Johan Hoefnagels

List of Publications by Year in Descending Order

128 papers	2,189 citations	27 h-index	42 g-index
138 ext. papers	2,495 ext. citations	3 avg, IF	5.22 L-index

#	Paper	IF	Citations
128	A continuum consistent discrete particle method for continuum–discontinuum transitions and complex fracture problems. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 390, 114460	5.7	
127	Plasticity, localization, and damage in ferritic-pearlitic steel studied by nanoscale digital image correlation. *Scripta Materialia*, **2022**, 208, 114327	5.6	3
126	Accurate Strain Field Measurement During Strip Rolling by Exploiting Recurring Material Motion with Time-Integrated Digital Image Correlation. *Experimental Mechanics*, **2022**, 62, 603-625	2.6	
125	Full-field hygro-expansion characterization of single softwood and hardwood pulp fibers. *Nordic Pulp and Paper Research Journal*, **2021**, 36, 61-74	1.1	1
124	Recrystallization-mediated crack initiation in tungsten under simultaneous high-flux hydrogen plasma loads and high-cycle transient heating. *Nuclear Fusion*, **2021**, 61, 046018	3.3	5
123	Cool, Dry, Nano-scale DIC Patterning of Delicate, Heterogeneous, Non-planar Specimens by Micro-mist Nebulization. *Experimental Mechanics*, **2021**, 61, 917-937	2.6	3
122	Power deposition behavior of high-density transient hydrogen plasma on tungsten in Magnum-PSI. *Plasma Physics and Controlled Fusion*, **2021**, 63, 085016	2	0
121	Revisiting the martensite/ferrite interface damage initiation mechanism: The key role of substructure boundary sliding. *Acta Materialia*, **2021**, 205, 116533	8.4	6
120	Interlaboratory Study of Digital Volume Correlation Error Due to X-Ray Computed Tomography Equipment and Scan Parameters: an Update from the DVC Challenge. *Experimental Mechanics*, **2021**, 61, 395-410	2.6	3
119	Parameter identification of micron-sized freestanding stretchable electronic interconnects using integrated digital height correlation. *Measurement Science and Technology*, **2021**, 32, 064001	2	1
118	A discrete slip plane model for simulating heterogeneous plastic deformation in single crystals. *International Journal of Solids and Structures*, **2021**, 228, 111094	3.1	1
117	Experimental full-field analysis of size effects in miniaturized cellular elastomeric metamaterials. *Materials and Design*, **2020**, 193, 108684	8.1	5
116	Three mechanisms of hydrogen-induced dislocation pinning in tungsten. *Nuclear Fusion*, **2020**, 60, 086015	3.3	5
115	An In-Situ, Micro-Mechanical Setup with Accurate, Tri-Axial, Piezoelectric Force Sensing and Positioning. *Experimental Mechanics*, **2020**, 60, 713-725	2.6	1
114	Robust and precise identification of the hygro-expansion of single fibers: a full-field fiber topography correlation approach. *Cellulose*, **2020**, 27, 6777-6792	5.5	5
113	Omnidirectional stretchability of freestanding interconnects for stretchable electronics. *Smart Materials and Structures*, **2020**, 29, 045019	3.4	
112	Fracture behavior of tungsten-based composites exposed to steady-state/transient hydrogen plasma. *Nuclear Fusion*, **2020**, 60, 046029	3.3	7

