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- [1] Meinhard Kuna. „Fracture mechanics of piezoelectric materials - Where are we right now?“ In: *Engineering Fracture Mechanics* 77.2 (2010). 214, S. 309–326. DOI: 10.1016/j.engfracmech.2009.03.016.
- [2] Martin Abendroth und Meinhard Kuna. „Identification of ductile damage and fracture parameters from the small punch test using neural networks“. In: *Engineering Fracture Mechanics* 73.6 (2006). 156, S. 710–725. DOI: 10.1016/j.engfracmech.2005.10.007.
- [3] Martin Abendroth und Meinhard Kuna. „Determination of deformation and failure properties of ductile materials by means of the small punch test and neural networks“. In: *Computational Materials Science* 28.3-4 SPEC. ISS. (2003). 147, S. 633–644. DOI: 10.1016/j.commatsci.2003.08.031.
- [4] M. Kuna und D.Z. Sun. „Three-dimensional cell model analyses of void growth in ductile materials“. In: *International Journal of Fracture* 81.3 (1996). 141, S. 235–258. DOI: 10.1007/BF00039573.
- [5] M. Kuna. „Finite element analyses of cracks in piezoelectric structures: A survey“. In: *Archive of Applied Mechanics* 76.11-12 (2006). 114, S. 725–745. DOI: 10.1007/s00419-006-0059-z.
- [6] Benjamin Nassauer, Thomas Liedke und Meinhard Kuna. „Polyhedral particles for the discrete element method: Geometry representation, contact detection and particle generation“. In: *Granular Matter* 15.1 (2013). 106, S. 85–93. DOI: 10.1007/s10035-012-0381-9.
- [7] Eric Béchet, M. Scherzer und M. Kuna. „Application of the X-FEM to the fracture of piezoelectric materials“. In: *International Journal for Numerical Methods in Engineering* 77.11 (2009). 97, S. 1535–1565. DOI: 10.1002/nme.2455.
- [8] Marco Enderlein, A. Ricoeur und M. Kuna. „Finite element techniques for dynamic crack analysis in piezoelectrics“. In: *International Journal of Fracture* 134.3-4 (2005). 97, S. 191–208. DOI: 10.1007/s10704-005-0522-9.

- [9] Meinhard Kuna. „Finite element analyses of crack problems in piezoelectric structures“. In: *Computational Materials Science* 13.1-3 (1998). 93, S. 67–80. DOI: 10.1016/s0927-0256(98)00047-0.
- [10] D. Kulawinski u. a. „Characterization of stress-strain behavior of a cast TRIP steel under different biaxial planar load ratios“. In: *Engineering Fracture Mechanics* 78.8 (2011). 70, S. 1684–1695. DOI: 10.1016/j.engfracmech.2011.02.021.
- [11] Geralf Hütter, Lutz Zybell und Meinhard Kuna. „Micromechanisms of fracture in nodular cast iron: From experimental findings towards modeling strategies - A review“. In: *Engineering Fracture Mechanics* 144 (2015). 69, S. 118–141. DOI: 10.1016/j.engfracmech.2015.06.042.
- [12] T. Liedke und M. Kuna. „A macroscopic mechanical model of the wire sawing process“. In: *International Journal of Machine Tools and Manufacture* 51.9 (2011). 69, S. 711–720. DOI: 10.1016/j.ijmachtools.2011.05.005.
- [13] Fulin Shang, Meinhard Kuna und Martin Abendroth. „Finite element analyses of three-dimensional crack problems in piezoelectric structures“. In: *Engineering Fracture Mechanics* 70.2 (2003). 69, S. 143–160. DOI: 10.1016/S0013-7944(02)00039-5.
- [14] Andreas Ricoeur und Meinhard Kuna. „Influence of electric field on the fracture of ferroelectric ceramics“. In: *Journal of the European Ceramic Society* 23.8 (2003). 68, S. 1313–1328. DOI: 10.1016/S0955-2219(02)00302-3.
- [15] M. Springmann und M. Kuna. „Identification of material parameters of the Gurson-Tvergaard-Needleman model by combined experimental and numerical techniques“. In: *Computational Materials Science* 32.3-4 (2005). 66, S. 544–552. DOI: 10.1016/j.commatsci.2004.09.010.
- [16] Stephan Roth, Geralf Hütter und Meinhard Kuna. „Simulation of fatigue crack growth with a cyclic cohesive zone model“. In: *International Journal of Fracture* 188.1 (2014). 60, S. 23–45. DOI: 10.1007/s10704-014-9942-8.
- [17] Claudia Funke u. a. „Biaxial fracture test of silicon wafers“. In: *Advanced Engineering Materials* 6.7 (2004). 56, S. 594–598. DOI: 10.1002/adem.200400406.
- [18] Geralf Hütter u. a. „Simulation of ductile crack initiation and propagation by means of a non-local Gurson-model“. In: *International Journal of Solids and Structures* 50.5 (2013). 55, S. 662–671. DOI: 10.1016/j.ijsolstr.2012.10.031.
- [19] M. Springmann und M. Kuna. „Identification of material parameters of the Gurson-Tvergaard-Needleman model by combined experimental and numerical techniques“. In: *Computational Materials Science* 33.4 (2005). 52, S. 501–509. DOI: 10.1016/j.commatsci.2005.02.002.
- [20] Christoph Settgast u. a. „A hybrid approach to simulate the homogenized irreversible elastic-plastic deformations and damage of foams by neural networks“. In: *International Journal of Plasticity* 126 (2020). 51. DOI: 10.1016/j.ijplas.2019.11.003.

- [21] H.-A. Bahr u. a. „Fracture analysis of a single edge cracked strip under thermal shock“. In: *Theoretical and Applied Fracture Mechanics* 8.1 (1987). 51, S. 33–39. DOI: 10.1016/0167-8442(87)90016-4.
- [22] K. Wippler, A. Ricoeur und M. Kuna. „Towards the computation of electrically permeable cracks in piezoelectrics“. In: *Engineering Fracture Mechanics* 71.18 (2004). 51, S. 2567–2587. DOI: 10.1016/j.engfracmech.2004.03.003.
- [23] Andreas Seupel, Geralf Hütter und Meinhard Kuna. „An efficient FE-implementation of implicit gradient-enhanced damage models to simulate ductile failure“. In: *Engineering Fracture Mechanics* 199 (2018). 50, S. 41–60. DOI: 10.1016/j.engfracmech.2018.01.022.
- [24] Meinhard Kuna. „Finite elements in fracture mechanics: Theory - Numerics - Applications“. In: *Solid Mechanics and its Applications* 201 (2013). 48, S. 1–472. DOI: 10.1007/978-94-007-6680-8_1.
- [25] B.N. Rao und M. Kuna. „Interaction integrals for fracture analysis of functionally graded piezoelectric materials“. In: *International Journal of Solids and Structures* 45.20 (2008). 47, S. 5237–5257. DOI: 10.1016/j.ijsolstr.2008.05.020.
- [26] M. Abendroth u. a. „Finite element-computation of the electromechanical J-integral for 2-D and 3-D crack analysis“. In: *International Journal of Fracture* 114.4 (2002). 47, S. 359–378. DOI: 10.1023/A:1015725725879.
- [27] Meinhard Kuna und Stephan Roth. „General remarks on cyclic cohesive zone models“. In: *International Journal of Fracture* 196.1-2 (2015). 45, S. 147–167. DOI: 10.1007/s10704-015-0053-y.
- [28] H.A. Richard und M. Kuna. „Theoretical and experimental study of superimposed fracture modes I, II and III“. In: *Engineering Fracture Mechanics* 35.6 (1990). 45, S. 949–960. DOI: 10.1016/0013-7944(90)90124-Y.
- [29] Stefan Rasche und Meinhard Kuna. „Improved small punch testing and parameter identification of ductile to brittle materials“. In: *International Journal of Pressure Vessels and Piping* 125 (2015). 42, S. 23–34. DOI: 10.1016/j.ijpvp.2014.09.001.
- [30] Andreas Ricoeur und M. Kuna. „Electrostatic tractions at crack faces and their influence on the fracture mechanics of piezoelectrics“. In: *International Journal of Fracture* 157.1-2 (2009). 42, S. 3–12. DOI: 10.1007/s10704-009-9321-z.
- [31] Hongjun Yu und Meinhard Kuna. „Interaction integral method for computation of crack parameters K-T – A review“. In: *Engineering Fracture Mechanics* 249 (2021). 40. DOI: 10.1016/j.engfracmech.2021.107722.
- [32] Benjamin Nassauer und Meinhard Kuna. „Contact forces of polyhedral particles in discrete element method“. In: *Granular Matter* 15.3 (2013). 40, S. 349–355. DOI: 10.1007/s10035-013-0417-9.

