Luise KÃ¤rger

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5522871/publications.pdf

Version: 2024-02-01

95 papers	1,704 citations	304602 22 h-index	345118 36 g-index
98 all docs	98 docs citations	98 times ranked	997 citing authors

#	Article	IF	Citations
1	Analytical modeling and investigation of constrained layer damping in hybrid laminates based on a unified plate formulation. International Journal of Mechanical Sciences, 2022, 216, 106964.	3.6	15
2	Optimisation of manufacturing process parameters for variable component geometries using reinforcement learning. Materials and Design, 2022, 214, 110423.	3.3	10
3	Optimisation of layup type and fibre orientation in continuous-fibre reinforced components via anisotropy analysis. Composite Structures, 2022, 287, 115347.	3.1	1
4	Low-velocity impact behavior of hybrid CFRP-elastomer-metal laminates in comparison with conventional fiber-metal laminates. Composite Structures, 2022, 287, 115340.	3.1	10
5	Experimental and Numerical Analysis of SMC Compression Molding in Confined Regionsâ€”A Comparison of Simulation Approaches. Journal of Composites Science, 2022, 6, 68.	1.4	6
6	Hybrid material additive manufacturing: interlocking interfaces for fused filament fabrication on laser powder bed fusion substrates. Virtual and Physical Prototyping, 2022, 17, 508-527.	5.3	9
7	Systematic Approach for Finite Element Analysis of Thermoplastic Impregnated 3D Filament Winding Structuresâ€”Advancements and Validation. Journal of Composites Science, 2022, 6, 98.	1.4	1
8	Advances in composite forming through 25Âyears of ESAFORM. International Journal of Material Forming, 2022, 15, 1.	0.9	10
9	Tensor interpolation in virtual manufacturing chains for fiber reinforced composites. International Journal of Mechanical Sciences, 2022, 226, 107378.	3.6	5
10	Extension of an analytical solution of a unified formulation to the frequency response of composite plates with viscoelastic layers. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000234.	0.2	3
11	A 3D process simulation model for wet compression moulding. Composites Part A: Applied Science and Manufacturing, 2021, 145, 106379.	3.8	6
12	Systematic approach for finite element analysis of thermoplastic impregnated 3D filament winding structures â€“ General concept and first validation results. Composite Structures, 2021, 268, 113964.	3.1	4
13	Theoretical approximation of hydrodynamic and fiber-fiber interaction forces for macroscopic simulations of polymer flow process with fiber orientation tensors. Composites Part C: Open Access, 2021, 5, 100152.	1.5	2
14	Micro-Scale Permeability Characterization of Carbon Fiber Composites Using Micrograph Volume Elements. Frontiers in Materials, 2021, 8, .	1.2	3
15	Experimental and Numerical Analysis of Mold Filling in Rotational Molding. Journal of Composites Science, 2021, 5, 289.	1.4	1
16	Modeling the Mullins effect of rubbers used in constrainedâ€layer damping applications. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	2
17	A novel approach for segmenting and mapping of local fiber orientation of continuous fiber-reinforced composite laminates based on volumetric images. NDT and E International, 2020, 110, 102194.	1.7	9
18	Estimating Optimum Process Parameters in Textile Draping of Variable Part Geometries - A Reinforcement Learning Approach. Procedia Manufacturing, 2020, 47, 847-854.	1.9	16