111	Multi-axial electro-mechanical testing methodology for highly stretchable freestanding micron-sized structures. *Journal of Micromechanics and Microengineering*, **2020**, 30, 055002	2	1
110	Full-field identification of mixed-mode adhesion properties in a flexible, multi-layer microelectronic material system. *Engineering Fracture Mechanics*, **2020**, 226, 106879	4.2	1
109	Laser-induced toughening inhibits cut-edge failure in multi-phase steel. *Scripta Materialia*, **2020**, 177, 79-85	5.6	2
108	Anisotropic hygro-expansion in hydrogel fibers owing to uniting 3D electrowriting and supramolecular polymer assembly. *European Polymer Journal*, **2020**, 141, 110099	5.2	9
107	Micron-scale experimental-numerical characterization of metal-polymer interface delamination in stretchable electronics interconnects. *International Journal of Solids and Structures*, **2020**, 204-205, 52-64	3.1	6
106	Correction of Scanning Electron Microscope Imaging Artifacts in a Novel Digital Image Correlation Framework. *Experimental Mechanics*, **2019**, 59, 489-516	2.6	21
105	Lath martensite plasticity enabled by apparent sliding of substructure boundaries. *Materials and Design*, **2019**, 172, 107646	8.1	7
104	Mixed-mode cohesive zone parameters from integrated digital image correlation on micrographs only. *International Journal of Solids and Structures*, **2019**, 156-157, 179-193	3.1	8
103	One-step deposition of nano-to-micron-scalable, high-quality digital image correlation patterns for high-strain in-situ multi-microscopy testing. *Strain*, **2019**, 55, e12330	1.7	12
102	A Multi-loading, Climate-Controlled, Stationary ROI Device for In-Situ X-ray CT Hygro-Thermo-Mechanical Testing. *Experimental Mechanics*, **2019**, 59, 295-308	2.6	3
101	Mechanical Shape Correlation: A novel integrated digital image correlation approach. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 345, 983-1006	5.7	3
100	Demonstrating the potential of accurate absolute cross-grain stress and orientation correlation using electron backscatter diffraction. *Scripta Materialia*, **2019**, 162, 266-271	5.6	19
99	Anomalous precipitation hardening in Al-(1 wt%)Cu thin films. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 722, 37-46	5.3	3
98	On micromechanical parameter identification with integrated DIC and the role of accuracy in kinematic boundary conditions. *International Journal of Solids and Structures*, **2018**, 146, 241-259	3.1	7
97	Correction of scan line shift artifacts in scanning electron microscopy: An extended digital image correlation framework. *Ultramicroscopy*, **2018**, 187, 144-163	3.1	18
96	Ferrite slip system activation investigated by uniaxial micro-tensile tests and simulations. *Acta Materialia*, **2018**, 146, 314-327	8.4	36
95	A bulge test based methodology for characterizing ultra-thin buckled membranes. *Thin Solid Films*, **2018**, 660, 88-100	2.2	7
94	Martensite crystallography and chemistry in dual phase and fully martensitic steels. *Materials Characterization*, **2018**, 139, 411-420	3.9	15

93	Image-based interface characterization with a restricted microscopic field of view. *International Journal of Solids and Structures*, **2018**, 132-133, 218-231	3.1	7
92	Crystal Plasticity Parameter Identification by Integrated DIC on Microscopic Topographies. *Conference Proceedings of the Society for Experimental Mechanics*, **2018**, 47-49	0.3	
91	From Fibrils to Toughness: Multi-Scale Mechanics of Fibrillating Interfaces in Stretchable Electronics. *Materials*, **2018**, 11,	3.5	4
90	A Platform for Mechano(-Electrical) Characterization of Free-Standing Micron-Sized Structures and Interconnects. *Micromachines*, **2018**, 9,	3.3	3
89	A consistent full-field integrated DIC framework for HR-EBSD. *Ultramicroscopy*, **2018**, 191, 44-50	3.1	26
88	Advances in Delamination Modeling of Metal/Polymer Systems: Continuum Aspects **2018**, 83-128		
87	Novel Image Correlation Based Techniques for Mechanical Analysis of MEMS. *Conference Proceedings of the Society for Experimental Mechanics*, **2018**, 19-28	0.3	
86	Mechanical Shape Correlation: A Novel Integrated Digital Image Correlation Approach. *Conference Proceedings of the Society for Experimental Mechanics*, **2018**, 47-54	0.3	3
85	On the Boundary Conditions and Optimization Methods in Integrated Digital Image Correlation. *Conference Proceedings of the Society for Experimental Mechanics*, **2018**, 55-61	0.3	
84	A Uni-Axial Nano-Displacement Micro-Tensile Test of Individual Constituents from Bulk Material. *Experimental Mechanics*, **2017**, 57, 1249-1263	2.6	7
83	On the underlying micromechanisms in time-dependent anelasticity in Al-(1 wt%)Cu thin films. *Acta Materialia*, **2017**, 124, 47-58	8.4	5
82	Boundary Mechanics in Lath Martensite, Studied by Uni-Axial Micro-Tensile Tests. *Conference Proceedings of the Society for Experimental Mechanics*, **2017**, 21-25	0.3	1
81	Self-adaptive Isogeometric Global Digital Image Correlation and Digital Height Correlation. *Conference Proceedings of the Society for Experimental Mechanics*, **2017**, 165-172	0.3	1
80	Full-Field Identification Methods: Comparison of FEM Updating and Integrated DIC. *Conference Proceedings of the Society for Experimental Mechanics*, **2017**, 191-197	0.3	
79	Ultra-Stretchable Interconnects for High-Density Stretchable Electronics. *Micromachines*, **2017**, 8,	3.3	16
78	Full-Field Identification of Interfaces in Microelectronic Devices. *Conference Proceedings of the Society for Experimental Mechanics*, **2017**, 9-13	0.3	
77	Comparison of the identification performance of conventional FEM updating and integrated DIC. *International Journal for Numerical Methods in Engineering*, **2016**, 106, 298-320	2.4	25
76	Systematic and objective identification of the microstructure around damage directly from images. *Scripta Materialia*, **2016**, 113, 101-105	5.6	4

