Sylvain Drapier

List of Publications by Year
in descending order

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64 papers	1,405 citations	279798 23 h-index	361022 35 g-index
70 all docs	70 docs citations	70 times ranked	997 citing authors

#	Article	IF	Citations
1	Bounding transverse permeability of fibrous media: a statistical study from random representative volume elements with consideration of fluid slip. International Journal of Multiphase Flow, 2021, 143, 103751.	3.4	5
2	Influence of intra-yarn flows on whole 3D woven fabric numerical permeability: from Stokes to Stokes-Darcy simulations. International Journal of Multiphase Flow, 2020, 129, 103349.	3.4	12
3	Capillary wicking in bio-based reinforcements undergoing swelling â€“ Dual scale consideration of porous medium. Composites Part A: Applied Science and Manufacturing, 2020, 134, 105893.	7.6	13
4	Numerical modeling of local capillary effects in porous media as a pressure discontinuity acting on the interface of a transient bi-fluid flow. International Journal of Material Forming, 2019, 12, 675-691.	2.0	7
5	Specific features of flax fibres used to manufacture composite materials. International Journal of Material Forming, 2019, 12, 1023-1052.	2.0	53
6	Role of interface formation versus fibres properties in the mechanical behaviour of bio-based composites manufactured by Liquid Composite Molding processes. Composites Part B: Engineering, 2019, 163, 86-95.	12.0	21
7	Accounting for local capillary effects in two-phase flows with relaxed surface tension formulation in enriched finite elements. Comptes Rendus - Mecanique, 2018, 346, 617-633.	2.1	12
8	Editorial for thematic issues: computational methods in manufacturing. International Journal of Material Forming, 2017, 10, 1-2.	2.0	3
9	Resin infusion-based processes simulation : coupled Stokes-Darcy flows in orthotropic preforms undergoing finite strain. International Journal of Material Forming, 2017, 10, 43-54.	2.0	20
10	Wetting and swelling property modifications of elementary flax fibres and their effects on the Liquid Composite Molding process. Composites Part A: Applied Science and Manufacturing, 2017, 97, 31-40.	7.6	34
11	Numerical approach for modelling across scales infusion-based processing of aircraft primary structures. AIP Conference Proceedings, 2017, , .	0.4	1
12	Wicking Tests for Unidirectional Fabrics: Measurements of Capillary Parameters to Evaluate Capillary Pressure in Liquid Composite Molding Processes. Journal of Visualized Experiments, 2017, , .	0.3	0
13	Modelling and simulating the forming of new dry automated lay-up reinforcements for primary structures. AIP Conference Proceedings, 2017, , .	0.4	3
14	Tensiometric method to reliably assess wetting properties of single fibers with resins: Validation on cellulosic reinforcements for composites. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 512, 26-33.	4.7	20
15	Surface characterisation and wetting properties of single basalt fibres. Composites Part B: Engineering, 2017, 109, 72-81.	12.0	35
16	Fibre/matrix interface. , 2017, , 165-180.		0
17	Capillary wicking in flax fabrics â€“ Effects of swelling in water. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 498, 176-184.	4.7	27
18	Towards void formation and permeability predictions in LCM processes: A computational bifluidâ€“solid mechanics framework dealing with capillarity and wetting issues. Comptes Rendus - Mecanique, 2016, 344, 236-250.	2.1	14

