

# Kim Lau Nielsen

## List of Publications by Citations

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54  
papers

935  
citations

17  
h-index

29  
g-index

57  
ext. papers

1,063  
ext. citations

3.7  
avg, IF

4.91  
L-index

#	Paper	IF	Citations
54	Ductile shear failure or plug failure of spot welds modelled by modified Gurson model. <i>Engineering Fracture Mechanics</i> , <b>2010</b> , 77, 1031-1047	4.2	136
53	Collapse and coalescence of spherical voids subject to intense shearing: studied in full 3D. <i>International Journal of Fracture</i> , <b>2012</b> , 177, 97-108	2.3	70
52	Effect of a shear modified Gurson model on damage development in a FSW tensile specimen. <i>International Journal of Solids and Structures</i> , <b>2009</b> , 46, 587-601	3.1	62
51	Relations between a micro-mechanical model and a damage model for ductile failure in shear. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2010</b> , 58, 1243-1252	5	60
50	Cohesive traction-separation laws for tearing of ductile metal plates. <i>International Journal of Impact Engineering</i> , <b>2012</b> , 48, 15-23	4	52
49	Failure by void coalescence in metallic materials containing primary and secondary voids subject to intense shearing. <i>International Journal of Solids and Structures</i> , <b>2011</b> , 48, 1255-1267	3.1	48
48	Modelling of plastic flow localisation and damage development in friction stir welded 6005A aluminium alloy using physics based strain hardening law. <i>International Journal of Solids and Structures</i> , <b>2010</b> , 47, 2359-2370	3.1	43
47	A numerical basis for strain-gradient plasticity theory: Rate-independent and rate-dependent formulations. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2014</b> , 63, 113-127	5	35
46	Micro-mechanical modelling of ductile failure in 6005A aluminium using a physics based strain hardening law including stage IV. <i>Engineering Fracture Mechanics</i> , <b>2010</b> , 77, 2491-2503	4.2	35
45	3D modelling of plug failure in resistance spot welded shear-lab specimens (DP600-steel). <i>International Journal of Fracture</i> , <b>2008</b> , 153, 125-139	2.3	28
44	Observations on Mode I ductile tearing in sheet metals. <i>European Journal of Mechanics, A/Solids</i> , <b>2013</b> , 42, 54-62	3.7	26
43	Strain gradient effects on steady state crack growth in rate-sensitive materials. <i>Engineering Fracture Mechanics</i> , <b>2012</b> , 96, 61-71	4.2	26
42	Numerical studies of shear damped composite beams using a constrained damping layer. <i>Composite Structures</i> , <b>2008</b> , 83, 304-311	5.3	24
41	Ductile damage development in friction stir welded aluminum (AA2024) joints. <i>Engineering Fracture Mechanics</i> , <b>2008</b> , 75, 2795-2811	4.2	22
40	Rate sensitivity of mixed mode interface toughness of dissimilar metallic materials: Studied at steady state. <i>International Journal of Solids and Structures</i> , <b>2012</b> , 49, 576-583	3.1	18
39	A 2D finite element implementation of the Fleck-Willis strain-gradient flow theory. <i>European Journal of Mechanics, A/Solids</i> , <b>2013</b> , 41, 134-142	3.7	17
38	Predicting failure response of spot welded joints using recent extensions to the Gurson model. <i>Computational Materials Science</i> , <b>2010</b> , 48, 71-82	3.2	17

