Ton van den Boogaard

List of Publications by Citations

141 papers	2,103 citations	25 h-index	42 g-index
153 ext. papers	2,440 ext. citations	2.7 avg, IF	5.29 L-index

#	Paper	IF	Citations
141	The technology of Incremental Sheet Forming—A brief review of the history. *Journal of Materials Processing Technology*, **2010**, 210, 981-997	5.3	203
140	An overview of stabilizing deformation mechanisms in incremental sheet forming. *Journal of Materials Processing Technology*, **2009**, 209, 3688-3695	5.3	187
139	A plane stress yield function for anisotropic sheet material by interpolation of biaxial stress states. *International Journal of Plasticity*, **2006**, 22, 557-580	7.6	173
138	Finite-Element Modeling of Deformation and Cracking in Early-Age Concrete. *Journal of Engineering Mechanics - ASCE*, **1994**, 120, 2519-2534	2.4	74
137	Plasticity and fracture modeling of quench-hardenable boron steel with tailored properties. *Journal of Materials Processing Technology*, **2014**, 214, 1211-1227	5.3	71
136	Simulation of aluminium sheet forming at elevated temperatures. *Computer Methods in Applied Mechanics and Engineering*, **2006**, 195, 6691-6709	5.7	64
135	Multi-scale friction modeling for sheet metal forming: The boundary lubrication regime. *Tribology International*, **2015**, 81, 112-128	4.9	61
134	Product defect compensation by robust optimization of a cold roll forming process. *Journal of Materials Processing Technology*, **2013**, 213, 978-986	5.3	50
133	Multi-scale friction modeling for sheet metal forming: The mixed lubrication regime. *Tribology International*, **2015**, 85, 10-25	4.9	49
132	Incremental forming by continuous bending under tension—An experimental investigation. *Journal of Materials Processing Technology*, **2009**, 209, 5456-5463	5.3	46
131	Optimization of forging processes using Finite Element simulations. *Structural and Multidisciplinary Optimization*, **2010**, 42, 797-810	3.6	45
130	An optimisation strategy for industrial metal forming processes. *Structural and Multidisciplinary Optimization*, **2008**, 35, 571-586	3.6	44
129	Accurate determination of flow curves using the bulge test with optical measuring systems. *Journal of Materials Processing Technology*, **2015**, 226, 169-187	5.3	40
128	Warm forming simulation of AlMg sheet. *Journal of Materials Processing Technology*, **2009**, 209, 5636-5645	5.3	40
127	The influence of ligament modelling strategies on the predictive capability of finite element models of the human knee joint. *Journal of Biomechanics*, **2017**, 65, 1-11	2.9	39
126	Effect of material scatter on the plastic behavior and stretchability in sheet metal forming. *Journal of Materials Processing Technology*, **2014**, 214, 238-252	5.3	34
125	Influence of ring growth rate on damage development in hot ring rolling. *Journal of Materials Processing Technology*, **2016**, 227, 268-280	5.3	32