- [33] T. Linse u. a. „Usage of the small-punch-test for the characterisation of reactor vessel steels in the brittle-ductile transition region“. In: *Engineering Fracture Mechanics* 75.11 (2008). 39, S. 3520–3533. DOI: 10.1016/j.engfracmech.2007.03.047.
- [34] T. Linse, G. Hütter und M. Kuna. „Simulation of crack propagation using a gradient-enriched ductile damage model based on dilatational strain“. In: *Engineering Fracture Mechanics* 95 (2012). 38, S. 13–28. DOI: 10.1016/j.engfracmech.2012.07.004.
- [35] F. Rabold und M. Kuna. „Cell model simulation of void growth in nodular cast iron under cyclic loading“. In: *Computational Materials Science* 32.3-4 (2005). 38, S. 489–497. DOI: 10.1016/j.commatsci.2004.09.016.
- [36] J. Storm u. a. „Geometrical modelling of foam structures using implicit functions“. In: *International Journal of Solids and Structures* 50.3-4 (2013). 37, S. 548–555. DOI: 10.1016/j.ijsolstr.2012.10.026.
- [37] M. Springmann und M. Kuna. „Identification of material parameters of the Rousset-Lier model by non-linear optimization“. In: *Computational Materials Science* 26.SUPPL. (2003). 37, S. 202–209. DOI: 10.1016/S0927-0256(02)00400-7.
- [38] Christoph Settgast, Martin Abendroth und Meinhard Kuna. „Constitutive modeling of plastic deformation behavior of open-cell foam structures using neural networks“. In: *Mechanics of Materials* 131 (2019). 35, S. 1–10. DOI: 10.1016/j.mechmat.2019.01.015.
- [39] A. Ricoeur und M. Kuna. „Electrostatic tractions at dielectric interfaces and their implication for crack boundary conditions“. In: *Mechanics Research Communications* 36.3 (2009). 35, S. 330–335. DOI: 10.1016/j.mechrescom.2008.09.009.
- [40] B.N. Rao und M. Kuna. „Interaction integrals for fracture analysis of functionally graded magnetoelectroelastic materials“. In: *International Journal of Fracture* 153.1 (2008). 35, S. 15–37. DOI: 10.1007/s10704-008-9285-4.
- [41] M. Wünsche u. a. „Transient dynamic analysis of interface cracks in layered anisotropic solids under impact loading“. In: *International Journal of Fracture* 157.1-2 (2009). 34, S. 131–147. DOI: 10.1007/s10704-008-9262-y.
- [42] Ilona Westram u. a. „Fatigue crack growth law for ferroelectrics under cyclic electrical and combined electromechanical loading“. In: *Journal of the European Ceramic Society* 27.6 (2007). 34, S. 2485–2494. DOI: 10.1016/j.jeurceramsoc.2006.09.010.
- [43] L. Zybell u. a. „A three-dimensional finite element for gradient elasticity based on a mixed-type formulation“. In: *Computational Materials Science* 52.1 (2012). 33, S. 268–273. DOI: 10.1016/j.commatsci.2011.02.026.
- [44] L. Zybell u. a. „Size effects in ductile failure of porous materials containing two populations of voids“. In: *European Journal of Mechanics, A/Solids* 45 (2014). 32, S. 8–19. DOI: 10.1016/j.euromechsol.2013.11.006.

- [45] M. Scherzer und M. Kuna. „Combined analytical and numerical solution of 2D interface corner configurations between dissimilar piezoelectric materials“. In: *International Journal of Fracture* 127.1 (2004). 32, S. 61–99. DOI: 10.1023/b:frac.0000035056.34258.4b.
- [46] S. Prüger, A. Seupel und M. Kuna. „A thermomechanically coupled material model for TRIP-steel“. In: *International Journal of Plasticity* 55 (2014). 31, S. 182–197. DOI: 10.1016/j.ijplas.2013.10.005.
- [47] Qun Li und Meinhard Kuna. „Inhomogeneity and material configurational forces in three dimensional ferroelectric polycrystals“. In: *European Journal of Mechanics, A/Solids* 31.1 (2012). 29, S. 77–89. DOI: 10.1016/j.euromechsol.2011.07.004.
- [48] Geralf Hütter u. a. „A modeling approach for the complete ductile-brittle transition region: Cohesive zone in combination with a non-local Gurson-model“. In: *International Journal of Fracture* 185.1-2 (2014). 29, S. 129–153. DOI: 10.1007/s10704-013-9914-4.
- [49] D. Kulawinski u. a. „Deformation and strain hardening behavior of powder metallurgical TRIP steel under quasi-static biaxial-planar loading“. In: *Materials Science and Engineering: A* 642 (2015). 28, S. 317–329. DOI: 10.1016/j.msea.2015.06.083.
- [50] M. Enderlein, A. Ricoeur und M. Kuna. „Comparison of finite element techniques for 2D and 3D crack analysis under impact loading“. In: *International Journal of Solids and Structures* 40.13-14 (2003). 28, S. 3425–3437. DOI: 10.1016/S0020-7683(03)00117-3.
- [51] M. Kuna und S. Wippler. „A cyclic viscoplastic and creep damage model for lead free solder alloys“. In: *Engineering Fracture Mechanics* 77.18 (2010). 27, S. 3635–3647. DOI: 10.1016/j.engfracmech.2010.03.015.
- [52] M. Springmann und M. Kuna. „Determination of ductile damage parameters by local deformation fields: Measurement and simulation“. In: *Archive of Applied Mechanics* 75.10-12 (2006). 27, S. 775–797. DOI: 10.1007/s00419-006-0033-9.
- [53] Andreas Ricoeur und Meinhard Kuna. „A micromechanical model for the fracture process zone in ferroelectrics“. In: *Computational Materials Science* 27.3 (2003). 27, S. 235–249. DOI: 10.1016/S0927-0256(02)00360-9.
- [54] Fulin Shang, Meinhard Kuna und Matthias Scherzer. „Analytical solutions for two penny-shaped crack problems in thermo-piezoelectric materials and their finite element comparisons“. In: *International Journal of Fracture* 117.2 (2002). 27, S. 113–128. DOI: 10.1023/A:1020976012521.
- [55] Geralf Hütter, Lutz Zybell und Meinhard Kuna. „Micromechanical modeling of crack propagation in nodular cast iron with competing ductile and cleavage failure“. In: *Engineering Fracture Mechanics* 147 (2015). 26, S. 388–397. DOI: 10.1016/j.engfracmech.2015.06.039.

- [56] M. Budnitzki und M. Kuna. „Stress induced phase transitions in silicon“. In: *Journal of the Mechanics and Physics of Solids* 95 (2016). 26, S. 64–91. DOI: 10.1016/j.jmps.2016.03.017.
- [57] Andreas Seupel, Geralf Hütter und Meinhard Kuna. „On the identification and uniqueness of constitutive parameters for a non-local GTN-model“. In: *Engineering Fracture Mechanics* 229 (2020). 26. DOI: 10.1016/j.engfracmech.2019.106817.
- [58] B.N. Rao und M. Kuna. „Interaction integrals for thermal fracture of functionally graded piezoelectric materials“. In: *Engineering Fracture Mechanics* 77.1 (2010). 26, S. 37–50. DOI: 10.1016/j.engfracmech.2009.09.009.
- [59] Meinhard Kuna u. a. „Fracture mechanics based design of a railway wheel made of austempered ductile iron“. In: *Engineering Fracture Mechanics* 72.2 (2005). 26, S. 241–253. DOI: 10.1016/j.engfracmech.2003.10.007.
- [60] J. Jackiewicz und M. Kuna. „Non-local regularization for FE simulation of damage in ductile materials“. In: *Computational Materials Science* 28.3-4 SPEC. ISS. (2003). 26, S. 684–695. DOI: 10.1016/j.commatsci.2003.08.024.
- [61] F. Shang, M. Kuna und T. Kitamura. „Theoretical investigation of an elliptical crack in thermopiezoelectric material. Part I: Analytical development“. In: *Theoretical and Applied Fracture Mechanics* 40.3 (2003). 24, S. 237–246. DOI: 10.1016/j.tafmec.2003.08.003.
- [62] Hongjun Yu u. a. „An I-integral method for crack-tip intensity factor variation due to domain switching in ferroelectric single-crystals“. In: *Journal of the Mechanics and Physics of Solids* 94 (2016). 23, S. 207–229. DOI: 10.1016/j.jmps.2016.04.031.
- [63] Lutz Zybell, Uwe Mühllich und Meinhard Kuna. „Constitutive equations for porous plane-strain gradient elasticity obtained by homogenization“. In: *Archive of Applied Mechanics* 79.4 (2009). 23, S. 359–375. DOI: 10.1007/s00419-008-0238-1.
- [64] J. Hein, J. Storm und M. Kuna. „Numerical thermal shock analysis of functionally graded and layered materials“. In: *International Journal of Thermal Sciences* 60 (2012). 23, S. 41–51. DOI: 10.1016/j.ijthermalsci.2012.05.005.
- [65] T. Liedke und M. Kuna. „Discrete element simulation of micromechanical removal processes during wire sawing“. In: *Wear* 304.1-2 (2013). 23, S. 77–82. DOI: 10.1016/j.wear.2013.04.026.
- [66] Martin Abendroth und Meinhard Kuna. „Determination of ductile material properties by means of the small punch test and neural networks“. In: *Advanced Engineering Materials* 6.7 (2004). 23, S. 536–540. DOI: 10.1002/adem.200400405.
- [67] A. Ricoeur, M. Enderlein und M. Kuna. „Calculation of the J-integral for limited permeable cracks in piezoelectrics“. In: *Archive of Applied Mechanics* 74.8 (2005). 23, S. 536–549. DOI: 10.1007/s00419-004-0370-5.