37	On modeling micro-structural evolution using a higher order strain gradient continuum theory. <i>International Journal of Plasticity</i> , <b>2016</b> , 76, 285-298	7.6	15
36	Investigation of a gradient enriched Gurson-Tvergaard model for porous strain hardening materials. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 75, 472-484	3.7	15
35	An investigation of back stress formulations under cyclic loading. <i>Mechanics of Materials</i> , <b>2019</b> , 130, 76-87	3.3	13
34	Micro-mechanics based cohesive zone modeling of full scale ductile plate tearing: From initiation to steady-state. <i>International Journal of Solids and Structures</i> , <b>2019</b> , 160, 265-275	3.1	12
33	Steady-state numerical modeling of size effects in micron scale wire drawing. <i>Journal of Manufacturing Processes</i> , <b>2017</b> , 25, 163-171	5	11
32	Grain-size affected mechanical response and deformation behavior in microscale reverse extrusion. <i>Materialia</i> , <b>2019</b> , 6, 100272	3.2	11
31	Strain gradient effects in periodic flat punch indenting at small scales. <i>International Journal of Solids and Structures</i> , <b>2014</b> , 51, 3549-3556	3.1	11
30	Fundamental differences between plane strain bending and far-field plane strain tension in ductile plate failure. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 141, 103960	5	10
29	The effect of post-welding conditions in friction stir welds: From weld simulation to ductile failure. <i>European Journal of Mechanics, A/Solids</i> , <b>2012</b> , 33, 67-74	3.7	10
28	Assisted crack tip flipping under Mode I thin sheet tearing. <i>European Journal of Mechanics, A/Solids</i> , <b>2017</b> , 64, 58-68	3.7	9
27	Hardening and strengthening behavior in rate-independent strain gradient crystal plasticity. <i>European Journal of Mechanics, A/Solids</i> , <b>2018</b> , 67, 157-168	3.7	9
26	Steady-state crack growth in single crystals under Mode I loading. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2017</b> , 101, 209-222	5	7
25	Void coalescence mechanism for combined tension and large amplitude cyclic shearing. <i>Engineering Fracture Mechanics</i> , <b>2018</b> , 189, 164-174	4.2	7
24	Steady-state fracture toughness of elastic-plastic solids: Isotropic versus kinematic hardening. <i>Engineering Fracture Mechanics</i> , <b>2019</b> , 207, 254-268	4.2	6
23	A novel numerical framework for self-similarity in plasticity: Wedge indentation in single crystals. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2018</b> , 112, 667-684	5	6
22	Cohesive traction-separation relations for plate tearing under mixed mode loading. <i>European Journal of Mechanics, A/Solids</i> , <b>2018</b> , 71, 199-209	3.7	6
21	Effect of damage-related microstructural parameters on plate tearing at steady state. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 77, 103818	3.7	6
20	Rolling induced size effects in elastic-viscoplastic sheet metals. <i>European Journal of Mechanics, A/Solids</i> , <b>2015</b> , 53, 259-267	3.7	6

19	A finite strain FE-Implementation of the Fleck-Willis gradient theory: Rate-independent versus visco-plastic formulation. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 75, 389-398	3.7	6
18	An incremental flow theory for crystal plasticity incorporating strain gradient effects. <i>International Journal of Solids and Structures</i> , <b>2017</b> , 110-111, 239-250	3.1	5
17	Crack tip flipping under mode I tearing: Investigated by X-ray tomography. <i>International Journal of Solids and Structures</i> , <b>2017</b> , 118-119, 119-127	3.1	5
16	Steady-state, elastic-plastic growth of slanted cracks in symmetrically loaded plates. <i>International Journal of Impact Engineering</i> , <b>2017</b> , 108, 286-294	4	5
15	Parameter window for assisted crack tip flipping: Studied by a shear extended Gurson model. <i>International Journal of Solids and Structures</i> , <b>2019</b> , 171, 135-145	3.1	4
14	Cohesive traction/separation relations for tearing of ductile plates with randomly distributed void nucleation sites. <i>International Journal of Fracture</i> , <b>2020</b> , 224, 187-198	2.3	4
13	Finite strain analysis of size effects in wedge indentation into a Face-Centered Cubic (FCC) single crystal. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 76, 193-207	3.7	3
12	Attaining the rate-independent limit of a rate-dependent strain gradient plasticity theory. <i>Extreme Mechanics Letters</i> , <b>2016</b> , 9, 40-44	3.9	3
11	Strain Hardening and Damage in 6xxx Series Aluminum Alloy Friction Stir Welds. <i>Materials Science Forum</i> , <b>2010</b> , 638-642, 333-338	0.4	3
10	Void-by-void versus multiple void interaction under mode I-mode II or mode I-mode III loading conditions. <i>Engineering Fracture Mechanics</i> , <b>2019</b> , 214, 248-259	4.2	2
9	Wedge indentation of single crystalline monazite: A numerical investigation. <i>International Journal of Plasticity</i> , <b>2019</b> , 112, 36-51	7.6	2
8	Size effect on void coalescence under intense shear. <i>European Journal of Mechanics, A/Solids</i> , <b>2021</b> , 90, 104329	3.7	2
7	A steady-state modeling framework incorporating the Kuroda-Iivergaard model: demonstrated on single crystal crack growth. <i>Archive of Applied Mechanics</i> , <b>2019</b> , 89, 2133-2145	2.2	1
6	The role of intermetallic particles on mode I crack propagation mechanisms in metal plates. <i>Engineering Fracture Mechanics</i> , <b>2021</b> , 253, 107901	4.2	1
5	Experimental Investigation of Crack Propagation Mechanisms in Commercially Pure Aluminium Plates. <i>Procedia Structural Integrity</i> , <b>2019</b> , 21, 2-11	1	0
4	Computational rate-independent strain gradient crystal plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 148, 104286	5	0
3	On the dependence of crack surface morphology and energy dissipation on microstructure in ductile plate tearing. <i>International Journal of Fracture</i> , <b>2021</b> , 230, 115	2.3	0
2	A finite strain framework for steady-state problems: Hyperelasto-viscoplasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 375, 113598	5.7	

- 1 Gradient strengthening effects in mode I tearing of ductile plate at the engineering scale.  
*Engineering Fracture Mechanics*, **2022**, 108516 4.2