124	The effects of temperature on friction and wear mechanisms during direct press hardening of Al-Si coated ultra-high strength steel. *Wear*, **2018**, 406-407, 149-155	3.5	31
123	Sequential robust optimization of a V-bending process using numerical simulations. *Structural and Multidisciplinary Optimization*, **2012**, 46, 137-153	3.6	31
122	Friction and wear mechanisms during hot stamping of AlSi coated press hardening steel. *Wear*, **2017**, 380-381, 137-145	3.5	29
121	Determination of strain hardening parameters of tailor hardened boron steel up to high strains using inverse FEM optimization and strain field matching. *Journal of Materials Processing Technology*, **2016**, 228, 43-58	5.3	29
120	The prediction of differential hardening behaviour of steels by multi-scale crystal plasticity modelling. *International Journal of Plasticity*, **2015**, 73, 119-141	7.6	29
119	A Metamodel Based Optimisation Algorithm for Metal Forming Processes **2007**, 55-72		27
118	Parameter reduction for the Yld2004-18p yield criterion. *International Journal of Material Forming*, **2016**, 9, 175-178	2	26
117	A comparison between dynamic implicit and explicit finite element simulations of the native knee joint. *Medical Engineering and Physics*, **2016**, 38, 1123-30	2.4	25
116	Cyclic stretch-bending: Mechanics, stability and formability. *Journal of Materials Processing Technology*, **2011**, 211, 1965-1981	5.3	25
115	Friction in sheet metal forming: influence of surface roughness and strain rate on sheet metal forming simulation results. *Procedia Manufacturing*, **2019**, 29, 512-519	1.5	23
114	Sequential improvement for robust optimization using an uncertainty measure for radial basis functions. *Structural and Multidisciplinary Optimization*, **2017**, 55, 1345-1363	3.6	22
113	A numerical investigation of the continuous bending under tension test. *Journal of Materials Processing Technology*, **2011**, 211, 1948-1956	5.3	21
112	A comparative study on the performance of meshless approximations and their integration. *Computational Mechanics*, **2011**, 48, 121-137	4	21
111	Substructuring in the implicit simulation of single point incremental sheet forming. *International Journal of Material Forming*, **2009**, 2, 181-189	2	21
110	Plasticity and fracture modeling of the heat-affected zone in resistance spot welded tailor hardened boron steel. *Journal of Materials Processing Technology*, **2016**, 234, 309-322	5.3	19
109	Phenomenological modeling of anisotropy induced by evolution of the dislocation structure on the macroscopic and microscopic scale. *International Journal of Material Forming*, **2011**, 4, 141-154	2	17
108	Friction surface cladding: An exploratory study of a new solid state cladding process. *Journal of Materials Processing Technology*, **2016**, 229, 769-784	5.3	16
107	Efficient implicit simulation of incremental sheet forming. *International Journal for Numerical Methods in Engineering*, **2012**, 90, 597-612	2.4	16

106	On the nonlinear anelastic behavior of AHSS. *International Journal of Solids and Structures*, **2018**, 151, 2-8	3.1	15
105	Time reduction in implicit single point incremental sheet forming simulation by refinement - derefinement. *International Journal of Material Forming*, **2008**, 1, 1167-1170	2	15
104	Adaptive return mapping algorithms for J2 elasto-viscoplastic flow. *International Journal for Numerical Methods in Engineering*, **2001**, 51, 1283-1298	2.4	15
103	Tensile tests with bending: a mechanism for incremental forming.. *International Journal of Material Forming*, **2008**, 1, 1155-1158	2	14
102	Large strain cyclic behavior of metastable austenic stainless steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 631, 166-172	5.3	13
101	Experimental characterization of microstructure development during loading path changes in bcc sheet steels. *Journal of Materials Science*, **2013**, 48, 674-689	4.3	13
100	Simulation of stretch forming with intermediate heat treatments of aircraft skins. *International Journal of Material Forming*, **2011**, 4, 129-140	2	13
99	Microscopic investigation of damage mechanisms and anisotropic evolution of damage in DP600. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2019**, 739, 348-356	5.3	13
98	Influence of Punch Radius in a Nakazima Test for Mild Steel and Aluminium. *International Journal of Material Forming*, **2010**, 3, 1179-1182	2	11
97	Material Characterization at High Strain by Adapted Tensile Tests. *Experimental Mechanics*, **2012**, 52, 1195-1209	2.6	10
96	Material-induced anisotropic damage in DP600. *International Journal of Damage Mechanics*, **2013**, 22, 1039-1070	3	9
95	The ALE-method with triangular elements: direct convection of integration point values. *International Journal for Numerical Methods in Engineering*, **2000**, 49, 697-720	2.4	9
94	Modeling boundary friction of coated sheets in sheet metal forming. *Tribology International*, **2021**, 153, 106554	4.9	9
93	Modeling Mixed Lubrication Friction for Sheet Metal Forming Applications. *Procedia Manufacturing*, **2020**, 47, 586-590	1.5	8
92	Cladding of Advanced Al Alloys Employing Friction Stir Welding. *Key Engineering Materials*, **2013**, 554-557, 1014-1021	0.4	8
91	Improvement of implicit finite element code performance in deep drawing simulations by dynamics contributions. *Journal of Materials Processing Technology*, **2003**, 134, 413-420	5.3	8
90	Influence of Feed Rate on Damage Development in Hot Ring Rolling. *Procedia Engineering*, **2014**, 81, 292-297		7
89	On the effect of numerical noise in approximate optimization of forming processes using numerical simulations. *International Journal of Material Forming*, **2013**, 7, 317	2	7

