Tod A Laursen

List of Publications by Year
in descending order

43 papers	3,682 citations	257450 24 h-index	361022 35 g-index
46 all docs	46 docs citations	46 times ranked	2450 citing authors

#	Article	IF	Citations
1	An augmented lagrangian treatment of contact problems involving friction. Computers and Structures, 1992, 42, 97-116.	4.4	711
2	A continuum-based finite element formulation for the implicit solution of multibody, large deformation-frictional contact problems. International Journal for Numerical Methods in Engineering, 1993, 36, 3451-3485.	2.8	306
3	A mortar segment-to-segment contact method for large deformation solid mechanics. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 601-629.	6.6	285
4	Determination of the Poisson's ratio of the cell: recovery properties of chondrocytes after release from complete micropipette aspiration. Journal of Biomechanics, 2006, 39, 78-87.	2.1	207
5	A study of the mechanics of microindentation using finite elements. Journal of Materials Research, 1992, 7, 618-626.	2.6	203
6	A mortar segment-to-segment frictional contact method for large deformations. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 4891-4913.	6.6	189
7	Computational Contact and Impact Mechanics. , 2003, , .		176
8	Two dimensional mortar contact methods for large deformation frictional sliding. International Journal for Numerical Methods in Engineering, 2005, 62, 1183-1225.	2.8	163
9	Finite element tree crown hydrodynamics model (FETCH) using porous media flow within branching elements: A new representation of tree hydrodynamics. Water Resources Research, 2005, 41, .	4.2	123
10	A segment-to-segment mortar contact method for quadratic elements and large deformations. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 555-566.	6.6	110
11	A 3D contact smoothing method using Gregory patches. International Journal for Numerical Methods in Engineering, 2002, 54, 1161-1194.	2.8	106
12	The Micromechanical Environment of Intervertebral Disc Cells Determined by a Finite Deformation, Anisotropic, and Biphasic Finite Element Model. Journal of Biomechanical Engineering, 2003, 125, 1-11.	1.3	97
13	Algorithmic symmetrization of coulomb frictional problems using augmented lagrangians. Computer Methods in Applied Mechanics and Engineering, 1993, 108, 133-146.	6.6	96
14	Optimization study and heat transfer comparison of staggered circular and elliptic tubes in forced convection. International Journal of Heat and Mass Transfer, 2001, 44, 3953-3961.	4.8	96
15	Large Deformation Finite Element Analysis of Micropipette Aspiration to Determine the Mechanical Properties of the Chondrocyte. Annals of Biomedical Engineering, 2005, 33, 494-501.	2.5	96
16	Improved implicit integrators for transient impact problems?geometric admissibility within the conserving framework. International Journal for Numerical Methods in Engineering, 2002, 53, 245-274.	2.8	89
17	Optimally staggered finned circular and elliptic tubes in forced convection. International Journal of Heat and Mass Transfer, 2004, 47, 1347-1359.	4.8	79
18	A Nitsche embedded mesh method. Computational Mechanics, 2012, 49, 243-257.	4.0	68

#	ARTICLE	IF	CITATIONS
19	A mortared finite element method for frictional contact on arbitrary interfaces. Computational Mechanics, 2006, 39, 223-235.	4.0	63
20	On methods for stabilizing constraints over enriched interfaces in elasticity. International Journal for Numerical Methods in Engineering, 2009, 78, 1009-1036.	2.8	58
21	A contact searching algorithm including bounding volume trees applied to finite sliding mortar formulations. Computational Mechanics, 2007, 41, 189-205.	4.0	56
22	Mortar contact formulations for deformable–deformable contact: Past contributions and new extensions for enriched and embedded interface formulations. Computer Methods in Applied Mechanics and Engineering, 2012, 205-208, 3-15.	6.6	52
23	Finite Element Modeling Predictions of Region-specific Cell-matrix Mechanics in the Meniscus. Biomechanics and Modeling in Mechanobiology, 2006, 5, 140-149.	2.8	43
24	A large deformation mortar formulation of self contact with finite sliding. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 756-772.	6.6	36
25	A mortar-finite element approach to lubricated contact problems. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 3656-3669.	6.6	26
26	An algorithm for the matrix-free solution of quasistatic frictional contact problems. International Journal for Numerical Methods in Engineering, 1999, 44, 1205-1226.	2.8	22
27	A new method for simulating rigid body motion in incompressible two‐phase flow. International Journal for Numerical Methods in Fluids, 2011, 67, 713-732.	1.6	21
28	Frictional contact mechanics methods for soft materials: Application to tracking breast cancers. Journal of Biomechanics, 2008, 41, 69-77.	2.1	20
29	A strong form meshfree collocation method for frictional contact on a rigid obstacle. Computer Methods in Applied Mechanics and Engineering, 2019, 357, 112597.	6.6	18
30	An algorithm for incorporation of frictional sliding conditions within a steady state rolling framework. Communications in Numerical Methods in Engineering, 2005, 22, 301-318.	1.3	16
31	A generalized object-oriented approach to solving ordinary and partial differential equations using finite elements. Finite Elements in Analysis and Design, 1996, 22, 93-107.	3.2	14
32	Slender Solar Sail Booms: Finite Element Analysis. Journal of Spacecraft and Rockets, 2007, 44, 528-537.	1.9	11
33	Multiphasic models of cell mechanics. , 2001, , 84-102.		8
34	On the interaction of frictional formulations with bifurcation phenomena in hyperelastic steady state rolling calculations. International Journal of Solids and Structures, 2006, 43, 2959-2988.	2.7	6
35	Compensation of overlay errors due to mask bending and non-flatness for EUV masks. Proceedings of SPIE, 2009, , .	0.8	6
36	Response to Dr. Schachar. Journal of Biomechanics, 2006, 39, 2344-2345.	2.1	3

#	Article	IF	Citations
37	Toward robust and accurate contact solvers for large deformation applications: a remapping/adaptivity framework for mortar-based methods. Computational Mechanics, 2014, 54, 53-70.	4.0	3
38	The Melosh Competition. Finite Elements in Analysis and Design, 2001, 37, 821-823.	3.2	0
39	New Developments in Surface-to-Surface Discretization Strategies for Analysis of Interface Mechanics. Computational Methods in Applied Sciences (Springer), 2007, , 67-86.	0.3	0
40	Emerging Spatial and Temporal Discretization Methods in Contact and Impact Mechanics. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2007, , 1-37.	0.6	0
41	The Melosh Competition. Finite Elements in Analysis and Design, 2008, 44, 227.	3.2	0
42	New Applications of Mortar Methodology to Extended and Embedded Finite Element Formulations. , 2011, , 1-8.		0
43	A Strong Form Meshfree Collocation Method: Engineering Applications Including Frictional Contact. , 2022, , 257-265.		0