#	Article	IF	Citations
19	The Impact of Draping Effects on the Stiffness and Failure Behavior of Unidirectional Non-Crimp Fabric Fiber Reinforced Composites. Materials, 2020, 13, 2959.	1.3	9
20	Experimental and numerical investigations of pressure-controlled resin transfer molding (PC-RTM). Advanced Manufacturing: Polymer and Composites Science, 2020, 6, 154-163.	0.2	3
21	Material Modeling in Forming Simulation of Three-Dimensional Fiber-Metal-Laminates â€“ A Parametric Study. Procedia Manufacturing, 2020, 47, 154-161.	1.9	3
22	A 3D Modelling Approach for Fluid Progression during Process Simulation of Wet Compression Moulding â€“ Motivation & Approach. Procedia Manufacturing, 2020, 47, 85-92.	1.9	7
23	On the Applicability of Thermoforming Characterization and Simulation Approaches to Glass Mat Thermoplastic Composites. Procedia Manufacturing, 2020, 47, 118-125.	1.9	7
24	Parameter Identification of Fiber Orientation Models Based on Direct Fiber Simulation with Smoothed Particle Hydrodynamics. Journal of Composites Science, 2020, 4, 77.	1.4	15
25	Capabilities of Macroscopic Forming Simulation for Large-Scale Forming Processes of Dry and Impregnated Textiles. Procedia Manufacturing, 2020, 47, 140-147.	1.9	7
26	Direct Bundle Simulation approach for the compression molding process of Sheet Molding Compound. Composites Part A: Applied Science and Manufacturing, 2020, 132, 105809.	3.8	32
27	Reduced-Integrated 8-Node Hexahedral Solid-Shell Element for the Macroscopic Forming Simulation of Continuous Fibre-Reinforced Polymers. Procedia Manufacturing, 2020, 47, 134-139.	1.9	8
28	Experimental and numerical investigation of the contact behavior during FE forming simulation of continuously reinforced composites in wet compression molding. AIP Conference Proceedings, 2019, , .	0.3	4
29	An approach for rapid prediction of textile draping results for variable composite component geometries using deep neural networks. AIP Conference Proceedings, 2019, , .	0.3	14
30	On the relevance of thermomechanics and crystallization kinetics for FE thermoforming simulation of semi-crystalline thermoplastic tapes. AIP Conference Proceedings, 2019, , .	0.3	0
31	Numerical modeling of a hybrid forming process for three-dimensionally curved fiber-metal laminates. AIP Conference Proceedings, 2019, , .	0.3	9
32	A coupled thermomechanical approach for finite element forming simulation of continuously fiber-reinforced semi-crystalline thermoplastics. Composites Part A: Applied Science and Manufacturing, 2019, 125, 105508.	3.8	26
33	Comparison of the flow and rheological behavior of two semi-structural sheet-molding-compound (SMC) based on a hybrid resin and glass or carbon fibers. AIP Conference Proceedings, 2019, , .	0.3	1
34	Manufacturing uncertainties and resulting robustness of optimized patch positions on continuous-discontinuous fiber reinforced polymer structures. Composite Structures, 2019, 213, 47-57.	3.1	6
35	Injection molding simulation of short fiber reinforced thermosets with anisotropic and non-Newtonian flow behavior. Composites Part A: Applied Science and Manufacturing, 2019, 124, 105476.	3.8	25
36	A machine learning assisted approach for textile formability assessment and design improvement of composite components. Composites Part A: Applied Science and Manufacturing, 2019, 124, 105459.	3.8	26

#	Article	IF	Citations
37	Comparative experimental and numerical analysis of bending behaviour of dry and low viscous infiltrated woven fabrics. Composites Part A: Applied Science and Manufacturing, 2019, 124, 105466.	3.8	17
38	Frequency domain modelling of transversely isotropic viscoelastic fibre-reinforced plastics. Composites Science and Technology, 2019, 180, 101-110.	3.8	17
39	Multi-objective CoFRP patch optimization with consideration of manufacturing constraints and integrated warpage simulation. Composite Structures, 2019, 221, 110861.	3.1	4
40	Experimental and Numerical Determination of the Local Fiber Volume Content of Unidirectional Non-Crimp Fabrics with Forming Effects. Journal of Composites Science, 2019, 3, 19.	1.4	16
41	Virtual process chain of sheet molding compound: Development, validation and perspectives. Composites Part B: Engineering, 2019, 169, 133-147.	5.9	69
42	Damping Characterization of Hybrid Carbon Fiber Elastomer Metal Laminates using Experimental and Numerical Dynamic Mechanical Analysis. Journal of Composites Science, 2019, 3, 3.	1.4	21
43	Introduction to Continuousâ€“Discontinuous Fiber-Reinforced Polymer Composites. , 2019, , 1-10.		0
44	Compression Molding of the Demonstrator Structure. , 2019, , 297-314.		0
45	Virtual Product Development Using Simulation Methods and AI. Lightweight Design Worldwide, 2019, 12, 12-19.	0.1	2
46	Application of a mixed variational higher order plate theory towards understanding the deformation behavior of hybrid laminates. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900048.	0.2	4
47	Motivating the development of a virtual process chain for sheet molding compound composites. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900124.	0.2	4
48	Fast processing and continuous simulation of automotive structural composite components. Composites Science and Technology, 2019, 171, 261-279.	3.8	96
49	Nonlinear hyperviscoelastic modelling of intra-ply deformation behaviour in finite element forming simulation of continuously fibre-reinforced thermoplastics. Composites Part A: Applied Science and Manufacturing, 2018, 109, 585-596.	3.8	46
50	Forming optimisation embedded in a CAE chain to assess and enhance the structural performance of composite components. Composite Structures, 2018, 192, 143-152.	3.1	50
51	Simplified phenomenological model of the nonlinear behavior of FRPs under combined stress states. Journal of Composite Materials, 2018, 52, 475-485.	1.2	1
52	Optimisation of manufacturing process parameters using deep neural networks as surrogate models. Procedia CIRP, 2018, 72, 426-431.	1.0	84
53	Experimental and numerical characterisation of fibreâ€metalâ€elastomer laminates by using DMA regarding its damping behaviour. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800432.	0.2	2
54	Modelling approach for anisotropic inter-ply slippage in finite element forming simulation of thermoplastic UD-tapes. AIP Conference Proceedings, 2018, , .	0.3	6