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19	Simulation numÃ©rique du procÃ©dÃ© par infusion de rÃ©sine dâ€™une nouvelle gÃ©nÃ©ration de renforts structuraux pour lâ€™aÃ©ronautique. Materiaux Et Techniques, 2016, 104, 412.	0.9	3
20	Capillary effects on flax fibers â€“ Modification and characterization of the wetting dynamics. Composites Part A: Applied Science and Manufacturing, 2015, 77, 257-265.	7.6	43
21	Characterisation of woven flax fibres reinforcements: Effect of the shear on the in-plane permeability. Journal of Composite Materials, 2015, 49, 3415-3430.	2.4	14
22	Capillary wicking in a fibrous reinforcement â€“ Orthotropic issues to determine the capillary pressure components. Composites Part A: Applied Science and Manufacturing, 2015, 77, 133-141.	7.6	38
23	3D robust iterative coupling of Stokes, Darcy and solid mechanics for low permeability media undergoing finite strains. Finite Elements in Analysis and Design, 2015, 94, 1-15.	3.2	17
24	Stokesâ€“Darcy coupling in severe regimes using multiscale stabilisation for mixed finite elements: monolithic approach versus decoupled approach. European Journal of Computational Mechanics, 2014, 23, 113-137.	0.6	13
25	Effect of the mold on the residual strain field monitored with optical fibers sensors in resin transfer molding processes. Journal of Composite Materials, 2014, 48, 2589-2601.	2.4	15
26	A Robust Monolithic Approach for Resin Infusion Based Process Modelling. Key Engineering Materials, 2014, 611-612, 306-315.	0.4	2
27	Sintering at Particle Scale: An Eulerian Computing Framework to Deal with Strong Topological and Material Discontinuities. Archives of Computational Methods in Engineering, 2014, 21, 141-187.	10.2	17
28	Integrating a logarithmic-strain based hyperelastic formulation into a three-field mixed finite element formulation to deal with incompressibility in finite-strain elastoplasticity. Finite Elements in Analysis and Design, 2014, 86, 61-70.	3.2	16
29	Simulation industrielle des procÃ©dÃ©s dâ€™infusion de rÃ©sine. Revue Des Composites Et Des Materiaux Avances, 2014, 24, 39-52.	0.6	0
30	Gas transport in fibrous media: Application to in-plane permeability measurement using transient flow. Journal of Composite Materials, 2013, 47, 2237-2247.	2.4	18
31	A finite elementâ€based level set method for fluidâ€“elastic solid interaction with surface tension. International Journal for Numerical Methods in Engineering, 2013, 93, 919-941.	2.8	18
32	Monitoring the resin infusion manufacturing process under industrial environment using distributed sensors. Journal of Composite Materials, 2012, 46, 691-706.	2.4	30
33	Numerical and experimental analyses of resin infusion manufacturing processes of composite materials. Journal of Composite Materials, 2012, 46, 1617-1631.	2.4	16
34	Combining a levelâ€set method and a mixed stabilized P1/P1 formulation for coupling Stokesâ€“Darcy flows. International Journal for Numerical Methods in Fluids, 2012, 69, 459-480.	1.6	33
35	Finite Element Simulation of Mass Transport During Sintering of a Granular Packing. Part I. Surface and Lattice Diffusions. Journal of the American Ceramic Society, 2012, 95, 2398-2405.	3.8	30
36	Simulation par Ã©lÃ©ments ï¬nis des procÃ©dÃ©s par infusion de rÃ©sine. Revue Des Composites Et Des Materiaux Avances, 2012, 22, 383-393.	0.6	0