- [68] Ulrich Groh und Meinhard Kuna. „Efficient boundary element analysis of cracks in 2D piezoelectric structures“. In: *International Journal of Solids and Structures* 42.8 (2005). 23, S. 2399–2416. DOI: [10.1016/j.ijsolstr.2004.09.023](https://doi.org/10.1016/j.ijsolstr.2004.09.023).
- [69] S. Wippler und M. Kuna. „Experimental and numerical investigation on the reliability of leadfree solders“. In: *Engineering Fracture Mechanics* 75.11 (2008). 23, S. 3534–3544. DOI: [10.1016/j.engfracmech.2007.03.046](https://doi.org/10.1016/j.engfracmech.2007.03.046).
- [70] N.A. Giang, M. Kuna und G. Hütter. „Influence of carbide particles on crack initiation and propagation with competing ductile-brittle transition in ferritic steel“. In: *Theoretical and Applied Fracture Mechanics* 92 (2017). 22, S. 89–98. DOI: [10.1016/j.tafmec.2017.05.015](https://doi.org/10.1016/j.tafmec.2017.05.015).
- [71] Anton Gladkyy und Meinhard Kuna. „DEM simulation of polyhedral particle cracking using a combined Mohr–Coulomb–Weibull failure criterion“. In: *Granular Matter* 19.3 (2017). 22. DOI: [10.1007/s10035-017-0731-8](https://doi.org/10.1007/s10035-017-0731-8).
- [72] Fulin Shang und Meinhard Kuna. „Thermal stress around a penny-shaped crack in a thermopiezoelectric solid“. In: *Computational Materials Science* 26.SUPPL. (2003). 22, S. 197–201. DOI: [10.1016/S0927-0256\(02\)00399-3](https://doi.org/10.1016/S0927-0256(02)00399-3).
- [73] K. Wippler und M. Kuna. „Crack analyses in three-dimensional piezoelectric structures by the BEM“. In: *Computational Materials Science* 39.1 SPEC. ISS. (2007). 22, S. 261–266. DOI: [10.1016/j.commatsci.2006.03.023](https://doi.org/10.1016/j.commatsci.2006.03.023).
- [74] Geralf Hütter, Uwe Mühlich und Meinhard Kuna. „Micromorphic homogenization of a porous medium: elastic behavior and quasi-brittle damage“. In: *Continuum Mechanics and Thermodynamics* 27.6 (2015). 21, S. 1059–1072. DOI: [10.1007/s00161-014-0402-5](https://doi.org/10.1007/s00161-014-0402-5).
- [75] Ł. Jański u. a. „Adaptive finite element computation of dielectric and mechanical intensity factors in piezoelectrics with impermeable cracks“. In: *International Journal for Numerical Methods in Engineering* 81.12 (2010). 21, S. 1492–1513. DOI: [10.1002/nme.2742](https://doi.org/10.1002/nme.2742).
- [76] Uwe Mühlich, Lutz Zybell und Meinhard Kuna. „Estimation of material properties for linear elastic strain gradient effective media“. In: *European Journal of Mechanics, A/Solids* 31.1 (2012). 21, S. 117–130. DOI: [10.1016/j.euromechsol.2011.06.011](https://doi.org/10.1016/j.euromechsol.2011.06.011).
- [77] Claudia Voigt u. a. „The influence of the measurement parameters on the crushing strength of reticulated ceramic foams“. In: *Journal of Materials Research* 28.17 (2013). 21, S. 2288–2299. DOI: [10.1557/jmr.2013.96](https://doi.org/10.1557/jmr.2013.96).
- [78] Johannes Storm u. a. „Geometry dependent effective elastic properties of open-cell foams based on kelvin cell models“. In: *Advanced Engineering Materials* 15.12 (2013). 21, S. 1292–1298. DOI: [10.1002/adem.201300141](https://doi.org/10.1002/adem.201300141).
- [79] J. Storm, M. Abendroth und M. Kuna. „Influence of curved struts, anisotropic pores and strut cavities on the effective elastic properties of open-cell foams“. In: *Mechanics of Materials* 86 (2015). 20, S. 1–10. DOI: [10.1016/j.mechmat.2015.02.012](https://doi.org/10.1016/j.mechmat.2015.02.012).

- [80] Johannes Storm, Martin Abendroth und Meinhard Kuna. „Numerical and analytical solutions for anisotropic yield surfaces of the open-cell Kelvin foam“. In: *International Journal of Mechanical Sciences* 105 (2016). 20, S. 70–82. DOI: 10.1016/j.ijmecsci.2015.10.014.
- [81] Sergii Kozinov, Meinhard Kuna und Stephan Roth. „A cohesive zone model for the electromechanical damage of piezoelectric/ferroelectric materials“. In: *Smart Materials and Structures* 23.5 (2014). 20. DOI: 10.1088/0964-1726/23/5/055024.
- [82] B. Nassauer, A. Hess und M. Kuna. „Numerical and experimental investigations of micromechanical processes during wire sawing“. In: *International Journal of Solids and Structures* 51.14 (2014). 19, S. 2656–2665. DOI: 10.1016/j.ijsolstr.2014.03.040.
- [83] Geralf Hütter u. a. „Consistent simulation of ductile crack propagation with discrete 3D voids“. In: *Computational Materials Science* 80 (2013). 19, S. 61–70. DOI: 10.1016/j.commatsci.2013.04.013.
- [84] Qun Li und Meinhard Kuna. „Evaluation of electromechanical fracture behavior by configurational forces in cracked ferroelectric polycrystals“. In: *Computational Materials Science* 57 (2012). 19, S. 94–101. DOI: 10.1016/j.commatsci.2011.01.050.
- [85] M. Kuna und D.-Z. Sun. „Analyses of void growth and coalescence in cast iron by cell models“. In: Bd. 6. 6. 19. 1996, C6–113–C6–122.
- [86] S. Soltysiak u. a. „High-temperature small punch test for mechanical characterization of a nickel-base super alloy“. In: *Materials Science and Engineering: A* 613 (2014). 18, S. 259–263. DOI: 10.1016/j.msea.2014.06.105.
- [87] Hongjun Yu u. a. „Phase field analysis of crack tip parameters in ferroelectric polycrystals under large-scale switching“. In: *Acta Materialia* 154 (2018). 18, S. 334–342. DOI: 10.1016/j.actamat.2018.05.042.
- [88] Florian Wallburg u. a. „Experimental and numerical analysis of scratching induced damage during diamond wire sawing of silicon“. In: *Wear* 454-455 (2020). 18. DOI: 10.1016/j.wear.2020.203328.
- [89] S. Soltysiak u. a. „Strength of fine grained carbon-bonded alumina (Al_2O_3 -C) materials obtained by means of the small punch test“. In: *Ceramics International* 40.7 PART A (2014). 18, S. 9555–9561. DOI: 10.1016/j.ceramint.2014.02.030.
- [90] Stefan Prüger u. a. „Study of reinforcing mechanisms in TRIP-matrix composites under compressive loading by means of micromechanical simulations“. In: *Advanced Engineering Materials* 15.7 (2013). 17, S. 542–549. DOI: 10.1002/adem.201200323.
- [91] F. Appel, U. Messerschmidt und M. Kuna. „Crack propagation in MgO during in-situ deformation in the high-voltage electron microscope“. In: *physica status solidi (a)* 55.2 (1979). 17, S. 529–536. DOI: 10.1002/pssa.2210550220.

- [92] T. Linse, M. Kuna und H.-W. Viehrig. „Quantification of brittle-ductile failure behavior of ferritic reactor pressure vessel steels using the Small-Punch-Test and micromechanical damage models“. In: *Materials Science and Engineering: A* 614 (2014). 16, S. 136–147. DOI: [10.1016/j.msea.2014.05.095](https://doi.org/10.1016/j.msea.2014.05.095).
- [93] Geralf Hütter, Lutz Zybell und Meinhard Kuna. „Size effects due to secondary voids during ductile crack propagation“. In: *International Journal of Solids and Structures* 51.3-4 (2014). 16, S. 839–847. DOI: [10.1016/j.ijsolstr.2013.11.012](https://doi.org/10.1016/j.ijsolstr.2013.11.012).
- [94] Carl H. Wolf u. a. „Investigation of fatigue crack growth under in-phase loading as well as phase-shifted loading using cruciform specimens“. In: *International Journal of Fatigue* 124 (2019). 15, S. 595–617. DOI: [10.1016/j.ijfatigue.2019.03.011](https://doi.org/10.1016/j.ijfatigue.2019.03.011).
- [95] Frank Rabold, Meinhard Kuna und Thomas Leibelt. „Procrack: A software for simulating three-dimensional fatigue crack growth“. In: *Lecture Notes in Applied and Computational Mechanics* 66 (2013). 15, S. 355–374. DOI: [10.1007/978-3-642-30316-6_16](https://doi.org/10.1007/978-3-642-30316-6_16).
- [96] L. Zybell u. a. „Optical in situ investigations of overload effects during fatigue crack growth in nodular cast iron“. In: *Engineering Fracture Mechanics* 95 (2012). 15, S. 45–56. DOI: [10.1016/j.engfracmech.2012.01.006](https://doi.org/10.1016/j.engfracmech.2012.01.006).
- [97] S. Kozinov und M. Kuna. „Simulation of fatigue damage in ferroelectric polycrystals under mechanical/electrical loading“. In: *Journal of the Mechanics and Physics of Solids* 116 (2018). 14, S. 150–170. DOI: [10.1016/j.jmps.2018.03.013](https://doi.org/10.1016/j.jmps.2018.03.013).
- [98] S. Kozinov und M. Kuna. „Simulation of damage in ferroelectric actuators by means of cohesive zone model“. In: *Sensors and Actuators, A: Physical* 233 (2015). 14, S. 176–183. DOI: [10.1016/j.sna.2015.06.030](https://doi.org/10.1016/j.sna.2015.06.030).
- [99] H. Zielke u. a. „Influence of carbon content and coking temperature on the biaxial flexural strength of carbon-bonded alumina at elevated temperatures“. In: *Carbon* 159 (2020). 14, S. 324–332. DOI: [10.1016/j.carbon.2019.12.042](https://doi.org/10.1016/j.carbon.2019.12.042).
- [100] Stephan Roth und Meinhard Kuna. „Prediction of size-dependent fatigue failure modes by means of a cyclic cohesive zone model“. In: *International Journal of Fatigue* 100 (2017). 14, S. 58–67. DOI: [10.1016/j.ijfatigue.2017.01.044](https://doi.org/10.1016/j.ijfatigue.2017.01.044).
- [101] Thomas Mottitschka u. a. „Influence of graphite spherical size on fatigue behaviour and fracture toughness of ductile cast iron en-gjs-400-18lt“. In: *International Journal of Materials Research* 103.1 (2012). 14, S. 87–96. DOI: [10.3139/146.110636](https://doi.org/10.3139/146.110636).
- [102] Stefan Prüger u. a. „A material model for TRIP-steels and its application to a CrMnNi cast alloy“. In: *Steel Research International* 82.9 (2011). 14, S. 1070–1079. DOI: [10.1002/srin.201100072](https://doi.org/10.1002/srin.201100072).
- [103] C. Ludwig u. a. „Simulation of anisotropic crack growth behavior of nickel base alloys under thermomechanical fatigue“. In: *Engineering Fracture Mechanics* 224 (2020). 13. DOI: [10.1016/j.engfracmech.2019.106800](https://doi.org/10.1016/j.engfracmech.2019.106800).