88	Efficient implicit finite element analysis of sheet forming processes. *International Journal for Numerical Methods in Engineering*, **2003**, 56, 1083-1107	2.4	7
87	Exploiting data in smart factories: real-time state estimation and model improvement in metal forming mass production. *International Journal of Material Forming*, **2020**, 13, 663-673	2	7
86	A noninvasive MRI based approach to estimate the mechanical properties of human knee ligaments. *Journal of the Mechanical Behavior of Biomedical Materials*, **2019**, 93, 43-51	4.1	6
85	Stretching the limits of forming processes by robust optimization: A numerical and experimental demonstrator. *Journal of Materials Processing Technology*, **2015**, 217, 345-355	5.3	6
84	Semi-analytical contact model to determine the flattening behavior of coated sheets under normal load. *Tribology International*, **2020**, 146, 106182	4.9	6
83	An Insight in Friction and Wear Mechanisms during Hot Stamping. *Key Engineering Materials*, **2018**, 767, 131-138	0.4	6
82	Friction and lubrication modeling in sheet metal forming simulations of a Volvo XC90 inner door. *IOP Conference Series: Materials Science and Engineering*, **2016**, 159, 012021	0.4	6
81	Contact Effects in Bending Affecting Stress and Formability. *International Journal of Material Forming*, **2010**, 3, 1159-1162	2	6
80	An adaptive time-stepping algorithm for quasistatic processes. *Communications in Numerical Methods in Engineering*, **1994**, 10, 837-844		6
79	Feedforward control of sheet bending based on force measurements. *Journal of Manufacturing Processes*, **2018**, 31, 260-272	5	6
78	Cracking Behavior of Coating during Hot Tensile Tests of AlSi-Coated Press Hardening Steel. *Procedia Manufacturing*, **2020**, 47, 602-607	1.5	5
77	Estimating product-to-product variations in metal forming using force measurements **2017**,		5
76	Multi-Scale Contact Modeling of Coated Steels for Sheet Metal Forming Applications. *Key Engineering Materials*, **2018**, 767, 223-231	0.4	5
75	Meshless methods and forming processes. *International Journal of Material Forming*, **2009**, 2, 585-588	2	5
74	Modelling of aluminium sheet forming at elevated temperatures. *AIP Conference Proceedings*, **2004**,	0	5
73	Combined athermal and isothermal martensite to austenite reversion kinetics, experiment and modelling. *Materials and Design*, **2020**, 196, 109124	8.1	5
72	Mixed lubrication friction model including surface texture effects for sheet metal forming. *Journal of Materials Processing Technology*, **2021**, 291, 117035	5.3	5
71	Temperature dependent micromechanics-based friction model for cold stamping processes. *Journal of Physics: Conference Series*, **2018**, 1063, 012136	0.3	5

70	Robust optimization based on analytical evaluation of uncertainty propagation. *Engineering Optimization*, **2019**, 51, 1581-1603	2	4
69	Model-based control of strip bending in mass production. *CIRP Annals - Manufacturing Technology*, **2015**, 64, 297-300	4.9	4
68	Modelling of Friction in Hot Stamping. *Procedia Manufacturing*, **2020**, 47, 596-601	1.5	4
67	Identification of Plasticity Model Parameters of the Heat-Affected Zone in Resistance Spot Welded Martensitic Boron Steel. *Key Engineering Materials*, **2015**, 639, 369-376	0.4	4
66	Deformation Scenarios of Combined Stretching and Bending in Complex Shaped Deep Drawing Parts. *Key Engineering Materials*, **2013**, 554-557, 1252-1264	0.4	4
65	Effect of temperature on anisotropy in forming simulation of aluminum alloys. *International Journal of Material Forming*, **2009**, 2, 387-390	2	4
64	Determination of Flow Curves under Equibiaxial Stress Conditions. *Key Engineering Materials*, **2012**, 504-506, 53-58	0.4	4
63	Topology Optimization for additive manufacturing with distortion constraints. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 386, 114095	5.7	4
62	Evaluation and assessment of non-normal output during robust optimization. *Structural and Multidisciplinary Optimization*, **2019**, 59, 2063-2076	3.6	3
61	A Continuum Model for the Effect of Dynamic Recrystallization on the Stress?Strain Response. *Materials*, **2018**, 11,	3.5	3
60	Modelling of the austenite-martensite transformation in stainless and TRIP steels **2013**,		3
59	On the performance of substructuring implicit simulation of single point incremental forming. *International Journal of Material Forming*, **2009**, 2, 559-562	2	3
58	The Stabilizing Effect of Bending-Under-Tension **2011**,		3
57	Effect of Thickness Stress in Stretch-Bending **2010**,		3
56	Thermo-mechanical Forming of Al-Mg-Si Alloys: Modeling and Experiments **2010**,		3
55	Stable Incremental Deformation of a Strip to High Strain. *Key Engineering Materials*, **2007**, 344, 615-620	0.4	3
54	A Robust Optimisation Strategy for Metal Forming Processes. *AIP Conference Proceedings*, **2007**,	0	3
53	Finite Element Simulation of the Stretch-Forming of Aircraft Skins. *AIP Conference Proceedings*, **2005**,	0	3

