Kim Lau Nielsen

List of Publications by Year
in descending order

57	1,198	430442 18	395343 33
papers	citations	h-index	g-index

57	57	57	736
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ductile shear failure or plug failure of spot welds modelled by modified Gurson model. Engineering Fracture Mechanics, 2010, 77, 1031-1047.	2.0	171
2	Collapse and coalescence of spherical voids subject to intense shearing: studied in full 3D. International Journal of Fracture, 2012, 177, 97-108.	1.1	88
3	Effect of a shear modified Gurson model on damage development in a FSW tensile specimen. International Journal of Solids and Structures, 2009, 46, 587-601.	1.3	76
4	Relations between a micro-mechanical model and a damage model for ductile failure in shear. Journal of the Mechanics and Physics of Solids, 2010, 58, 1243-1252.	2.3	68
5	Cohesive tractionâ€“separation laws for tearing of ductile metal plates. International Journal of Impact Engineering, 2012, 48, 15-23.	2.4	62
6	Failure by void coalescence in metallic materials containing primary and secondary voids subject to intense shearing. International Journal of Solids and Structures, 2011, 48, 1255-1267.	1.3	61
7	Modelling of plastic flow localisation and damage development in friction stir welded 6005A aluminium alloy using physics based strain hardening law. International Journal of Solids and Structures, 2010, 47, 2359-2370.	1.3	50
8	A numerical basis for strain-gradient plasticity theory: Rate-independent and rate-dependent formulations. Journal of the Mechanics and Physics of Solids, 2014, 63, 113-127.	2.3	47
9	Micro-mechanical modelling of ductile failure in 6005A aluminium using a physics based strain hardening law including stage IV. Engineering Fracture Mechanics, 2010, 77, 2491-2503.	2.0	39
10	3D modelling of plug failure in resistance spot welded shear-lab specimens (DP600-steel). International Journal of Fracture, 2008, 153, 125-139.	1.1	35
11	Strain gradient effects on steady state crack growth in rate-sensitive materials. Engineering Fracture Mechanics, 2012, 96, 61-71.	2.0	33
12	Numerical studies of shear damped composite beams using a constrained damping layer. Composite Structures, 2008, 83, 304-311.	3.1	32
13	Observations on Mode I ductile tearing in sheet metals. European Journal of Mechanics, A/Solids, 2013, 42, 54-62.	2.1	31
14	Ductile damage development in friction stir welded aluminum (AA2024) joints. Engineering Fracture Mechanics, 2008, 75, 2795-2811.	2.0	29
15	Investigation of a gradient enriched Gurson-Tvergaard model for porous strain hardening materials. European Journal of Mechanics, A/Solids, 2019, 75, 472-484.	2.1	25
16	An investigation of back stress formulations under cyclic loading. Mechanics of Materials, 2019, 130, 76-87.	1.7	22
17	Predicting failure response of spot welded joints using recent extensions to the Gurson model. Computational Materials Science, 2010, 48, 71-82.	1.4	21
18	A 2D finite element implementation of the Fleckâ€“Willis strain-gradient flow theory. European Journal of Mechanics, A/Solids, 2013, 41, 134-142.	2.1	21

#	Article	IF	Citations
19	Rate sensitivity of mixed mode interface toughness of dissimilar metallic materials: Studied at steady state. International Journal of Solids and Structures, 2012, 49, 576-583.	1.3	18
20	On modeling micro-structural evolution using a higher order strain gradient continuum theory. International Journal of Plasticity, 2016, 76, 285-298.	4.1	17
21	Micro-mechanics based cohesive zone modeling of full scale ductile plate tearing: From initiation to steady-state. International Journal of Solids and Structures, 2019, 160, 265-275.	1.3	17
22	Fundamental differences between plane strain bending and far-field plane strain tension in ductile plate failure. Journal of the Mechanics and Physics of Solids, 2020, 141, 103960.	2.3	16
23	Steady-state numerical modeling of size effects in micron scale wire drawing. Journal of Manufacturing Processes, 2017, 25, 163-171.	2.8	15
24	Grain-size affected mechanical response and deformation behavior in microscale reverse extrusion. Materialia, 2019, 6, 100272.	1.3	15
25	Strain gradient effects in periodic flat punch indenting at small scales. International Journal of Solids and Structures, 2014, 51, 3549-3556.	1.3	13
26	Hardening and strengthening behavior in rate-independent strain gradient crystal plasticity. European Journal of Mechanics, A/Solids, 2018, 67, 157-168.	2.1	12
27	The effect of post-welding conditions in friction stir welds: From weld simulation to ductile failure. European Journal of Mechanics, A/Solids, 2012, 33, 67-74.	2.1	11
28	Assisted crack tip flipping under Mode I thin sheet tearing. European Journal of Mechanics, A/Solids, 2017, 64, 58-68.	2.1	11
29	A finite strain FE-Implementation of the Fleck-Willis gradient theory: Rate-independent versus visco-plastic formulation. European Journal of Mechanics, A/Solids, 2019, 75, 389-398.	2.1	11
30	Cohesive tractionâ€“separation relations for tearing of ductile plates with randomly distributed void nucleation sites. International Journal of Fracture, 2020, 224, 187-198.	1.1	11
31	Effect of damage-related microstructural parameters on plate tearing at steady state. European Journal of Mechanics, A/Solids, 2019, 77, 103818.	2.1	10
32	Void coalescence mechanism for combined tension and large amplitude cyclic shearing. Engineering Fracture Mechanics, 2018, 189, 164-174.	2.0	9
33	An incremental flow theory for crystal plasticity incorporating strain gradient effects. International Journal of Solids and Structures, 2017, 110-111, 239-250.	1.3	8
34	Steady-state crack growth in single crystals under Mode I loading. Journal of the Mechanics and Physics of Solids, 2017, 101, 209-222.	2.3	8
35	Crack tip flipping under mode I tearing: Investigated by X-ray tomography. International Journal of Solids and Structures, 2017, 118-119, 119-127.	1.3	8
36	Steady-state fracture toughness of elastic-plastic solids: Isotropic versus kinematic hardening. Engineering Fracture Mechanics, 2019, 207, 254-268.	2.0	8