- [104] M. Wünsche u. a. „A hypersingular time-domain BEM for 2D dynamic crack analysis in anisotropic solids“. In: *International Journal for Numerical Methods in Engineering* 78.2 (2009). 13, S. 127–150. DOI: 10.1002/nme.2477.
- [105] Qun Li u. a. „Evaluation of electromechanical coupling effect by microstructural modeling of domain switching in ferroelectrics“. In: *Mechanics Research Communications* 37.3 (2010). 13, S. 332–336. DOI: 10.1016/j.mechrescom.2010.03.003.
- [106] H.-G. Maschke und M. Kuna. „A review of boundary and finite element methods in fracture mechanics“. In: *Theoretical and Applied Fracture Mechanics* 4.3 (1985). 13, S. 181–189. DOI: 10.1016/0167-8442(85)90003-5.
- [107] Andreas Burgold u. a. „Modeling of the cyclic deformation behavior of austenitic TRIP-steels“. In: *International Journal of Plasticity* 133 (2020). 12. DOI: 10.1016/j.ijplas.2020.102792.
- [108] Th. Hensl u. a. „An eigenstrain approach to predict phase transformation and self-accommodation in partially stabilized zirconia“. In: *Acta Materialia* 86 (2015). 12, S. 361–373. DOI: 10.1016/j.actamat.2014.12.032.
- [109] Andreas Seupel und Meinhard Kuna. „A gradient-enhanced damage model motivated by engineering approaches to ductile failure of steels“. In: *International Journal of Damage Mechanics* 28.8 (2019). 12, S. 1261–1296. DOI: 10.1177/1056789518823879.
- [110] A. Seupel u. a. „Experimental characterization and damage modeling of a particle reinforced TWIP-steel matrix composite“. In: *Materials Science and Engineering: A* 662 (2016). 12, S. 342–355. DOI: 10.1016/j.msea.2016.03.056.
- [111] M. Budnitzki und M. Kuna. „A thermomechanical constitutive model for phase transformations in silicon under pressure and contact loading conditions“. In: *International Journal of Solids and Structures* 49.11-12 (2012). 12, S. 1316–1324. DOI: 10.1016/j.ijsolstr.2012.02.004.
- [112] T. Mottitschka u. a. „Influence of overloads on the fatigue crack growth in nodular cast iron: Experiments and numerical simulation“. In: Bd. 2. 1. 12. 2010, S. 1557–1567. DOI: 10.1016/j.proeng.2010.03.168.
- [113] M. Zheng u. a. „Crack initiation behavior in StE690 steel characterized by strain energy density criterion“. In: *Theoretical and Applied Fracture Mechanics* 36.2 (2001). 12, S. 141–145. DOI: 10.1016/S0167-8442(01)00064-7.
- [114] Meinhard Kuna und Michael Zwick. „A mixed hybrid finite element for three-dimensional elastic crack analysis“. In: *International Journal of Fracture* 45.1 (1990). 12, S. 65–79. DOI: 10.1007/BF00012610.
- [115] Hongjun Yu u. a. „Domain-independent I-integrals for force and couple stress intensity factor evaluations of a crack in micropolar thermoelastic medium“. In: *International Journal of Solids and Structures* 100-101 (2016). 11, S. 470–484. DOI: 10.1016/j.ijsolstr.2016.09.020.

- [116] M. Lukhi, M. Kuna und G. Hütter. „Numerical investigation of low cycle fatigue mechanism in nodular cast iron“. In: *International Journal of Fatigue* 113 (2018). 11, S. 290–298. DOI: 10.1016/j.ijfatigue.2018.04.019.
- [117] M. Budnitzki und M. Kuna. „Experimental and numerical investigations on stress induced phase transitions in silicon“. In: *International Journal of Solids and Structures* 106-107 (2017). 11, S. 294–304. DOI: 10.1016/j.ijsolstr.2016.09.006.
- [118] Benjamin Nassauer, Thomas Liedke und Meinhard Kuna. „Development of a coupled discrete element (DEM)–smoothed particle hydrodynamics (SPH) simulation method for polyhedral particles“. In: *Computational Particle Mechanics* 3.1 (2016). 11, S. 95–106. DOI: 10.1007/s40571-015-0097-9.
- [119] Yi-Ze Wang und Meinhard Kuna. „Screw dislocation in functionally graded magneto-electroelastic solids“. In: *Philosophical Magazine Letters* 94.2 (2014). 11, S. 72–79. DOI: 10.1080/09500839.2013.861089.
- [120] J. Hein und M. Kuna. „A generalized J-integral for thermal shock analyses of 3D surface cracks in spatially and temperature dependent materials“. In: *Theoretical and Applied Fracture Mechanics* 92 (2017). 11, S. 318–330. DOI: 10.1016/j.tafmec.2017.04.013.
- [121] Meinhard Kuna und Andreas Ricoeur. „Theoretical investigations on the cracking of ferroelectric ceramics“. In: Bd. 3992. 11. 2000, S. 185–196.
- [122] L. Janski und M. Kuna. „Adaptive finite element modeling of stationary and propagating cracks in piezoelectric structures“. In: *Archives of Mechanics* 63.5-6 (2011). 10, S. 599–619.
- [123] Geralf Hütter u. a. „Ductile crack propagation by plastic collapse of the intervoid ligaments“. In: *International Journal of Fracture* 176.1 (2012). 10, S. 81–96. DOI: 10.1007/s10704-012-9728-9.
- [124] M. Kuna. „An application of the finite element method to elastic-plastic analysis of the compact tension fracture test specimen“. In: *International Journal of Fracture* 12.1 (1976). 10, S. 175–177. DOI: 10.1007/BF00036026.
- [125] T. Linse u. a. „Application of the small-punch test to irradiated reactor vessel steels in the brittle-ductile transition region“. In: *Journal of ASTM International* 5.4 (2008). 10. DOI: 10.1520/JAI101008.
- [126] Andreas Ricoeur und Meinhard Kuna. „The thermoelectromechanical J-integral and the thermal permeability of cracks“. In: *Key Engineering Materials* 385-387 (2008). 10, S. 569–572.
- [127] F. Shang, T. Kitamura und M. Kuna. „Theoretical investigation of an elliptical crack in thermopiezoelectric material. Part II: Crack propagation“. In: *Theoretical and Applied Fracture Mechanics* 40.3 (2003). 10, S. 247–253. DOI: 10.1016/j.tafmec.2003.09.005.

- [128] Fulin Shang, Meinhard Kuna und Matthias Scherzer. „Development of finite element techniques for three-dimensional analyses of thermo-piezoelectric materials“. In: *Journal of Engineering Materials and Technology* 125.1 (2003). 10, S. 18–21. DOI: 10.1115/1.1526128.
- [129] H. Zielke, M. Abendroth und M. Kuna. „Determining fracture mechanical properties for brittle materials using the ball on three balls test combined with numerical simulations“. In: *Theoretical and Applied Fracture Mechanics* 86 (2016). 9, S. 19–24. DOI: 10.1016/j.tafmec.2016.09.001.
- [130] Yi-Ze Wang und Meinhard Kuna. „General solutions of mechanical-electric-magnetic fields in magneto-electro-elastic solid containing a moving anti-plane crack and a screw dislocation“. In: *ZAMM Zeitschrift fur Angewandte Mathematik und Mechanik* 95.7 (2015). 9, S. 703–713. DOI: 10.1002/zamm.201300279.
- [131] Christoph Settgast u. a. „Validation of an experimental-numerical approach for the high temperature behaviour of open-cell ceramic foams“. In: *Journal of the European Ceramic Society* 39.2-3 (2019). 9, S. 610–617. DOI: 10.1016/j.jeurceramsoc.2018.09.022.
- [132] N.A. Giang u. a. „Dislocation pile-up and cleavage: effects of strain gradient plasticity on micro-crack initiation in ferritic steel“. In: *International Journal of Fracture* 214.1 (2018). 9, S. 1–15. DOI: 10.1007/s10704-018-0313-8.
- [133] U. Mühlich u. a. „A first-order strain gradient damage model for simulating quasi-brittle failure in porous elastic solids“. In: *Archive of Applied Mechanics* 83.6 (2013). 9, S. 955–967. DOI: 10.1007/s00419-013-0729-6.
- [134] Qun Li, Andreas Ricoeur und Meinhard Kuna. „Coulomb traction on a penny-shaped crack in a three dimensional piezoelectric body“. In: *Archive of Applied Mechanics* 81.6 (2011). 9, S. 685–700. DOI: 10.1007/s00419-010-0443-6.
- [135] M. Budnitzki und M. Kuna. „Scratching of silicon surfaces“. In: *International Journal of Solids and Structures* 162 (2019). 8, S. 211–216. DOI: 10.1016/j.ijsolstr.2018.11.024.
- [136] B. Nassauer und M. Kuna. „Impact of micromechanical parameters on wire sawing: a 3D discrete element analysis“. In: *Computational Particle Mechanics* 2.1 (2015). 8, S. 63–71. DOI: 10.1007/s40571-015-0036-9.
- [137] J. Hein und M. Kuna. „3D J-integral for functionally graded and temperature dependent thermoelastic materials“. In: Bd. 2. 8. 2016, S. 2246–2254. DOI: 10.1016/j.prostr.2016.06.281.
- [138] Omar El Khatib, Sergii Kozinov und Meinhard Kuna. „A micro–macro scale approach for thermal effects in ferroelectrics“. In: *Continuum Mechanics and Thermodynamics* 31.5 (2019). 8, S. 1439–1452. DOI: 10.1007/s00161-019-00760-8.