52	A mixed elastoplastic/rigid-plastic material model. *International Journal for Numerical Methods in Engineering*, **1999**, 46, 1421-1434	2.4	3
51	A New in-Plane Bending Test to Determine Flow Curves for Materials with Low Uniform Elongation. *Experimental Mechanics*, **2020**, 60, 1225-1238	2.6	3
50	Investigating AlSi coating fracture at high temperatures using acoustic emission sensors. *Surface and Coatings Technology*, **2021**, 423, 127587	4.4	3
49	An Engineering Approach to Strain Rate and Temperature Compensation of the Flow Stress Established by the Hydraulic Bulge Test. *Key Engineering Materials*, **2015**, 651-653, 138-143	0.4	2
48	Friction and lubrication modelling in sheet metal forming simulations of the Volvo XC90 inner door. *Journal of Physics: Conference Series*, **2016**, 734, 032090	0.3	2
47	Numerical and Experimental Validation of a New Damage Initiation Criterion. *Journal of Physics: Conference Series*, **2017**, 896, 012080	0.3	2
46	Study on Instability and Forming Limit of Sheet Metal under Stretch-Bending. *Key Engineering Materials*, **2014**, 611-612, 84-91	0.4	2
45	Multi-stage FE simulation of hot ring rolling **2013**,		2
44	Accurate Evaluation Method for the Hydraulic Bulge Test. *Key Engineering Materials*, **2013**, 554-557, 33-40	0.4	2
43	Incremental Sheet Forming Analysed by Tensile Tests. *Key Engineering Materials*, **2009**, 410-411, 347-354	0.4	2
42	Influence Of The Plastic Material Behaviour On The Prediction Of Forming Limits. *AIP Conference Proceedings*, **2007**,	0	2
41	Strain in Shear, and Material Behaviour in Incremental Forming. *Key Engineering Materials*,519-526	0.4	2
40	Multiscale friction model for hot sheet metal forming. *Friction*,1	5.6	2
39	Gradient enhanced physically based plasticity: Implementation and application to a problem pertaining size effect **2016**,		2
38	The implications of non-anatomical positioning of a meniscus prosthesis on predicted human knee joint biomechanics. *Medical and Biological Engineering and Computing*, **2020**, 58, 1341-1355	3.1	2
37	Evolution of real area of contact due to combined normal load and sub-surface straining in sheet metal. *Friction*, **2021**, 9, 840-855	5.6	2
36	Friction in Sheet Metal Forming Simulations: Modelling of New Sheet Metal Coatings and Lubricants. *IOP Conference Series: Materials Science and Engineering*, **2018**, 418, 012093	0.4	2
35	Tool Texturing for Deep Drawing Applications. *IOP Conference Series: Materials Science and Engineering*, **2018**, 418, 012095	0.4	2

