Pavel Simacek

List of Publications by Year
in descending order

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52 papers	1,606 citations	331259 21 h-index	301761 39 g-index
52 all docs	52 docs citations	52 times ranked	649 citing authors

#	Article	IF	Citations
1	Modeling short fiber deformation in dilute suspension: Fiber deposition process. Composites Science and Technology, 2022, 218, 109149.	3.8	2
2	Effect of the initial resin distribution in partially impregnated thermoplastic prepregs on consolidation. Composites Science and Technology, 2022, 225, 109488.	3.8	1
3	Gap filling mechanisms during the thin ply Automated Tape Placement process. Composites Part A: Applied Science and Manufacturing, 2021, 147, 106454.	3.8	8
4	Prediction of process-induced void formation in anisotropic Fiber-reinforced autoclave composite parts. International Journal of Material Forming, 2020, 13, 143-158.	0.9	12
5	A non-local void dynamics modeling and simulation using the Proper Generalized Decomposition. International Journal of Material Forming, 2020, 13, 533-546.	0.9	1
6	A continuum approach for consolidation modeling in composites processing. Composites Science and Technology, 2020, 186, 107892.	3.8	10
7	Experimental parametric study of flowâ€induced fiber washout during highâ€injectionâ€pressure resin transfer molding. Polymer Composites, 2020, 41, 1053-1065.	2.3	5
8	Novel epoxy powder for manufacturing thick-section composite parts under vacuum-bag-only conditions. Part I: Through-thickness process modelling. Composites Part A: Applied Science and Manufacturing, 2020, 136, 105969.	3.8	13
9	On the variability of permeability induced by reinforcement distortions and dual scale flow in liquid composite moulding: A review. Composites Part A: Applied Science and Manufacturing, 2019, 120, 188-210.	3.8	50
10	A micromechanics model to predict extensional viscosity of aligned long discontinuous fiber suspensions. International Journal of Material Forming, 2019, 12, 777-791.	0.9	1
11	Simulation and Validation of Injection-Compression Filling Stage of Liquid Moulding with Fast Curing Resins. Applied Composite Materials, 2019, 26, 41-63.	1.3	10
12	A model for fibre washout during high injection pressure resin transfer moulding. Journal of Reinforced Plastics and Composites, 2018, 37, 865-876.	1.6	10
13	Resin flow modeling in compliant porous media: an efficient approach for liquid composite molding. International Journal of Material Forming, 2018, 11, 503-515.	0.9	12
14	A new methodology for race-tracking detection and criticality in resin transfer molding process using pressure sensors. Journal of Composite Materials, 2018, 52, 4087-4103.	1.2	14
15	Use of medial axis to find optimal channel designs to reduce mold filling time in resin transfer molding. Composites Part A: Applied Science and Manufacturing, 2017, 95, 161-172.	3.8	19
16	Role of fiber distribution and air evacuation time on capillary driven flow into fiber tows. Composites Part A: Applied Science and Manufacturing, 2017, 93, 144-152.	3.8	16
17	Entrapment and venting of bubbles during vacuum bag prepreg processing. Journal of Composite Materials, 2017, 51, 2757-2768.	1.2	18
18	Use of Centroidal Voronoi Diagram to find optimal gate locations to minimize mold filling time in resin transfer molding. Composites Part A: Applied Science and Manufacturing, 2016, 87, 243-255.	3.8	27