- [139] Andreas Burgold u. a. „Fracture mechanics testing and crack growth simulation of highly ductile austenitic steel“. In: *Materialpruefung/Materials Testing* 60.4 (2018). 8, S. 341–348. DOI: 10.3139/120.111156.
- [140] M. Kuna u. a. „The study of crack tip stress and strain field in elasto-plastic materials“. In: *Czechoslovak Journal of Physics* 28.1 (1978). 8, S. 88–107. DOI: 10.1007/BF01591313.
- [141] Florian Wallburg u. a. „A material removal coefficient for diamond wire sawing of silicon“. In: *Wear* 504-505 (2022). 7. DOI: 10.1016/j.wear.2022.204400.
- [142] D. Zhang u. a. „Multi-axial brittle failure criterion using Weibull stress for open Kelvin cell foams“. In: *International Journal of Solids and Structures* 75-76 (2015). 7, S. 1–11. DOI: 10.1016/j.ijsolstr.2015.04.020.
- [143] Dennis Bäcker, Andreas Ricoeur und Meinhard Kuna. „Sensor concept based on piezoelectric PVDF films for the structural health monitoring of fatigue crack growth“. In: *Structural Durability and Health Monitoring* 7.1-2 (2011). 7, S. 1–22.
- [144] Stefan Prüger u. a. „Influence of material and interface properties on the transformation behaviour of particle reinforced TRIP-matrix composites“. In: *Computational Materials Science* 64 (2012). 7, S. 273–277. DOI: 10.1016/j.commatsci.2012.04.031.
- [145] Yi-Ze Wang und Meinhard Kuna. „Time-harmonic dynamic Green’s functions for two-dimensional functionally graded magnetoelastic materials“. In: *Journal of Applied Physics* 115.4 (2014). 7. DOI: 10.1063/1.4862757.
- [146] M. Kuna. „Fem-techniques for thermo-electro-mechanical crack analyses in smart structures“. In: *Solid Mechanics and its Applications* 127 (2006). 7, S. 131–143. DOI: 10.1007/1-4020-4131-4_14.
- [147] Andreas Seupel und Meinhard Kuna. „Phenomenological modeling of strain hardening, phase transformation and damage effects of trip-steels“. In: Bd. 2017-January. 6. 2017, S. 576–587.
- [148] Hongjun Yu, Meinhard Kuna und Sergii Kozinov. „Effect of large-scale domain switching on intensity factors for a crack in 3D ferroelectric single crystals using the I-integral method“. In: *International Journal of Solids and Structures* 161 (2019). 6, S. 203–218. DOI: 10.1016/j.ijsolstr.2018.11.015.
- [149] Christoph Settgast, Martin Abendroth und Meinhard Kuna. „Fracture mechanical analysis of open cell ceramic foams under multi-axial mechanical loading“. In: *Archive of Applied Mechanics* 86.1-2 (2016). 6, S. 335–349. DOI: 10.1007/s00419-015-1107-3.
- [150] Carl H. Wolf u. a. „Crack growth behaviour in biaxial stress fields: Calculation of K-factors for cruciform specimens“. In: *Theoretical and Applied Fracture Mechanics* 107 (2020). 6. DOI: 10.1016/j.tafmec.2020.102521.

- [151] L. Mehlhorn u. a. „Influence of material and interface properties on the overall behaviour of particle reinforced steel with focus on the phase transformation capabilities of the individual components“. In: *Steel Research International* 82.9 (2011). 6, S. 1022–1031. DOI: 10.1002/srin.201100083.
- [152] Christian Ludwig und Meinhard Kuna. „An analytical approach to determine the pressure distribution during chemical mechanical polishing“. In: *Journal of Electronic Materials* 41.9 (2012). 6, S. 2606–2612. DOI: 10.1007/s11664-012-2151-1.
- [153] U. Mühlich, L. Zybell und M. Kuna. „Micromechanical modelling of size effects in failure of porous elastic solids using first order plane strain gradient elasticity“. In: *Computational Materials Science* 46.3 (2009). 6, S. 647–653. DOI: 10.1016/j.commatsci.2009.02.024.
- [154] Sebastian Henkel u. a. „Cruciform specimens used for determination of the influence of T-stress on fatigue crack growth with overloads on aluminum alloy Al 6061 T651“. In: *Frattura ed Integrità Strutturale* 13.48 (2019). 5, S. 135–143. DOI: 10.3221/IGF-ESIS.48.16.
- [155] J. Storm, M. Abendroth und M. Kuna. „Effect of morphology, topology and anisotropy of open cell foams on their yield surface“. In: *Mechanics of Materials* 137 (2019). 5. DOI: 10.1016/j.mechmat.2019.103145.
- [156] Carl H. Wolf u. a. „Fatigue Crack Growth in Austenitic Stainless Steel: Effects of Phase Shifted Loading and Crack Paths“. In: *Advanced Engineering Materials* 21.5 (2019). 5. DOI: 10.1002/adem.201800861.
- [157] Christoph Settgast u. a. „Prediction of High Temperature Behavior of Open-Cell Ceramic Foams Using an Experimental-Numerical Approach“. In: *Advanced Engineering Materials* 19.9 (2017). 5. DOI: 10.1002/adem.201700082.
- [158] Henry Zielke u. a. „Influence of the Specimen Manufacturing Process on the Strength of Carbon-Bonded Alumina ($\text{Al}_2\text{O}_3-\text{C}$)“. In: *Advanced Engineering Materials* 19.9 (2017). 5. DOI: 10.1002/adem.201700083.
- [159] Geralf Hütter, Uwe Mühlich und Meinhard Kuna. „Simulation of local instabilities during crack propagation in the ductile-brittle transition region“. In: *European Journal of Mechanics, A/Solids* 30.3 (2011). 5, S. 195–203. DOI: 10.1016/j.euromechsol.2010.12.013.
- [160] D. Bäcker, C. Häusler und M. Kuna. „Piezoelectric sensor for in-situ measurement of stress intensity factors“. In: Bd. 7981. 5. 2011. DOI: 10.1117/12.881094.
- [161] Andreas Emrich u. a. „Indirect measuring of crack growth by means of a key-curve-method in pre-cracked Charpy specimens made of nodular cast iron“. In: *International Journal of Fracture* 145.1 (2007). 5, S. 47–61. DOI: 10.1007/s10704-007-9105-2.

- [162] M. Kuna, H. Rajiyah und S.N. Atluri. „A new approach to determine weight functions from Bueckner's fundamental field by the superposition technique“. In: *International Journal of Fracture* 44.4 (1990). 5, R57–R63. DOI: 10.1007/BF00036175.
- [163] H. Zielke u. a. „Determining the fracture toughness of ceramic filter materials using the miniaturized chevron-notched beam method at high temperature“. In: *Ceramics International* 44.12 (2018). 4, S. 13986–13993. DOI: 10.1016/j.ceramint.2018.04.248.
- [164] Dennis Bäcker, Meinhard Kuna und Christoph Häusler. „Eigenfunctions of crack problems in the Mindlin plate theory“. In: *ZAMM Zeitschrift fur Angewandte Mathematik und Mechanik* 95.8 (2015). 4, S. 765–777. DOI: 10.1002/zamm.201300256.
- [165] Sergii Kozinov und Meinhard Kuna. „Mechanically induced ferroelectric domain evolution during crack propagation“. In: *Smart Materials and Structures* 28.2 (2019). 4. DOI: 10.1088/1361-665X/aaf67d.
- [166] J. Hein, O. El Khatib und M. Kuna. „Influence of interfaces on crack propagation through a layered refractory loaded by thermal shock“. In: *Journal of Ceramic Science and Technology* 7.2 (2016). 4, S. 203–208. DOI: 10.4416/JCST2016-00004.
- [167] Jarno Hein und Meinhard Kuna. „Optimizing thermal shock resistance of layered refractories“. In: *Advanced Engineering Materials* 14.6 (2012). 4, S. 408–415. DOI: 10.1002/adem.201100283.
- [168] Stephan Roth und Meinhard Kuna. „Numerical study on interfacial damage of sprayed coatings due to thermo-mechanical fatigue“. In: 4. 2011, S. 1032–1043.
- [169] S. Rasche u. a. „Determination of mechanical properties of brittle materials by using the small punch test and the ball on three balls test“. In: 4. 2010.
- [170] Eric Béchet, Matthias Scherzer und Meinhard Kuna. „Fracture of piezoelectric materials with the X-FEM“. In: *European Journal of Computational Mechanics* 17.5-7 (2008). 4, S. 637–649. DOI: 10.3166/REMN.17.637–649.
- [171] M. Kuna. „Three-dimensional elastic analysis of CT specimen with straight and curved crack fronts“. In: *International Journal of Fracture* 19.3 (1982). 4, R63–R67. DOI: 10.1007/BF00017136.
- [172] W. Uhlmann u. a. „Approximate representation of elastic-plastic small scale yielding solution for crack problems“. In: *International Journal of Fracture* 12.3 (1976). 4, S. 507–509. DOI: 10.1007/BF00032853.
- [173] Florian Wallburg u. a. „Influence of Microcracks on Strength of Diamond Wire Sawn Silicon Substrates“. In: *Lecture Notes in Mechanical Engineering* (2021). 3, S. 365–383. DOI: 10.1007/978-981-15-9893-7_26.
- [174] V. Mikulich u. a. „Experimental and numerical study of interaction between particle loaded fluid and a rough wall with micropillars“. In: *Tribology International* 83 (2015). 3, S. 42–50. DOI: 10.1016/j.triboint.2014.10.009.

