# Uwe Wolfram

## List of Publications by Year in descending order



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|---|---|---|---|
| 48 papers | 1,993 citations | 279798 23 h-index | 243625 44 g-index |
| 51 all docs | 51 docs citations | 51 times ranked | 2438 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Mechanical properties of cortical bone and their relationships with age, gender, composition and microindentation properties in the elderly. Bone, 2016, 93, 196-211. | 2.9 | 207 |
| 2 | In situ micropillar compression reveals superior strength and ductility but an absence ofÂdamage inÂlamellar bone. Nature Materials, 2014, 13, 740-747. | 27.5 | 154 |
| 3 | In vivo degradation of low temperature calcium and magnesium phosphate ceramics in a heterotopic model. Acta Biomaterialia, 2011, 7, 3469-3475. | 8.3 | 119 |
| 4 | Rehydration of vertebral trabecular bone: Influences on its anisotropy, its stiffness and the indentation work with a view to age, gender and vertebral level. Bone, 2010, 46, 348-354. | 2.9 | 112 |
| 5 | Effect of Subchondral Drilling on the Microarchitecture of Subchondral Bone. American Journal of Sports Medicine, 2012, 40, 828-836. | 4.2 | 109 |
| 6 | Highâ€resolution ZTE imaging of human teeth. NMR in Biomedicine, 2012, 25, 1144-1151. | 2.8 | 109 |
| 7 | Autofluorescence imaging, an excellent tool for comparative morphology. Journal of Microscopy, 2011, 244, 259-272. | 1.8 | 95 |
| 8 | Periodontal Ligament Hydrostatic Pressure with Areas of Root Resorption after Application of a Continuous Torque Moment. Angle Orthodontist, 2007, 77, 653-659. | 2.4 | 84 |
| 9 | Valid Î¼ finite element models of vertebral trabecular bone can be obtained using tissue properties measured with nanoindentation under wet conditions. Journal of Biomechanics, 2010, 43, 1731-1737. | 2.1 | 83 |
| 10 | Fabric-based Tsaiâ€“Wu yield criteria for vertebral trabecular bone in stress and strain space. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 15, 218-228. | 3.1 | 66 |
| 11 | Post-yield and failure properties of cortical bone. BoneKEy Reports, 2016, 5, 829. | 2.7 | 63 |
| 12 | Damage accumulation in vertebral trabecular bone depends on loading mode and direction. Journal of Biomechanics, 2011, 44, 1164-1169. | 2.1 | 59 |
| 13 | A generalized anisotropic quadric yield criterion and its application to bone tissue at multiple length scales. Biomechanics and Modeling in Mechanobiology, 2013, 12, 1155-1168. | 2.8 | 58 |
| 14 | Nanoscale deformation mechanisms and yield properties of hydrated bone extracellular matrix. Acta Biomaterialia, 2017, 60, 302-314. | 8.3 | 58 |
| 15 | Correspondences of hydrostatic pressure in periodontal ligament with regions of root resorption: A clinical and a finite element study of the same human teeth. Computer Methods and Programs in Biomedicine, 2009, 93, 155-161. | 4.7 | 53 |
| 16 | Internal forces and moments in the femur of the rat during gait. Journal of Biomechanics, 2010, 43, 2473-2479. | 2.1 | 53 |
| 17 | Hydrogels for nucleus replacementâ€”Facing the biomechanical challenge. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 67-77. | 3.1 | 51 |
| 18 | Continuum damage interactions between tension and compression in osteonal bone. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 49, 355-369. | 3.1 | 36 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Compressive behaviour of uniaxially aligned individual mineralised collagen fibres at the micro- and nanoscale. Acta Biomaterialia, 2019, 89, 313-329. | 8.3 | 36 |
| 20 | Crumbling Reefs and Cold-Water Coral Habitat Loss in a Future Ocean: Evidence of â€œCoralporosisâ€•as an Indicator of Habitat Integrity. Frontiers in Marine Science, 2020, 7, . | 2.5 | 36 |
| 21 | Measurement of structural anisotropy in femoral trabecular bone using clinical-resolution CT images. Journal of Biomechanics, 2013, 46, 2659-2666. | 2.1 | 34 |
| 22 | Compositional and mechanical properties of growing cortical bone tissue: a study of the human fibula. Scientific Reports, 2019, 9, 17629. | 3.3 | 31 |
| 23 | Particle tracking during Ostwald ripening using time-resolved laboratory X-ray microtomography. Materials Characterization, 2014, 90, 185-195. | 4.4 | 26 |
| 24 | Characterizing microcrack orientation distribution functions in osteonal bone samples. Journal of Microscopy, 2016, 264, 268-281. | 1.8 | 26 |
| 25 | â€œPeroperative estimation of bone quality and primary dental implant stabilityâ€• Journal of the Mechanical Behavior of Biomedical Materials, 2019, 92, 24-32. | 3.1 | 20 |
| 26 | A method to obtain surface strains of soft tissues using a laser scanning device. Journal of Biomechanics, 2008, 41, 2402-2410. | 2.1 | 17 |
| 27 | Vertebral trabecular main direction can be determined from clinical CT datasets using the gradient structure tensor and not the inertia tensorâ€”A case study. Journal of Biomechanics, 2009, 42, 1390-1396. | 2.1 | 17 |
| 28 | Internal morphology of human facet joints: comparing cervical and lumbar spine with regard to age, gender and the vertebral core. Journal of Anatomy, 2012, 220, 233-241. | 1.5 | 17 |
| 29 | A downloadable meshed human canine tooth model with PDL and bone for finite element simulations. Dental Materials, 2009, 25, e57-e62. | 3.5 | 15 |
| 30 | TRANSVERSE ISOTROPIC ELASTIC PROPERTIES OF VERTEBRAL TRABECULAR BONE MATRIX MEASURED USING MICROINDENTATION UNDER DRY CONDITIONS (EFFECTS OF AGE, GENDER, AND VERTEBRAL LEVEL). Journal of Mechanics in Medicine and Biology, 2010, 10, 139-150. | 0.7 | 13 |
| 31 | A new multiscale micromechanical model of vertebral trabecular bones. Biomechanics and Modeling in Mechanobiology, 2017, 16, 933-946. | 2.8 | 13 |
| 32 | Identification of a crushable foam material model and application to strength and damage prediction of human femur and vertebral body. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 26, 136-147. | 3.1 | 12 |
| 33 | European Society of Biomechanics S.M. Perren Award 2016: A statistical damage model for bone tissue based on distinct compressive and tensile cracks. Journal of Biomechanics, 2016, 49, 3616-3625. | 2.1 | 11 |
| 34 | Comparative Analysis of Bone Structural Parameters Reveals Subchondral Cortical Plate Resorption and Increased Trabecular Bone Remodeling in Human Facet Joint Osteoarthritis. International Journal of Molecular Sciences, 2018, 19, 845. | 4.1 | 11 |
| 35 | Nonlinear micro finite element models based on digital volume correlation measurements predict early microdamage in newly formed bone. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 132, 105303. | 3.1 | 10 |
| 36 | Structural Behavior of Human Lumbar Intervertebral Disc under Direct Shear. Journal of Applied Biomaterials and Functional Materials, 2015, 13, 66-71. | 1.6 | 9 |