75	Microstructural study of the mechanical response of compacted graphite iron: An experimental and numerical approach. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 658, 439-449	5.3	16
74	A Statistical/Computational/Experimental Approach to Study the Microstructural Morphology of Damage. *Conference Proceedings of the Society for Experimental Mechanics*, **2016**, 61-65	0.3	
73	On image gradients in digital image correlation. *International Journal for Numerical Methods in Engineering*, **2016**, 105, 243-260	2.4	42
72	Adaptive Isogeometric Digital Height Correlation: Application to Stretchable Electronics. *Strain*, **2016**, 52, 336-354	1.7	14
71	Plasticity of lath martensite by sliding of substructure boundaries. *Scripta Materialia*, **2016**, 120, 37-40	5.6	37
70	Block and sub-block boundary strengthening in lath martensite. *Scripta Materialia*, **2016**, 116, 117-121	5.6	64
69	Crystal plasticity parameter identification with 3D measurements and Integrated Digital Image Correlation. *Acta Materialia*, **2016**, 116, 321-331	8.4	38
68	Analysis of the dissipative mechanisms in metal–elastomer interfaces. *Engineering Fracture Mechanics*, **2015**, 149, 412-424	4.2	11
67	Bridging network properties to the effective hygro-expansivity of paper: experiments and modelling. *Philosophical Magazine*, **2015**, 95, 3385-3401	1.6	13
66	A Generic, Time-Resolved, Integrated Digital Image Correlation, Identification Approach. *Conference Proceedings of the Society for Experimental Mechanics*, **2015**, 257-263	0.3	
65	Time-resolved integrated digital image correlation. *International Journal for Numerical Methods in Engineering*, **2015**, 103, 157-182	2.4	40
64	Retardation of plastic instability via damage-enabled microstrain delocalization. *Journal of Materials Science*, **2015**, 50, 6882-6897	4.3	27
63	Anelasticity in Al-Alloy Thin Films: A Micro-mechanical Analysis. *Conference Proceedings of the Society for Experimental Mechanics*, **2015**, 107-112	0.3	
62	Potential-based constitutive models for cohesive interfaces: Theory, implementation and examples. *Composites Part B: Engineering*, **2015**, 68, 38-50	10	13
61	Interface debonding characterization by image correlation integrated with Double Cantilever Beam kinematics. *International Journal of Solids and Structures*, **2015**, 55, 79-91	3.1	54
60	A Small-Scale, Contactless, Pure Bending Device for In-situ Testing. *Experimental Mechanics*, **2015**, 55, 1511-1524	2.6	4
59	On the use of adaptive refinement in isogeometric digitalimage correlation. *International Journal for Numerical Methods in Engineering*, **2015**, 104, 944-962	2.4	13
58	On the role of fibril mechanics in the work of separation of fibrillating interfaces. *Mechanics of Materials*, **2015**, 88, 1-11	3.3	8