- [175] Jeffy Abraham, Stephan Roth und Meinhard Kuna. „A cohesive zone model for thermo-mechanical fatigue“. In: *International Journal of Fatigue* 136 (2020). 3. DOI: 10.1016/j.ijfatigue.2020.105572.
- [176] Mohan Kumar Rajendran, Meinhard Kuna und Michael Budnitzki. „Undercooling versus stress induced martensitic phase transformation: The case of MgO – partially stabilized zirconia“. In: *Computational Materials Science* 174 (2020). 3. DOI: 10.1016/j.commatsci.2019.109460.
- [177] F. Wallburg, M. Kuna und S. Schoenfelder. „Material Removal Simulation in Sawing Processes of Photovoltaic Silicon“. In: Bd. 4. 13. 3. 2019, S. 761–768. DOI: 10.1557/adv.2019.95.
- [178] Marcel Selent, Martin Abendroth und Meinhard Kuna. „Experimental and Numerical Investigations on the Creep Behaviour of Heat-Resisting Chromium Steel X10CrMoVnb9-1 by Means of Small Punch Test“. In: *Transactions of the Indian Institute of Metals* 69.2 (2016). 3, S. 629–633. DOI: 10.1007/s12666-015-0797-0.
- [179] Stefan Prüger u. a. „Implementation of a material model for a cast TRIP-steel“. In: 3. 2011, S. 858–869.
- [180] Felix Koch u. a. „Residual stress analysis of in-service welded gas pipelines“. In: Bd. 6 B. 3. 2013. DOI: 10.1115/PVP2013-97585.
- [181] J. Hein u. a. „Prospects of a new generation of refractories made by ceramic multilayer technology“. In: *InterCeram: International Ceramic Review* (2012). 3, S. 93–97.
- [182] Stefan Soltysiak u. a. „Influence of the content of modified coal tar pitch powder on the strength of carbon bonded alumina (Al₂O₃-C)“. In: *Advanced Engineering Materials* 15.12 (2013). 3, S. 1230–1234. DOI: 10.1002/adem.201300173.
- [183] Dennis Bäcker, Meinhard Kuna und Andreas Ricoeur. „Sensor concept based on piezoelectric PVDF films to measure fracture mechanical parameters; [Ein sensorkonzept auf der basis piezoelektrischer pvdf-folien zur messung bruchmechanischer beanspruchungsgrößen]“. In: *Materialprüfung/Materials Testing* 52.5 (2010). 3, S. 292–299. DOI: 10.3139/120.110130.
- [184] Andreas Ricoeur und Meinhard Kuna. „Influence of the fracture process zone in ferroelectrics on the effective fracture toughness“. In: Bd. 5053. 3. 2003, S. 395–404. DOI: 10.1117/12.484081.
- [185] M. Kuna und M. Springmann. „Determination of ductile damage parameters by local deformation fields“. In: 3. 2006, S. 535–536. DOI: 10.1007/1-4020-4972-2_265.
- [186] Andreas Burgold, Meinhard Kuna und Stefan Prüger. „Crack tip fields in ductile materials with martensitic phase transformation - A numerical 2D study“. In: *Engineering Fracture Mechanics* 138 (2015). 2, S. 169–184. DOI: 10.1016/j.engfracmech.2015.03.002.

- [187] Omar El Khatib, Meinhard Kuna und Sergii Kozinov. „Switching induced heating at the crack tip in ferroelectric ceramics“. In: *International Journal of Fracture* 221.2 (2020). 2, S. 141–154. DOI: 10.1007/s10704-019-00415-4.
- [188] S. Kozinov, S. Roth und M. Kuna. „Development of a cohesive model for damage simulation in ferroelectric materials subjected to electromechanical loading“. In: 2. 2014, S. 4320–4331.
- [189] Hongjun Yu und Meinhard Kuna. „A J-interaction integral to compute force stress and couple stress intensity factors for cracks in functionally graded micropolar materials“. In: *Advanced Structured Materials* 80 (2018). 2, S. 419–448. DOI: 10.1007/978-3-319-70563-7_19.
- [190] Mehul Lukhi, Geralf Hütter und Meinhard Kuna. „A Novel Micromechanics Approach for Understanding of Fatigue in Nodular Cast Iron“. In: Bd. 13. 2. 2018, S. 607–612. DOI: 10.1016/j.prostr.2018.12.100.
- [191] Andreas Burgold, Stephan Roth und Meinhard Kuna. „Cohesive zone modeling of stable crack propagation in highly ductile steel“. In: *Key Engineering Materials* 774 KEM (2018). 2, S. 167–172. DOI: 10.4028/www.scientific.net/KEM.774.167.
- [192] Meinhard Kuna, Andreas Burgold und Stefan Prüger. „Stress analysis and configurational forces for cracks in TRIP-steels“. In: *International Journal of Fracture* 193.2 (2015). 2, S. 171–187. DOI: 10.1007/s10704-015-0027-0.
- [193] Sergii Kozinov und Meinhard Kuna. „Micromechanical simulation of ferroelectric domain processes at crack tips“. In: *Archive of Applied Mechanics* 89.6 (2019). 2, S. 1069–1083. DOI: 10.1007/s00419-018-1419-1.
- [194] Martin Abendroth u. a. „A hybrid approach to describe the elastic-plastic deformation behavior of 2D cellular solids including damage effects“. In: *Technische Mechanik* 40.1 (2020). 2, S. 5–14. DOI: 10.24352/UB.OVGU-2020-008.
- [195] Andreas Seupel u. a. „Modeling of the Thermomechanical Behavior, Damage, and Fracture of High Alloy TRIP-Steel“. In: *Springer Series in Materials Science* 298 (2020). 2, S. 723–769. DOI: 10.1007/978-3-030-42603-3_22.
- [196] Sergii Kozinov und Meinhard Kuna. „Numerical analysis of fracture of pre-stressed ferroelectric actuator taking into account cohesive zone for damage accumulation“. In: *Computational Methods in Applied Sciences* 43 (2017). 2, S. 23–39. DOI: 10.1007/978-3-319-44507-6_2.
- [197] Mohan Kumar Rajendran, Michael Budnitzki und Meinhard Kuna. „Multi-scale Modeling of Partially Stabilized Zirconia with Applications to TRIP-Matrix Composites“. In: *Springer Series in Materials Science* 298 (2020). 2, S. 679–721. DOI: 10.1007/978-3-030-42603-3_21.
- [198] Christoph Settgast u. a. „A hybrid approach for consideration of the elastic-plastic behaviour of open-cell ceramic foams“. In: 2. 2020, S. 2314–2325.

- [199] Stephan Roth und Meinhard Kuna. „Finite element analyses of fatigue crack growth under small scale yielding conditions modelled with a cyclic cohesive zone approach“. In: 2. 2013, S. 1075–1086.
- [200] Jarno Hein und Meinhard Kuna. „Optimal design of layered refractories for thermal shock resistance“. In: 2. 2012, S. 4511–4524.
- [201] Lars Mehlhorn, Uwe Mühlisch und Meinhard Kuna. „A material model of particle size dependent transformation plasticity of psz ceramics under thermomechanical loading“. In: *Advanced Engineering Materials* 15.7 (2013). 2, S. 638–645. DOI: 10.1002/adem.201200375.
- [202] Dennis Bäcker, Christoph Häusler und Meinhard Kuna. „Piezoelectric polyvinylidene fluoride films for the measurement of fracture mechanical parameters; [Piezoelektrische Polyvinylidenfluorid-Folien zur Messung bruchmechanischer Kenngrößen]“. In: *Technisches Messen* 78.6 (2011). 2, S. 293–303. DOI: 10.1524/teme.2011.0116.
- [203] T. Linse u. a. „Application of the small-punch test to irradiated reactor vessel steels in the brittle-ductile transition region“. In: Bd. 1502 STP. 2. 2009, S. 218–235. DOI: 10.1520/JAI101008.
- [204] T. Mottitschka u. a. „Fatigue crack growth in nodular cast iron - Influences of graphite spherical size and variable amplitude loading“. In: Bd. 240. 2. 2010. DOI: 10.1088/1742-6596/240/1/012060.
- [205] D. Bäcker, M. Kuna und C. Häusler. „Measurement of Kirchhoff's stress intensity factors in bending plates“. In: Bd. 9061. 2. 2014. DOI: 10.1117/12.2044472.
- [206] Andreas Ricoeur, Marco Enderlein und Meinhard Kuna. „Fatigue crack growth in ferroelectrics under cyclic electrical loading“. In: Bd. 6170. 2. 2006. DOI: 10.1117/12.657624.
- [207] M. Springmann und M. Kuna. „Erratum: Identification of material parameters of the Gurson-Tvergaard- Needleman model by combined experimental and numerical techniques (Computational Materials Science (2005) 32 (544-552))“. In: *Computational Materials Science* 33.4 (2005). 2, S. 500. DOI: 10.1016/j.commatsci.2005.02.003.
- [208] M. Kuna. „HYBRID CRACK TIP ELEMENTS FOR THREE DIMENSIONAL FRACTURE PROBLEMS.“ In: 2. 1984, S. 607–617. DOI: 10.1007/978-94-009-6146-3_40.
- [209] M. Kuna und E. Roos. „Cell model analyses of the void behaviour under cyclic plastic loading“. In: 2. 1998, S. 585–594.
- [210] M. Zheng, U. Lauschke und M. Kuna. „A damage mechanics based approach for fracture of metallic components“. In: *Computational Materials Science* 19.1-4 (2000). 2, S. 170–178. DOI: 10.1016/s0927-0256(00)00152-x.
- [211] Meinhard Kuna. „Numerical analysis of fracture in smart composite structures“. In: *Structures and Materials* 6 (2000). 2, S. 23–33.