#	Article	IF	Citations
19	Gas Evacuation from Partially Saturated Woven Fiber Laminates. Transport in Porous Media, 2016, 115, 541-562.	1.2	16
20	Simulating tape resin infiltration during thermoset pultrusion process. Composites Part A: Applied Science and Manufacturing, 2015, 72, 115-126.	3.8	17
21	A methodology to reduce variability during vacuum infusion with optimized design of distribution media. Composites Part A: Applied Science and Manufacturing, 2015, 78, 223-233.	3.8	38
22	A method to determine open pore volume with pulse decay. Applied Physics Letters, 2014, 105, .	1.5	7
23	Effect of relative ply orientation on the through-thickness permeability of unidirectional fabrics. Composites Science and Technology, 2014, 96, 116-121.	3.8	22
24	Analytic method to estimate multiple equivalent permeability components from a single rectilinear experiment in liquid composite molding processes. Composites Part A: Applied Science and Manufacturing, 2014, 67, 157-170.	3.8	9
25	A process model for the compaction and saturation of partially impregnated thermoset prepreg tapes. Composites Part A: Applied Science and Manufacturing, 2014, 64, 234-244.	3.8	21
26	A non-local void filling model to describe its dynamics during processing thermoplastic composites. Composites Part A: Applied Science and Manufacturing, 2013, 46, 154-165.	3.8	30
27	Resin film impregnation in fabric prepregs with dual length scale permeability. Composites Part A: Applied Science and Manufacturing, 2013, 53, 118-128.	3.8	39
28	Resin transfer molding (RTM) in polymer matrix composites. , 2012, , 245-309.		24
29	Experimental validation of post-filling flow in vacuum assisted resin transfer molding processes. Composites Part A: Applied Science and Manufacturing, 2012, 43, 370-380.	3.8	48
30	The effect of fabric and fiber tow shear on dual scale flow and fiber bundle saturation during liquid molding of textile composites. International Journal of Material Forming, 2012, 5, 83-97.	0.9	38
31	Impact of the Fibre Bed on Resin Viscosity in Liquid Composite Moulding Simulations. Applied Composite Materials, 2012, 19, 669-688.	1.3	2
32	Characterization of 3D fiber preform permeability tensor in radial flow using an inverse algorithm based on sensors and simulation. Composites Part A: Applied Science and Manufacturing, 2011, 42, 1283-1292.	3.8	40
33	A phenomenological model for fiber tow saturation of dual scale fabrics in liquid composite molding. Polymer Composites, 2010, 31, 1881-1889.	2.3	25
34	Resin flow analysis with fiber preform deformation in through thickness direction during Compression Resin Transfer Molding. Composites Part A: Applied Science and Manufacturing, 2010, 41, 881-887.	3.8	53
35	Process analysis of compression resin transfer molding. Composites Part A: Applied Science and Manufacturing, 2009, 40, 431-441.	3.8	68
36	Post-filling flow in vacuum assisted resin transfer molding processes: Theoretical analysis. Composites Part A: Applied Science and Manufacturing, 2009, 40, 913-924.	3.8	54

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37	Modeling Flow in Compression Resin Transfer Molding for Manufacturing of Complex Lightweight High-Performance Automotive Parts. Journal of Composite Materials, 2008, 42, 2523-2545.	1.2	55
38	The Compaction Behavior of Fibrous Preform Materials during the VARTM Infusion. AIP Conference Proceedings, 2007, , .	0.3	4
39	Modeling resin flow and fiber tow saturation induced by distribution media collapse in VARTM. Composites Science and Technology, 2007, 67, 2757-2769.	3.8	37
40	Permeability characterization of dual scale fibrous porous media. Composites Part A: Applied Science and Manufacturing, 2006, 37, 2057-2068.	3.8	96
41	Analytic characterization of the permeability of dual-scale fibrous porous media. Composites Science and Technology, 2006, 66, 2795-2803.	3.8	80
42	Simulating three-dimensional flow in compression resin transfer molding process. Revue Europeenne Des Elements, 2005, 14, 777-802.	0.1	7
43	Desirable features in mold filling simulations for Liquid Composite Molding processes. Polymer Composites, 2004, 25, 355-367.	2.3	147
44	Gate elements at injection locations in numerical simulations of flow through porous media: applications to mold filling. International Journal for Numerical Methods in Engineering, 2004, 61, 1501-1519.	1.5	10
45	A closed form solution to describe infusion of resin under vacuum in deformable fibrous porous media. Modelling and Simulation in Materials Science and Engineering, 2004, 12, S191-S204.	0.8	38
46	The implications of fiber compaction and saturation on fully coupled VARTM simulation. Composites Part A: Applied Science and Manufacturing, 2004, 35, 159-169.	3.8	122
47	Approximate numerical method for prediction of temperature distribution in flow through narrow gaps containing porous media. Computational Mechanics, 2003, 32, 1-9.	2.2	6
48	Influence of injection gate definition on the flow-front approximation in numerical simulations of mold-filling processes. International Journal for Numerical Methods in Fluids, 2003, 42, 1237-1248.	0.9	16
49	A numerical model to predict fiber tow saturation during liquid composite molding. Composites Science and Technology, 2003, 63, 1725-1736.	3.8	104
50	Permeability model for a woven fabric. Polymer Composites, 1996, 17, 887-899.	2.3	92
51	Pathologies associated with the numerical analysis of hyper-anisotropic materials. International Journal for Numerical Methods in Engineering, 1993, 36, 3487-3508.	1.5	11
52	Experimental validation of co-cure process of honeycomb sandwich structures simulation: adhesive fillet shape and bond-line porosity. Advanced Manufacturing: Polymer and Composites Science, 0, , 1-14.	0.2	1