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|---|---|---|---|
| 37 | Effect of patient inhalation profile and airway structure on drug deposition in image-based models with particle-particle interactions. International Journal of Pharmaceutics, 2022, 612, 121321. | 5.2 | 9 |
| 38 | An experimentally informed statistical elasto-plastic mineralised collagen fibre model at the micrometre and nanometre lengthscale. Scientific Reports, 2021, 11, 15539. | 3.3 | 8 |
| 39 | Statistical osteoporosis models using composite finite elements: A parameter study. Journal of Biomechanics, 2009, 42, 2205-2209. | 2.1 | 7 |
| 40 | Registration of phaseâ€contrast images in propagationâ€based Xâ€ray phase tomography. Journal of Microscopy, 2018, 269, 36-47. | 1.8 | 7 |
| 41 | Heat impact during laser ablation extraction of mineralised tissue micropillars. Scientific Reports, 2021, 11, 11007. | 3.3 | 7 |
| 42 | Multiscale mechanical consequences of ocean acidification for cold-water corals. Scientific Reports, 2022, 12, 8052. | 3.3 | 6 |
| 43 | Impact of measurement errors on the determination of the linear modulus of human meniscal attachments. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 10, 120-127. | 3.1 | 5 |
| 44 | Response to the commentary on mechanical properties of cortical bone and their relationships with age, gender, composition and microindentation properties in the elderly. Bone, 2017, 105, 312-314. | 2.9 | 5 |
| 45 | Extrafibrillar matrix yield stress and failure envelopes for mineralised collagen fibril arrays. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 105, 103563. | 3.1 | 5 |
| 46 | Validation of composite finite elements efficiently simulating elasticity of trabecular bone. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 652-660. | 1.6 | 3 |
| 47 | A rate-independent continuum model for bone tissue with interaction of compressive and tensile micro-damage. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 74, 448-462. | 3.1 | 3 |
| 48 | Axial knee alignment influences the repair of focal articular cartilage defects â€“ A translational study in sheep. Osteoarthritis and Cartilage, 2015, 23, A143-A144. | 1.3 | 0 |