- [212] M. Kuna und V. Schmidt. „EFFICIENT FINITE-ELEMENT-ALGORITHM FOR THREE-DIMENSIONAL FRACTURE PROBLEMS.“ In: 2. 1984, S. 1079–1086. DOI: 10.1016/b978-1-4832-8440-8.50089-2.
- [213] H. Zielke, M. Abendroth und M. Kuna. „Fracture toughness characterization of carbon bonded alumina using chevron notched specimens“. In: *Key Engineering Materials* 754 KEM (2017). 1, S. 71–74. DOI: 10.4028/www.scientific.net/KEM.754.71.
- [214] H. Zielke, M. Abendroth und M. Kuna. „Determination of fracture mechanical properties of carbon bonded alumina using miniaturized specimens“. In: *Key Engineering Materials* 713 (2016). 1, S. 70–73. DOI: 10.4028/www.scientific.net/KEM.713.70.
- [215] St. Gesell u. a. „Numerical calculation of Δ CTOD to simulate fatigue crack growth under large scale viscoplastic deformations“. In: *Engineering Fracture Mechanics* 281 (2023). 1. DOI: 10.1016/j.engfracmech.2023.109064.
- [216] N.A. Giang, M. Kuna und G. Hütter. „Effect of Gradient Plasticity on Crack Initiation and Propagation in the Ductile-Brittle Transition Region of Ferritic Steel“. In: Bd. 13. 1. 2018, S. 45–50. DOI: 10.1016/j.prostr.2018.12.008.
- [217] Sergii Kozinov und Meinhard Kuna. „Numerical investigation of crack propagation direction in ferroelectric actuators“. In: Bd. 10165. 1. 2017. DOI: 10.1117/12.2258229.
- [218] S. Soltysiak, M. Abendroth und M. Kuna. „Influence of the Cabores content on the strength of carbon bonded alumina obtained by means of small punch test“. In: 1. 2014, S. 135–140. DOI: 10.1002/9781118837009.ch24.
- [219] T. Linse und M. Kuna. „Characterization of reactor vessel steels in the brittle-ductile transition region“. In: Bd. 1. 1. 2008, S. 765–772.
- [220] Daniel Gloger, Marco Enderlein und Meinhard Kuna. „Error analysis for fem analysis of cracks using submodels“. In: Bd. 2. 1. 2012, S. 41–47. DOI: 10.1115/PVP2012-78522.
- [221] Łukasz Jański, Peter Steinhorst und Meinhard Kuna. „Crack propagation simulations in piezoelectric structures with an efficient adaptive finite element tool“. In: *IUTAM Bookseries* 24 (2011). 1, S. 163–173. DOI: 10.1007/978-90-481-9887-0_16.
- [222] Geralf Hütter u. a. „Integrated damage mechanics approach to brittle and ductile crack propagation“. In: Bd. 7. 1. 2013, S. 5639–5646.
- [223] B.N. Rao und M. Kuna. „Erratum to: Interaction integrals for fracture analysis of functionally graded magnetoelectroelastic materials (*International Journal of Fracture* (2008) 153 (15-37) DOI: 10.1007/s10704-008-9285-4)“. In: *International Journal of Fracture* 161.2 (2010). 1, S. 199–201. DOI: 10.1007/s10704-010-9446-0.
- [224] Marcel Springmann u. a. „Influence of strain localization on parameter identification“. In: *Journal of Engineering Materials and Technology* 131.1 (2009). 1, S. 0110031–0110039. DOI: 10.1115/1.3026546.
- [225] Thomas Linse und Meinhard Kuna. „Application of damage models to the ductile-brittle transition region of Reactor Steels“. In: Bd. 7. 1. 2013, S. 5538–5547.

- [226] Andreas Ricoeur, Dennis Bäcker und Meinhard Kuna. „In-situ determination of stress intensity factors for the prediction of fatigue crack growth using piezoelectric polymer coatings“. In: Bd. 7647. 1. 2010. DOI: 10.1111/12.847641.
- [227] M. Budnitzki und M. Kuna. „Modeling silicon under contact loading conditions: Aspects of non-associated flow“. In: *Technische Mechanik* 32.2 (2012). 1, S. 146–154.
- [228] Stefan Soltysiak u. a. „Influence of the microstructure on the fracture behavior of carbon bonded alumina“. In: *Key Engineering Materials* 592-593 (2014). 1, S. 279–282. DOI: 10.4028/www.scientific.net/KEM.592-593.279.
- [229] M. Enderlein u. a. „Computational dynamic fracture analysis for drop tests of shipping casks“. In: Bd. 2. 1. 2005, S. 1031–1036.
- [230] M. Kuna u. a. „Theoretical and Experimental Studies of Plane Cracked Body Behavior in Elastic and Elasto-plastic Regions - 2. Evaluation of Criteria for COD Failure and J-integral.; [TEORETICHESKOE I EKSPERIMENTAL'NOE IZUCHENIE PO-VEDENIYA PLOSKIKH TEL S TRESHCHINOI V UPRUGOI I UPRUGOPLASTICHESKOI OBLASTYAKH - 2. OTSENKA KRITERIEV RAZRUSHENIYA COD I J-INTEGRALA.]“ In: *Problemy Prochnosti* 6 (144) (1981). 1, S. 102–107.
- [231] Meinhard Kuna und Martin Abendroth. „Testing of ductile materials by the small-punch-test - Determination and transfer of damage parameters; [Prüfung duktiler Werkstoffe mit dem Small-Punch-Test - Bestimmung und Übertragung schädigungsmechanischer Parameter]“. In: *Materialprüfung/Materials Testing* 47.1-2 (2005). 1, S. 45–54. DOI: 10.3139/120.100637.
- [232] M. Springmann und M. Kuna. „Identification of material parameters of inelastic constitutive laws from displacement fields“. In: *Structures and Materials* 14 (2004). 1, S. 13–23.
- [233] A. Burgold u. a. „Experimental and numerical investigation of crack growth in highly ductile cast trip-steel“. In: Bd. 2. 0. 2017, S. 510–511.
- [234] Anthony Ingraffea u. a. „Editorial to the Special Issue 50th Anniversary of EFM“. In: *Engineering Fracture Mechanics* 187 (2018). 0, S. 16–21. DOI: 10.1016/j.engfracmech.2018.01.029.
- [235] Sergey Kozinov und Meinhard Kuna. „Configurational forces in ferroelectric structures analyzed by a macromechanical switching model“. In: *Acta Mechanica* 234.1 (2023). 0, S. 17–36. DOI: 10.1007/s00707-022-03265-9.
- [236] N.A. Giang, M. Kuna und G. Hütter. „Modelling the influence of carbide-ferrite interface on crack initiation and growth in the transition region of ferritic steel“. In: Bd. 1. 0. 2017, S. 435–436.
- [237] Andreas Seupel und Meinhard Kuna. „Phenomenological modeling of thermomechanical coupling effects of highly alloyed TRIP-steels at different stress states“. In: Bd. 35. C. 0. 2021, S. 10–17. DOI: 10.1016/j.prostr.2021.12.042.