#	Article	IF	Citations
55	A meta-model based approach for rapid formability estimation of continuous fibre reinforced components. AIP Conference Proceedings, 2018, , .	0.3	6
56	Experimental and numerical investigation of the shear behaviour of infiltrated woven fabrics. Composites Part A: Applied Science and Manufacturing, 2018, 114, 327-337.	3.8	21
57	A 2D modeling approach for fluid propagation during FE-forming simulation of continuously reinforced composites in wet compression moulding. AIP Conference Proceedings, 2018, , .	0.3	10
58	Simulation of Reinforced Reactive Injection Molding with the Finite Volume Method. Journal of Composites Science, 2018, 2, 5.	1.4	14
59	Simulating Mold Filling in Compression Resin Transfer Molding (CRTM) Using a Three-Dimensional Finite-Volume Formulation. Journal of Composites Science, 2018, 2, 23.	1.4	12
60	Experimental and numerical study of the influence of integrated load transmission elements on filling behavior in resin transfer molding. Composite Structures, 2018, 198, 135-143.	3.1	18
61	Multi-Objective Patch Optimization with Integrated Kinematic Draping Simulation for Continuousâ€“Discontinuous Fiber-Reinforced Composite Structures. Journal of Composites Science, 2018, 2, 22.	1.4	25
62	Numerical and experimental investigations of the damping behaviour of hybrid CFRP-elastomer-metal laminates. Composite Structures, 2018, 202, 1109-1113.	3.1	23
63	Rheological measurements and rheological shell model Considering the compressible behavior of long fiber reinforced sheet molding compound (SMC). Composites Part A: Applied Science and Manufacturing, 2017, 95, 110-117.	3.8	24
64	Virtual characterization and macroscopic material modeling of a carbon fiber-reinforced PA6 UD composite. Journal of Composite Materials, 2017, 51, 3075-3086.	1.2	5
65	A viscoelastic approach for modeling bending behavior in finite element forming simulation of continuously fiber reinforced composites. Composites Part A: Applied Science and Manufacturing, 2017, 94, 113-123.	3.8	90
66	On the relevance of modeling viscoelastic bending behavior in finite element forming simulation of continuously fiber reinforced thermoplastics. AIP Conference Proceedings, 2017, , .	0.3	3
67	Modeling of the non-isothermal crystallization kinetics of polyamide 6 composites during thermoforming. AIP Conference Proceedings, 2017, , .	0.3	7
68	A macroscopic approach to simulate the forming behaviour of stitched unidirectional non-crimp fabrics (UD-NCF). Composites Part A: Applied Science and Manufacturing, 2017, 102, 322-335.	3.8	49
69	Evaluation of the physical mechanisms of adhesively bonded metal-based hybrid material systems under tensile loading. Materials and Design, 2017, 132, 215-224.	3.3	2
70	A Benchmark Study of Finite Element Codes for Forming Simulation of Thermoplastic UD-Tapes. Procedia CIRP, 2017, 66, 101-106.	1.0	42
71	Modeling and validation of gripper induced membrane forces in finite element forming simulation of continuously reinforced composites. AIP Conference Proceedings, 2017, , .	0.3	2
72	An iterative approach for the determination of tailored blanks for waste-free composite forming by means of FE forming simulation. International Journal of Automotive Composites, 2017, 3, 323.	0.1	2