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37	Characterization of friction properties at the workmaterial/cutting tool interface during the machining of randomly structured carbon fibers reinforced polymer with carbide tools under dry conditions. Tribology International, 2011, 44, 2050-2058.	5.9	56
38	3D finite element simulation of the matter flow by surface diffusion using a level set method. International Journal for Numerical Methods in Engineering, 2011, 86, 845-861.	2.8	24
39	3D simulation of the matter transport by surface diffusion within a level-set context. European Journal of Computational Mechanics, 2010, 19, 281-292.	0.6	4
40	Mixed Experimental and Numerical Approach for Characterizing the Biomechanical Response of the Human Leg Under Elastic Compression. Journal of Biomechanical Engineering, 2010, 132, 031006.	1.3	42
41	Characterization of Liquid Resin Infusion (LRI) filling by fringe pattern projection and in situ thermocouples. Composites Part A: Applied Science and Manufacturing, 2010, 41, 36-44.	7.6	19
42	In vivo identification of soft biological tissues using MR imaging. European Journal of Computational Mechanics, 2009, 18, 21-32.	0.6	4
43	Ã‰tude mÃ©canique des articles de contention et de leurs effets sur la jambe humaine. Mecanique Et Industries, 2009, 10, 7-13.	0.2	0
44	Numerical modelling of liquid infusion into fibrous media undergoing compaction. European Journal of Mechanics, A/Solids, 2008, 27, 647-661.	3.7	48
45	Numerical aspects of fluid infusion inside a compressible porous medium undergoing large strains. European Journal of Computational Mechanics, 2008, 17, 819-827.	0.6	15
46	ModÃ©lisation de la croissance de dÃ©fauts dans des cupules de prothÃ¨ses de hanche en zircone soumises au phÃ©nomÃ¨ne de dÃ©coaptation. Mecanique Et Industries, 2008, 9, 153-158.	0.2	6
47	Identification strategy for orthotropic knitted elastomeric fabrics under large biaxial deformations. Inverse Problems in Science and Engineering, 2007, 15, 871-894.	1.2	6
48	Experimental assessment and analytical 2D predictions of the stocking pressures induced on a model leg by Medical Compressive Stockings. Journal of Biomechanics, 2006, 39, 3017-3025.	2.1	55
49	An Experimental Assessment of the Saturated Transverse Permeability of Non-crimped New Concept (NC2) Multiaxial Fabrics. Journal of Composite Materials, 2005, 39, 1169-1193.	2.4	19
50	Characterization of transient through-thickness permeabilities of Non Crimp New Concept (NC2) multiaxial fabrics. Composites Part A: Applied Science and Manufacturing, 2005, 36, 877-892.	7.6	34
51	First applications of a novel unified model for global and local buckling of sandwich columns. European Journal of Mechanics, A/Solids, 2002, 21, 683-701.	3.7	49
52	Influence of the stitching density on the transverse permeability of non-crimped new concept (NC2) multiaxial reinforcements: measurements and predictions. Composites Science and Technology, 2002, 62, 1979-1991.	7.8	52
53	Nonlinear interaction of geometrical and material properties in sandwich beam instabilities. International Journal of Solids and Structures, 2002, 39, 3717-3739.	2.7	53
54	Closed-form solution for the cross-section warping in short beams under three-point bending. Composite Structures, 2001, 52, 233-246.	5.8	29

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55	A structural approach of plastic microbuckling in long fibre composites: comparison with theoretical and experimental results. International Journal of Solids and Structures, 2001, 38, 3877-3904.	2.7	46
56	Towards a numerical model of the compressive strength for long fibre composites. European Journal of Mechanics, A/Solids, 1999, 18, 69-92.	3.7	31
57	Finite-element investigation of the compressive strength of non-crimp-fabric-based composites. Composites Science and Technology, 1999, 59, 1287-1297.	7.8	75
58	A finite-element investigation of the interlaminar shear behaviour of non-crimp-fabric-based composites. Composites Science and Technology, 1999, 59, 2351-2362.	7.8	47
59	A non-linear numerical approach to the analysis of microbuckling. Composites Science and Technology, 1998, 58, 785-790.	7.8	10
60	Theoretical study of structural effects on the compressive failure of laminate composites. Comptes Rendus De L'AcadÃ©mie Des Sciences - Series IIB - Mechanics-Physics-Chemistry-Astronomy, 1997, 324, 219-227.	0.1	1
61	Structure effect and microbuckling. Composites Science and Technology, 1996, 56, 861-867.	7.8	34
62	Direct 3D Simulation of Powder Sintering by Surface and Volume Diffusion. Key Engineering Materials, 0, 554-557, 714-723.	0.4	1
63	3D Modelling of Doped and Multi-Materials during Sintering of a Granular Packing. Key Engineering Materials, 0, 554-557, 724-731.	0.4	1
64	Monolithic Approach of Stokes-Darcy Coupling for LCM Process Modelling. Key Engineering Materials, 0, 554-557, 447-455.	0.4	8