- [238] Omar El Khatib u. a. „A non-iterative parameter identification procedure for the non-local Gurson–Tvergaard–Needleman model based on standardized experiments“. In: *International Journal of Fracture* 241.1 (2023). 0, S. 73–94. DOI: 10.1007/s10704-023-00689-9.
- [239] Omar El Khatib, Meinhard Kuna und Sergey Kozinov. „Transient thermal fracture analysis of ferroelectric ceramics under electromechanical loading“. In: *Smart Materials and Structures* 30.8 (2021). 0. DOI: 10.1088/1361-665X/ac0f90.
- [240] F. Rabold und M. Kuna. „ProCrack - A tool for automated finite element simulation of fatigue crack growth in three-dimensional components“. In: Bd. 1. 0. 2017, S. 528–529.
- [241] Giang Ngoc Anh, Geralf Hütter und Meinhard Kuna. „Micromechanical modeling of crack initiation and propagation in the ductile-brittle transition region“. In: *Key Engineering Materials* 713 (2016). 0, S. 58–61. DOI: 10.4028/www.scientific.net/KEM. 713.58.
- [242] Mehul Lukhi, Meinhard Kuna und Geralf Hütter. „Micromechanical simulation of fatigue in nodular cast iron under stress-controlled loading“. In: *Material Design and Processing Communications* 3.4 (2021). 0. DOI: 10.1002/mdp2.214.
- [243] Rahul Ganesh u. a. „ProCrackPlast: a finite element tool to simulate 3D fatigue crack growth under large plastic deformations“. In: *International Journal of Fracture* 243.1 (2023). 0, S. 65–90. DOI: 10.1007/s10704-023-00732-9.
- [244] M. Kuna, G. Hütter und L. Zybell. „A survey on micromechanical modelling strategies for fracture in nodular cast iron“. In: Bd. 1. 0. 2017, S. 437–438.
- [245] Anthony Ingraffea und Meinhard Kuna. „Dr. Paul Croce Paris August 7, 1930–January 15, 2017“. In: *Engineering Fracture Mechanics* 187 (2018). 0, S. 1–10. DOI: 10.1016/j.engfracmech.2017.10.001.
- [246] U. Mühlrich und M. Kuna. „Simulation of quasi-brittle failure by means of a continuum damage model based on first order strain gradient elasticity“. In: 0. 2012, S. 6332–6348.
- [247] B.N. Rao und M. Kuna. „Erratum to ‘Interaction integrals for fracture analysis of functionally graded piezoelectric materials’, International Journal of Solids and Structures 45 (20) (2008) 5237–5257 (DOI:10.1016/j.ijsolstr.2008.05.020)“. In: *International Journal of Solids and Structures* 47.9 (2010). 0, S. 1325–1326. DOI: 10.1016/j.ijsolstr.2010. 01.001.
- [248] J. Storm, M. Abeidroth und M. Kuna. „Geometry dependent effective heat conductivity of open-cell foams based on kelvin cell models“. In: 0. 2014, S. 897–902. DOI: 10.1002/9781118837009.ch153.
- [249] Geralf Hütter u. a. „2D and 3D simulation of ductile crack propagation by plastic collapse of micro-ligaments“. In: 0. 2012.
- [250] Meinhard Kuna. „Preface“. In: *IUTAM Bookseries* 24 (2011). 0, S. v–vii.

- [251] Qun Li, Marco Enderlein und Meinhard Kuna. „Micromechanical simulation of ferroelectric domain switching at cracks“. In: *IUTAM Bookseries* 24 (2011). 0, S. 101–110. DOI: [10.1007/978-90-481-9887-0_10](https://doi.org/10.1007/978-90-481-9887-0_10).
- [252] M. Kuna und B.N. Rao. „Interaction integrals for cracks in functionally graded magneto-electroelastic materials“. In: Bd. 8. 0. 2009, S. 6422–6430.
- [253] Dennis Bäcker, Christoph Häusler und Meinhard Kuna. „In-situ crack monitoring in plates; [Ein Sensorkonzept zur In-situ-Rissüberwachung in plattenartigen Strukturen]“. In: *Materialprüfung/Materials Testing* 55.11-12 (2013). 0, S. 830–839. DOI: [10.3139/120.110505](https://doi.org/10.3139/120.110505).
- [254] Ł. Janski und M. Kuna. „Crack propagation simulations in piezoelectric structures with an efficient adaptive finite element tool“. In: Bd. 6. 0. 2009, S. 4600–4609.
- [255] L. Zybell u. a. „Numerical and experimental investigations of overload effects during fatigue crack growth in nodular cast iron“. In: 0. 2010.
- [256] Uwe Mühlisch u. a. „Simulation of size effects in failure of porous elastic solids using strain gradient elasticity in conjunction with a statistical approach“. In: Bd. 4. 0. 2009, S. 3102–3111.
- [257] M. Kuna und S. Wippler. „Constitutive description of the damage process in lead free solder alloys“. In: Bd. 4. 0. 2009, S. 3158–3167.
- [258] Karsten Wippler und Meinhard Kuna. „Application of the θ -method to 3D BEM analysis of cracks in piezoelectric components“. In: *Key Engineering Materials* 488-489 (2012). 0, S. 363–366. DOI: [10.4028/www.scientific.net/KEM.488-489.363](https://doi.org/10.4028/www.scientific.net/KEM.488-489.363).
- [259] Marco Menzer und Meinhard Kuna. „Damage identification in two-dimensional structures using Lamb waves“. In: Bd. 9061. 0. 2014. DOI: [10.1117/12.2042770](https://doi.org/10.1117/12.2042770).
- [260] Benjamin Nassauer und Meinhard Kuna. „A discrete element method for polyhedral particles“. In: 0. 2013, S. 681–690.
- [261] Michael Wünsche, Chuanzeng Zhang und Meinhard Kuna. „Dynamische Rissanalyse in geschichteten anisotropen Verbundwerkstoffen mit einer Zeitbereichs-Randelementmethode“. In: *Materialprüfung/Materials Testing* 51.3 (2009). 0, S. 116–125. DOI: [10.3139/120.110021](https://doi.org/10.3139/120.110021).
- [262] T. Linse und M. Kuna. „Application of a gradient-enriched ductile damage model in the brittle-ductile transition region of ferritic steels“. In: 0. 2010.
- [263] Uwe Mühlisch, Lutz Zybell und Meinhard Kuna. „Simulation of failure in porous elastic solids incorporating size effects“. In: Bd. 1. 0. 2008, S. 233–240.
- [264] Meinhard Kuna. „Fracture mechanics of piezoelectric materials and components“. In: Bd. 2. 0. 2008, S. 1664–1692.

- [265] Éric Béchet und Meinhard Kuna. „Some numerical studies with X-FEM for cracked piezoelectric media“. In: *IUTAM Bookseries* 24 (2011). 0, S. 141–152. DOI: 10.1007/978-90-481-9887-0_14.
- [266] Ulrich Groh und Meinhard Kuna. „2D piezoelectric crack analysis by boundary element method“. In: *Key Engineering Materials* 251-252 (2003). 0, S. 91–96. DOI: 10.4028/www.scientific.net/kem.251-252.91.
- [267] M. Kuna u. a. „Theoretical and experimental investigation of the behavior of plane bodies with a crack in the elastic and elastic-plastic regions. 1. Analysis of stresses and strains by the finite element method“. In: *Strength of Materials* 12.11 (1980). 0, S. 1366–1372. DOI: 10.1007/BF01124559.
- [268] M. Kuna u. a. „Theoretical and experimental study of the behavior of plane bodies with a crack in the elastic and elastoplastic regions. Communication 2. Evaluation of the cod and J-integral failure criteria“. In: *Strength of Materials* 13.6 (1981). 0, S. 785–790. DOI: 10.1007/BF00767812.
- [269] Kohichi Tanaka u. a. „The influence of specimen configuration on the retardation behavior of fatigue crack growth“. In: *Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A* 46.408 (1980). 0, S. 853–860. DOI: 10.1299/kikaia.46.853.
- [270] Z. Bilek, M. Kuna und V. Schmidt. „FINITE ELEMENT APPROACH TO CRACK TIP OPENING DISPLACEMENT DETERMINATION IN STRUCTURAL STEELS.“ In: *Congr on Mater Test, 7th, Lect v.1* (1978). 0, S. 9–12.
- [271] F. Shang, T. Kitamura und M. Kuna. „An elliptical crack in a thermopiezoelectric solid under uniform temperature gradient: Analytical development“. In: *Key Engineering Materials* 261-263.I (2004). 0, S. 63–68.
- [272] M. Kuna, H. Rajiyah und S.N. Atluri. „Response: Discussion of a new approach to determine weight functions from bueckner's fundamental field by the superposition technique," by M.H. Aliabadi and D.P. Rooke“. In: *International Journal of Fracture* 47.4 (1991). 0, R61–62. DOI: 10.1007/BF00012953.
- [273] U. Muhlich, A. Emrich und M. Kuna. „Modified key-curve-method for determination of dynamic crack resistance curves“. In: 0. 2006, S. 409–410. DOI: 10.1007/1-4020-4972-2_202.
- [274] S. Rasche und M. Kuna. „Determination of working and strength properties with the Small-Punch-Test Identification of flow curves and material characteristics of brittle failure at low temperatures; [Bestimmung von Verformungs- und Festigkeitseigenschaften mit dem Small-Punch-Test Identifikation von Fließkurven und Materialkennwerten des Sprödbruchs bei Tiefen Temperaturen]“. In: *VDI Berichte* 1948 (2006). 0, S. 113–122.
- [275] Z. Knésl u. a. „The thermal properties of a crack tip plastic zone“. In: *Czechoslovak Journal of Physics* 29.7 (1979). 0, S. 825–828. DOI: 10.1007/BF01797646.

- [276] Zdenek Bilek, Meinhard Kuna und Zdenek Knesl. „Study of Crack Tip Opening Using the Finite Element Method.; [STUDIUM OTEVRENI TRHLINY METODOU KONECNYCH PRVKU.]“ In: *Kovove Materialy* 15.6 (1977). 0, S. 663–684.
- [277] Meinhard Kuna. „Finite element analyses of cracks in piezoelectric structures“. In: *Key Engineering Materials* 348-349 (2007). 0, S. 629–632. DOI: 10.4028/0 - 87849 - 448 - 0.629.
- [278] M. Kuna. „A review of finite element techniques to analyse 3D piezoelectric crack problems“. In: Bd. 8. 0. 2005, S. 6024–6029.
- [279] Zdenek Bilek, Meinhard Kuna und Zdenek Knesl. „Study of Local Heating at the Dynamically Loaded Crack Tip.; [STUDIUM LOKALNIHO OHREVU V KORENI TRHLINY PRI DYNAMICKEM ZATIZENI.]“ In: *Kovove Materialy* 19.4 (1981). 0, S. 413–422.
- [280] Michael Wünsche u. a. „2D-dynamische Rissanalyse in anisotropen Werkstoffen mit einer hypersingulären Zeitbereichs-Randelementmethode“. In: *Materialpruefung/Materials Testing* 49.10 (2007). 0, S. 534–541. DOI: 10.3139/120.100844.