

Pavel Simacek

List of Publications by Year in descending order

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52
papers

1,606
citations

331670

21
h-index

302126

39
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52
all docs

52
docs citations

52
times ranked

649
citing authors

#	ARTICLE	IF	CITATIONS
1	Desirable features in mold filling simulations for Liquid Composite Molding processes. <i>Polymer Composites</i> , 2004, 25, 355-367.	4.6	147
2	The implications of fiber compaction and saturation on fully coupled VARTM simulation. <i>Composites Part A: Applied Science and Manufacturing</i> , 2004, 35, 159-169.	7.6	122
3	A numerical model to predict fiber tow saturation during liquid composite molding. <i>Composites Science and Technology</i> , 2003, 63, 1725-1736.	7.8	104
4	Permeability characterization of dual scale fibrous porous media. <i>Composites Part A: Applied Science and Manufacturing</i> , 2006, 37, 2057-2068.	7.6	96
5	Permeability model for a woven fabric. <i>Polymer Composites</i> , 1996, 17, 887-899.	4.6	92
6	Analytic characterization of the permeability of dual-scale fibrous porous media. <i>Composites Science and Technology</i> , 2006, 66, 2795-2803.	7.8	80
7	Process analysis of compression resin transfer molding. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009, 40, 431-441.	7.6	68
8	Modeling Flow in Compression Resin Transfer Molding for Manufacturing of Complex Lightweight High-Performance Automotive Parts. <i>Journal of Composite Materials</i> , 2008, 42, 2523-2545.	2.4	55
9	Post-filling flow in vacuum assisted resin transfer molding processes: Theoretical analysis. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009, 40, 913-924.	7.6	54
10	Resin flow analysis with fiber preform deformation in through thickness direction during Compression Resin Transfer Molding. <i>Composites Part A: Applied Science and Manufacturing</i> , 2010, 41, 881-887.	7.6	53
11	On the variability of permeability induced by reinforcement distortions and dual scale flow in liquid composite moulding: A review. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 120, 188-210.	7.6	50
12	Experimental validation of post-filling flow in vacuum assisted resin transfer molding processes. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012, 43, 370-380.	7.6	48
13	Characterization of 3D fiber preform permeability tensor in radial flow using an inverse algorithm based on sensors and simulation. <i>Composites Part A: Applied Science and Manufacturing</i> , 2011, 42, 1283-1292.	7.6	40
14	Resin film impregnation in fabric prepregs with dual length scale permeability. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013, 53, 118-128.	7.6	39
15	A closed form solution to describe infusion of resin under vacuum in deformable fibrous porous media. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2004, 12, S191-S204.	2.0	38
16	The effect of fabric and fiber tow shear on dual scale flow and fiber bundle saturation during liquid molding of textile composites. <i>International Journal of Material Forming</i> , 2012, 5, 83-97.	2.0	38
17	A methodology to reduce variability during vacuum infusion with optimized design of distribution media. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 78, 223-233.	7.6	38
18	Modeling resin flow and fiber tow saturation induced by distribution media collapse in VARTM. <i>Composites Science and Technology</i> , 2007, 67, 2757-2769.	7.8	37

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19	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.	7.6	30
20	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.	7.6	27
21	A phenomenological model for fiber tow saturation of dual scale fabrics in liquid composite molding. Polymer Composites, 2010, 31, 1881-1889.	4.6	25
22	Resin transfer molding (RTM) in polymer matrix composites. , 2012, , 245-309.		24
23	Effect of relative ply orientation on the through-thickness permeability of unidirectional fabrics. Composites Science and Technology, 2014, 96, 116-121.	7.8	22
24	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.	7.6	21
25	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.	7.6	19
26	Entrapment and venting of bubbles during vacuum bag prepreg processing. Journal of Composite Materials, 2017, 51, 2757-2768.	2.4	18
27	Simulating tape resin infiltration during thermoset pultrusion process. Composites Part A: Applied Science and Manufacturing, 2015, 72, 115-126.	7.6	17
28	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.	1.6	16
29	Gas Evacuation from Partially Saturated Woven Fiber Laminates. Transport in Porous Media, 2016, 115, 541-562.	2.6	16
30	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.	7.6	16
31	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.	2.4	14
32	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.	7.6	13
33	Resin flow modeling in compliant porous media: an efficient approach for liquid composite molding. International Journal of Material Forming, 2018, 11, 503-515.	2.0	12
34	Prediction of process-induced void formation in anisotropic Fiber-reinforced autoclave composite parts. International Journal of Material Forming, 2020, 13, 143-158.	2.0	12
35	Pathologies associated with the numerical analysis of hyper-anisotropic materials. International Journal for Numerical Methods in Engineering, 1993, 36, 3487-3508.	2.8	11
36	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.	2.8	10

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37	A model for fibre washout during high injection pressure resin transfer moulding. <i>Journal of Reinforced Plastics and Composites</i> , 2018, 37, 865-876.	3.1	10
38	Simulation and Validation of Injection-Compression Filling Stage of Liquid Moulding with Fast Curing Resins. <i>Applied Composite Materials</i> , 2019, 26, 41-63.	2.5	10
39	A continuum approach for consolidation modeling in composites processing. <i>Composites Science and Technology</i> , 2020, 186, 107892.	7.8	10
40	Analytic method to estimate multiple equivalent permeability components from a single rectilinear experiment in liquid composite molding processes. <i>Composites Part A: Applied Science and Manufacturing</i> , 2014, 67, 157-170.	7.6	9
41	Gap filling mechanisms during the thin ply Automated Tape Placement process. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 147, 106454.	7.6	8
42	Simulating three-dimensional flow in compression resin transfer molding process. <i>Revue Europeenne Des Elements</i> , 2005, 14, 777-802.	0.1	7
43	A method to determine open pore volume with pulse decay. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	7
44	Approximate numerical method for prediction of temperature distribution in flow through narrow gaps containing porous media. <i>Computational Mechanics</i> , 2003, 32, 1-9.	4.0	6
45	Experimental parametric study of flow-induced fiber washout during high-injection-pressure resin transfer molding. <i>Polymer Composites</i> , 2020, 41, 1053-1065.	4.6	5
46	The Compaction Behavior of Fibrous Preform Materials during the VARTM Infusion. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	4
47	Impact of the Fibre Bed on Resin Viscosity in Liquid Composite Moulding Simulations. <i>Applied Composite Materials</i> , 2012, 19, 669-688.	2.5	2
48	Modeling short fiber deformation in dilute suspension: Fiber deposition process. <i>Composites Science and Technology</i> , 2022, 218, 109149.	7.8	2
49	A micromechanics model to predict extensional viscosity of aligned long discontinuous fiber suspensions. <i>International Journal of Material Forming</i> , 2019, 12, 777-791.	2.0	1
50	A non-local void dynamics modeling and simulation using the Proper Generalized Decomposition. <i>International Journal of Material Forming</i> , 2020, 13, 533-546.	2.0	1
51	Effect of the initial resin distribution in partially impregnated thermoplastic prepregs on consolidation. <i>Composites Science and Technology</i> , 2022, 225, 109488.	7.8	1
52	Experimental validation of co-cure process of honeycomb sandwich structures simulation: adhesive fillet shape and bond-line porosity. <i>Advanced Manufacturing: Polymer and Composites Science</i> , 0, , 1-14.	0.4	1