34	A Class of Rate-Independent Lower-Order Gradient Plasticity Theories: Implementation and Application to Disc Torsion Problem. *Materials*, **2018**, 11,	3.5	2
33	Inverse Identification of Process Variations for Thin Steel Sheet Bending. *Key Engineering Materials*, **2015**, 651-653, 1363-1368	0.4	1
32	Interpolation of final geometry and result fields in process parameter space. *MATEC Web of Conferences*, **2016**, 80, 13006	0.3	1
31	From specified product tolerance to acceptable material and process scatter: an inverse robust optimization approach. *International Journal of Material Forming*, **2020**, 13, 467-478	2	1
30	An RVE-Based Study of the Effect of Martensite Banding on Damage Evolution in Dual Phase Steels. *Materials*, **2020**, 13,	3.5	1
29	Constitutive modeling of hot horming of austenitic stainless steel 316LN by accounting for recrystallization in the dislocation evolution. *Journal of Physics: Conference Series*, **2016**, 734, 032026	0.3	1
28	The effect of tooling deformation on process control in multistage metal forming **2016**,		1
27	Friction in Sheet Metal Forming: Forming Simulations of Dies in Try-Out. *Journal of Physics: Conference Series*, **2018**, 1063, 012134	0.3	1
26	Experimental investigation of pinching phenomena in cold rolling of thin steel sheets **2019**,		1
25	On the choice of basis in proper orthogonal decomposition-based surrogate models **2019**,		1
24	Implementation and application of a gradient enhanced crystal plasticity model **2017**,		1
23	Efficient calculation of uncertainty propagation with an application in robust optimization of forming processes **2017**,		1
22	A nonlinear dynamic corotational finite element model for submerged pipes. *IOP Conference Series: Materials Science and Engineering*, **2017**, 276, 012030	0.4	1
21	Modelling of anelastic deformation in dual-phase steel for improved springback simulation. *Procedia Engineering*, **2017**, 207, 185-190		1
20	Sequential Optimization of Strip Bending Process Using Multiquadric Radial Basis Function Surrogate Models. *Key Engineering Materials*, **2013**, 554-557, 911-918	0.4	1
19	A Plasticity Induced Anisotropic Damage Model for Sheet Forming Processes. *Key Engineering Materials*, **2013**, 554-557, 1245-1251	0.4	1
18	Experimental validation of numerical sensitivities in a deep drawing simulation. *International Journal of Material Forming*, **2008**, 1, 41-44	2	1
17	Do Advanced Material Models Contribute to Accuracy in Industrial Sheet Forming Simulations?. *Advanced Materials Research*, **2005**, 6-8, 71-80	0.5	1

16	Evaluation of POD based surrogate models of fields resulting from nonlinear FEM simulations. *Advanced Modeling and Simulation in Engineering Sciences*, **2021**, 8,	2.7	1
15	On the nonlinear anelastic behaviour of AHSS. *Journal of Physics: Conference Series*, **2016**, 734, 032100	0.3	1
14	Return mapping algorithm for elasto-plastic deformation of thin walled pipes. *International Journal of Pressure Vessels and Piping*, **2020**, 188, 104245	2.4	0
13	A Yield Criterion Based on Mean Shear Stress. *Key Engineering Materials*, **2014**, 611-612, 3-10	0.4	0
12	Accounting for non-normal distribution of input variables and their correlations in robust optimization. *Optimization and Engineering*,1	2.1	0
11	Numerical and experimental studies of AlSi coating microstructure and its fracture at high temperatures. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2021**, 827, 142067	5.3	0
10	A constitutive law based on the self-consistent homogenization theory for improved springback simulation of a dual-phase steel. *Journal of Physics: Conference Series*, **2018**, 1063, 012120	0.3	
9	Finite element modeling of pipe-laying dynamics using corotational elements. *International Journal for Computational Methods in Engineering Science and Mechanics*, **2019**, 20, 293-307	0.7	
8	Physically Based Criterion for Prediction of Instability under Stretch-Bending of Sheet Metal. *Key Engineering Materials*, **2015**, 651-653, 144-149	0.4	
7	Instability Prediction during Stretch Bending of AHSS Sheet Metal. *Key Engineering Materials*, **2014**, 622-623, 1145-1151	0.4	
6	Transformation in Austenitic Stainless Steel Sheet under Different Loading Directions. *Key Engineering Materials*, **2011**, 473, 444-451	0.4	
5	Effect of heating temperatures on AlSi coating microstructure and fracture during hot-tensile tests. *IOP Conference Series: Materials Science and Engineering*, **2021**, 1157, 012018	0.4	
4	Bayesian Model-based State Estimation for Mass Production Metal Forming. *IOP Conference Series: Materials Science and Engineering*, **2019**, 651, 012095	0.4	
3	The evolution of mechanical properties of AISI 301 as a result of phase reversion heat treatment, experiment and modeling. *Journal of Physics: Conference Series*, **2018**, 1063, 012106	0.3	
2	Effect of temperature and heat generation on martensitic phase transformation in DH steels. *Results in Materials*, **2022**, 14, 100281	2.3	
1	Surface Texture Design for Sheet Metal Forming Applications. *Minerals, Metals and Materials Series*, **2022**, 703-711	0.3	