57	Multi-scale experimental analysis of rate dependent metal/elastomer interface mechanics. *Journal of the Mechanics and Physics of Solids*, **2015**, 80, 26-36	5	13
56	Characterization of time-dependent anelastic microbeam bending mechanics. *Journal Physics D: Applied Physics*, **2014**, 47, 355306	3	17
55	Strain localization and damage in dual phase steels investigated by coupled in-situ deformation experiments and crystal plasticity simulations. *International Journal of Plasticity*, **2014**, 63, 198-210	7.6	320
54	On-wafer time-dependent high reproducibility nano-force tensile testing. *Journal Physics D: Applied Physics*, **2014**, 47, 495306	3	13
53	Direct Stress-Strain Measurements from Bulged Membranes Using Topography Image Correlation. *Experimental Mechanics*, **2014**, 54, 717-727	2.6	52
52	Irreversible mixed mode interface delamination using a combined damage-plasticity cohesive zone enabling unloading. *International Journal of Fracture*, **2014**, 185, 77-95	2.3	16
51	Quantification of Three-Dimensional Surface Deformation using Global Digital Image Correlation. *Experimental Mechanics*, **2014**, 54, 557-570	2.6	26
50	Integrated Global Digital Image Correlation for Interface Delamination Characterization. *Conference Proceedings of the Society for Experimental Mechanics*, **2014**, 27-32	0.3	
49	A practical approach for the separation of interfacial toughness and structural plasticity in a delamination growth experiment. *International Journal of Fracture*, **2013**, 183, 1-18	2.3	7
48	Incorporation of bioactive glass in calcium phosphate cement: material characterization and in vitro degradation. *Journal of Biomedical Materials Research - Part A*, **2013**, 101, 2365-73	5.4	31
47	Simulation of interlaminar damage in mixed-mode bending tests using large deformation self-adaptive cohesive zones. *Engineering Fracture Mechanics*, **2013**, 109, 387-402	4.2	6
46	Electron Micrographic Digital Image Correlation: Method Optimization and Microstructural banding Case Study. *Conference Proceedings of the Society for Experimental Mechanics*, **2013**, 71-77	0.3	2
45	Enhanced Global Digital Image Correlation for Accurate Measurement of Microbeam Bending. *Advanced Structured Materials*, **2013**, 43-51	0.6	6
44	Global Digital Image Correlation for Pressure Deflected Membranes. *Conference Proceedings of the Society for Experimental Mechanics*, **2013**, 135-140	0.3	
43	Micromechanical Characterization of Ductile Damage in DP Steel. *Conference Proceedings of the Society for Experimental Mechanics*, **2013**, 29-35	0.3	
42	A Micropillar Compression Methodology for Ductile Damage Quantification. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 796-801	2.3	2
41	An In Situ Experimental-Numerical Approach for Characterization and Prediction of Interface Delamination: Application to CuLF-MCE Systems. *Advanced Engineering Materials*, **2012**, 14, 1034-1041	3.5	7
40	A Global Digital Image Correlation Enhanced Full-Field Bulge Test Method. *Procedia IUTAM*, **2012**, 4, 73-81		17

39	Multi-Axial Deformation Setup for Microscopic Testing of Sheet Metal to Fracture. *Experimental Mechanics*, **2012**, 52, 669-678	2.6	28
38	Identification of the continuum damage parameter: An experimental challenge in modeling damage evolution. *Acta Materialia*, **2012**, 60, 3581-3589	8.4	61
37	On the validity regime of the bulge equations. *Journal of Materials Research*, **2012**, 27, 1245-1250	2.5	10
36	An in-situ experimental-numerical approach for interface delamination characterization. *Conference Proceedings of the Society for Experimental Mechanics*, **2011**, 569-576	0.3	1
35	Measuring time-dependent deformations in metallic MEMS. *Microelectronics Reliability*, **2011**, 51, 1054-1059	1.2	22
34	Stretching-induced interconnect delamination in stretchable electronic circuits. *Journal Physics D: Applied Physics*, **2011**, 44, 034008	3	44
33	An improved miniature mixed-mode delamination setup forin situmicroscopic interface failure analyses. *Journal Physics D: Applied Physics*, **2011**, 44, 034005	3	18
32	Creep measurements in free-standing thin metal film micro-cantilever bending. *Conference Proceedings of the Society for Experimental Mechanics*, **2011**, 167-171	0.3	
31	A miniaturized contactless pure-bending device for in-situ SEM failure analysis. *Conference Proceedings of the Society for Experimental Mechanics*, **2011**, 587-596	0.3	
30	Interface Integrity in Stretchable Electronics. *Conference Proceedings of the Society for Experimental Mechanics*, **2011**, 577-585	0.3	1
29	Microstructural banding effects clarified through micrographic digital image correlation. *Scripta Materialia*, **2010**, 62, 835-838	5.6	136
28	Indentation-based damage quantification revisited. *Scripta Materialia*, **2010**, 63, 316-319	5.6	23
27	Copper–rubber interface delamination in stretchable electronics. *Scripta Materialia*, **2010**, 63, 875-878	5.6	34
26	A brittle-fracture methodology for three-dimensional visualization of ductile deformation micromechanisms. *Scripta Materialia*, **2009**, 61, 20-23	5.6	13
25	On a Proper Account of First- and Second-Order Size Effects in Crystal Plasticity. *Advanced Engineering Materials*, **2009**, 11, 143-147	3.5	7
24	Experimental analysis of strain path dependent ductile damage mechanics and forming limits. *Mechanics of Materials*, **2009**, 41, 1264-1276	3.3	80
23	In-situ characterization of interface delamination by a new miniature mixed mode bending setup. *International Journal of Fracture*, **2009**, 158, 183-195	2.3	19
22	A critical assessment of indentation-based ductile damage quantification. *Acta Materialia*, **2009**, 57, 4957-4966	8.4	31