#	Article	IF	Citations
73	Rheological In-Mold Measurements and Characterizations of Sheet-Molding-Compound (SMC) Formulations with Different Constitution Properties by Using a Compressible Shell Model. International Polymer Processing, 2017, 32, 659-668.	0.3	12
74	An iterative approach for the determination of tailored blanks for waste-free composite forming by means of FE forming simulation. International Journal of Automotive Composites, 2017, 3, 323.	0.1	0
75	Accurate Cure Modeling for Isothermal Processing of Fast Curing Epoxy Resins. Polymers, 2016, 8, 390.	2.0	46
76	A method for validation of finite element forming simulation on basis of a pointwise comparison of distance and curvature. AIP Conference Proceedings, 2016, , .	0.3	15
77	Characterisation of the draping behaviour of unidirectional non-crimp fabrics (UD-NCF). Composites Part A: Applied Science and Manufacturing, 2016, 80, 28-38.	3.8	47
78	Experimental and numerical analysis of bolt-loaded open-hole laminates reinforced by winded carbon rovings. Composite Structures, 2016, 141, 194-202.	3.1	11
79	Evaluation of Different Hybrid Material Systems and Systematic Analysis of their Physical Mechanisms in Terms of Fatigue. Materials Science Forum, 2015, 825-826, 473-481.	0.3	2
80	Development and validation of a CAE chain for unidirectional fibre reinforced composite components. Composite Structures, 2015, 132, 350-358.	3.1	58
81	A new efficient and reliable algorithm to determine the fracture angle for Puckâ€™s 3D matrix failure criterion for UD composites. Composites Science and Technology, 2014, 100, 19-25.	3.8	46
82	As-built FE simulation of advanced fibre placement structures based on manufacturing data. Composite Structures, 2013, 100, 104-112.	3.1	13
83	Composite Process Chain Towards As-Built Design. Research Topics in Aerospace, 2013, , 199-210.	0.6	2
84	Investigations on imperfection sensitivity and deduction of improved knock-down factors for unstiffened CFRP cylindrical shells. Composite Structures, 2010, 92, 1939-1946.	3.1	141
85	Evaluation of impact assessment methodologies. Part II: Experimental validation. Composites Part B: Engineering, 2009, 40, 71-76.	5.9	11
86	Evaluation of impact assessment methodologies. Part I: Applied methods. Composites Part B: Engineering, 2009, 40, 65-70.	5.9	9
87	Efficient simulation of low-velocity impacts on composite sandwich panels. Computers and Structures, 2008, 86, 988-996.	2.4	19
88	Efficient prediction of damage resistance and tolerance of composite aerospace structures. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2008, 222, 179-188.	0.7	11
89	Stiffness and failure behaviour of folded sandwich cores under combined transverse shear and compression. Composites Part A: Applied Science and Manufacturing, 2007, 38, 1288-1295.	3.8	56
90	Rapid simulation of impacts on composite sandwich panels inducing barely visible damage. Composite Structures, 2007, 79, 527-534.	3.1	27

#	Article	IF	Citations
91	A three-layered sandwich element with improved transverse shear stiffness and stresses based on FSDT. Computers and Structures, 2006, 84, 843-854.	2.4	37
92	Evaluation of two finite element formulations for a rapid 3D stress analysis of sandwich structures. Computers and Structures, 2005, 83, 1537-1545.	2.4	19
93	Development of a Modular Draping Test Bench for Analysis of Infiltrated Woven Fabrics in Wet Compression Molding. Key Engineering Materials, 0, 809, 35-40.	0.4	2
94	Wide Scale Characterization and Modeling of the Vibration and Damping Behavior of CFRP-Elastomer-Metal Laminatesâ€"Comparison and Discussion of Different Test Setups. Applied Composite Materials, 0, , 1.	1.3	4
95	Simulation of the Influence of Embedded Inserts on the RTM Filling Behavior Considering Local Fiber Structure. Key Engineering Materials, 0, 742, 681-688.	0.4	6