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37	A novel numerical framework for self-similarity in plasticity: Wedge indentation in single crystals. Journal of the Mechanics and Physics of Solids, 2018, 112, 667-684.	2.3	7
38	Cohesive traction-separation relations for plate tearing under mixed mode loading. European Journal of Mechanics, A/Solids, 2018, 71, 199-209.	2.1	7
39	Parameter window for assisted crack tip flipping: Studied by a shear extended Gurson model. International Journal of Solids and Structures, 2019, 171, 135-145.	1.3	7
40	Finite strain analysis of size effects in wedge indentation into a Face-Centered Cubic (FCC) single crystal. European Journal of Mechanics, A/Solids, 2019, 76, 193-207.	2.1	7
41	Rolling induced size effects in elasticâ€“viscoplastic sheet metals. European Journal of Mechanics, A/Solids, 2015, 53, 259-267.	2.1	6
42	Steady-state, elastic-plastic growth of slanted cracks in symmetrically loaded plates. International Journal of Impact Engineering, 2017, 108, 286-294.	2.4	5
43	The role of intermetallic particles on mode I crack propagation mechanisms in metal plates. Engineering Fracture Mechanics, 2021, 253, 107901.	2.0	5
44	Strain Hardening and Damage in 6xxx Series Aluminum Alloy Friction Stir Welds. Materials Science Forum, 2010, 638-642, 333-338.	0.3	3
45	Attaining the rate-independent limit of a rate-dependent strain gradient plasticity theory. Extreme Mechanics Letters, 2016, 9, 40-44.	2.0	3
46	On the dependence of crack surface morphology and energy dissipation on microstructure in ductile plate tearing. International Journal of Fracture, 2021, 230, 115.	1.1	3
47	Size effect on void coalescence under intense shear. European Journal of Mechanics, A/Solids, 2021, 90, 104329.	2.1	3
48	Experimental Investigation of Crack Propagation Mechanisms in Commercially Pure Aluminium Plates. Procedia Structural Integrity, 2019, 21, 2-11.	0.3	3
49	Exploring barriers for the use of FEA-based variation simulation in industrial development practice. Design Science, 2021, 7, .	1.1	3
50	Wedge indentation of single crystalline monazite: A numerical investigation. International Journal of Plasticity, 2019, 112, 36-51.	4.1	2
51	Void-by-void versus multiple void interaction under mode I-mode II or mode I-mode III loading conditions. Engineering Fracture Mechanics, 2019, 214, 248-259.	2.0	2
52	A steady-state modeling framework incorporating the Kurodaâ€“Tvergaard model: demonstrated on single crystal crack growth. Archive of Applied Mechanics, 2019, 89, 2133-2145.	1.2	1
53	Computational rate-independent strain gradient crystal plasticity. Journal of the Mechanics and Physics of Solids, 2021, 148, 104286.	2.3	1
54	Parametric CAD Modeling: New Principles for Robust Sketch Constraints. Computer-Aided Design and Applications, 0, , 56-81.	0.4	1

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55	A finite strain framework for steady-state problems: Hyperelasto-viscoplasticity. Computer Methods in Applied Mechanics and Engineering, 2021, 375, 113598.	3.4	0
56	Barriers for Virtual Assessment of Structural Robustness. , 2019, , .		0
57	Gradient strengthening effects in mode I tearing of ductile plate at the engineering scale. Engineering Fracture Mechanics, 2022, , 108516.	2.0	0