21	First-Order Size Effects in the Mechanics of Miniaturized Components. *Applied Mechanics and Materials*, **2008**, 13-14, 183-192	0.3	2
20	Experimental-Numerical Analysis of the Indentation-Based Damage Characterization Methodology. *Applied Mechanics and Materials*, **2008**, 13-14, 151-160	0.3	3
19	Brittle Fracture-Based Experimental Methodology for Microstructure Analysis. *Applied Mechanics and Materials*, **2008**, 13-14, 133-139	0.3	4
18	Processing induced size effects in plastic yielding upon miniaturisation. *Journal of the Mechanics and Physics of Solids*, **2008**, 56, 2687-2706	5	41
17	Substrate temperature dependence of the roughness evolution of HWCVD a-Si:H studied by real-time spectroscopic ellipsometry. *Thin Solid Films*, **2006**, 501, 88-91	2.2	13
16	Quasi-ice monolayer on atomically smooth amorphous SiO2 at room temperature observed with a high-finesse optical resonator. *Physical Review Letters*, **2005**, 95, 166104	7.4	46
15	Plasma-surface interaction and surface diffusion during silicon-based thin-film growth. *IEEE Transactions on Plasma Science*, **2005**, 33, 234-235	1.3	4
14	Novel in situ and real-time optical probes to detect (surface) defect states of a-Si:H. *Materials Research Society Symposia Proceedings*, **2005**, 862, 1431		
13	Time-resolved cavity ringdown study of the Si and SiH3 surface reaction probability during plasma deposition of a-Si:H at different substrate temperatures. *Journal of Applied Physics*, **2004**, 96, 4094-4106	2.5	35
12	Absolute surface coverage measurement using a vibrational overtone. *Journal of Chemical Physics*, **2004**, 120, 2879-88	3.9	30
11	New ultrahigh vacuum setup and advanced diagnostic techniques for studying a-Si:H film growth by radical beams. *Materials Research Society Symposia Proceedings*, **2004**, 808, 491		4
10	The a-Si:H Growth Mechanism: Temperature Study of the SiH3 Surface Reactivity and the Surface Silicon Hydride Composition During Film Growth. *Materials Research Society Symposia Proceedings*, **2003**, 762, 931		3
9	Temperature dependence of the surface reactivity of SiH3 radicals and the surface silicon hydride composition during amorphous silicon growth. *Surface Science*, **2003**, 547, L865-L870	1.8	31
8	High-rate a-Si:H and □-Si:H Film Growth Studied by Advanced Plasma and in situ Film Diagnostics. *Materials Research Society Symposia Proceedings*, **2002**, 715, 2561		
7	Time-resolved cavity ring-down spectroscopic study of the gas phase and surface loss rates of Si and SiH3 plasma radicals. *Chemical Physics Letters*, **2002**, 360, 189-193	2.5	33
6	Improvement of hydrogenated amorphous silicon properties with increasing contribution of SiH3 to film growth. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2001**, 19, 1027-1029	2.9	31
5	Cavity ring down detection of SiH3 in a remote SiH4 plasma and comparison with model calculations and mass spectrometry. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2001**, 19, 467-476	2.9	44
4	Cavity ring down study of the densities and kinetics of Si and SiH in a remote Ar-H2-SiH4 plasma. *Journal of Applied Physics*, **2001**, 89, 2065-2073	2.5	55

3	Material properties and growth process of microcrystalline silicon with growth rates in excess of 1 nm/s. *Materials Research Society Symposia Proceedings*, **2001**, 664, 421	7
2	Low temperature inorganic chemical vapor deposition of TiSiN diffusion barrier liners for gigascale copper interconnect applications. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2000**, 18, 2011	19
1	Studies into the Growth Mechanism of a-Si:H Using in situ Cavity Ring-Down Techniques237-271	