zwischenbericht, 2000, Institut für Massibau und Baustofftechnologie, University of Karlsruhe
- [5] **Eibl J., Akkermann J., Rabczuk T.:** Investigations of externally prestressed segment bridges with slice opening (Zur Schnittgrössenermittlung bei Segmentbrücken aufgrund Fugenöffnungen im Grenzzustand der Tragfähigkeit), Zwischenbericht, 1998, Institut für Massibau und Baustofftechnologie, University of Karlsruhe

Selected Plenary-talks, Semi-plenary talks and keynote talks (Conference Proceedings)

- [1] **Bordas S.P.A., Kerfriden P., Miller K., Rabczuk T., Courtecuisse H., Faure F.:** Towards real time multiscale simulation of cutting in non-linear materials with applications to surgical simulation and computer guided surgery, *ECCM2012 (semi-plenary talk-co-authored)*, 2012
- [2] **Rabczuk T., Bordas S.P.A.:** Partition of unity enriched methods for multiscale fracture and fluid structure interaction driven brittle and ductile failure, *XFEM2011, ECCOMAS Conference (invited semi-plenary talk)*, 2011, Cardiff (UK)
- [3] **Rabczuk T. Areias P.M.A.:** A meshfree thin shell for arbitrary evolving cracks based on an external enrichment, *International Conference on Computational and Experimental Engineering and Science (invited keynote talk)*, 2008, Honolulu, Hawaii (USA)
- [4] **Wall W.A., Wiechert L., Gee M., Rabczuk T., Metzke R.:** Coupled Problems in Computational Modeling of the Respiratory System, *Computational Methods for Coupled Problems in Science and Engineering (Plenary talk-co-authored)*, in: High Performance Computing on Vector Systems 2007, 145-166, DOI: 10.107/978-3-540-74384-2_12, Santa Eulalia, Ibiza, Spain, 2007
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Citation metric, February 26, 2013; Scopus h-index = 28 (27 excluding self citations of all authors); ISI h-index = 27

Table 1: Citation metric

Citations	2009	2010	2011	2012	2013	2003-2013
ISI-Web of Science	207	442	480	573	197	2161
ISI-All data bases	217	450	487	589	197	2212
Scopus	223	462	507	608	334	2393
Scopus (excluding self citations of all authors)	192	360	387	496	285	1889