

Nicolas Roussel

List of Publications by Year in descending order

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118
papers

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39113

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35168

102
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120
all docs

120
docs citations

120
times ranked

5184
citing authors

#	ARTICLE	IF	CITATIONS
1	Viscosity modifying agents: Key components of advanced cement-based materials with adapted rheology. Cement and Concrete Research, 2022, 152, 106646.	4.6	39
2	Digital Fabrication with Cement-Based Materials”The Rilem D.F.C. Technical Committee History, Strategy and Achievements. RILEM State-of-the-Art Reports, 2022, , 1-9.	0.3	2
3	Printable Cement-Based Materials: Fresh Properties Measurements and Control. RILEM State-of-the-Art Reports, 2022, , 99-136.	0.3	3
4	Digital Fabrication with Cement-Based Materials: Underlying Physics. RILEM State-of-the-Art Reports, 2022, , 49-98.	0.3	5
5	Decrease of the amount of fat in chocolate at constant viscosity by optimizing the particle size distribution of chocolate. Food Structure, 2022, 31, 100253.	2.3	9
6	75 years of RILEM: Materials & Structures papers that have shaped the research landscape. Materials and Structures/Materiaux Et Constructions, 2022, 55, 1.	1.3	0
7	Digital Fabrication with Cement-Based Materials: Process Classification and Case Studies. RILEM State-of-the-Art Reports, 2022, , 11-48.	0.3	10
8	A new mix design method for low-environmental-impact blended cementitious materials: Optimization of the physical characteristics of powders for better rheological and mechanical properties. Cement and Concrete Composites, 2022, 128, 104437.	4.6	8
9	Layer pressing in concrete extrusion-based 3D-printing: Experiments and analysis. Cement and Concrete Research, 2022, 155, 106741.	4.6	22
10	Material-process interactions in particle bed 3D printing and the underlying physics. Cement and Concrete Research, 2022, 156, 106748.	4.6	23
11	Capillary imbibition depth in particle-bed 3D printing “ Physical frame and one-dimensional experiments. Cement and Concrete Research, 2022, 156, 106740.	4.6	5
12	Slow penetration for characterizing concrete for digital fabrication. Cement and Concrete Research, 2022, 157, 106802.	4.6	9
13	Environmental impact of extrusion-based additive manufacturing: generic model, power measurements and influence of printing resolution. Cement and Concrete Research, 2022, 157, 106807.	4.6	11
14	Selected Test Methods for Assessing Fresh and Plastic-State 3D Concrete Printing Materials. RILEM Bookseries, 2022, , 460-466.	0.2	2
15	Robustness of cement-based materials: From dosage variations to yield stress fluctuations. Cement and Concrete Research, 2021, 139, 106260.	4.6	14
16	Influence of mixing on the generation of nanoparticles in cement systems. Cement and Concrete Research, 2021, 143, 106379.	4.6	7
17	Polycarboxylate ester adsorption on cement grains: Influence of polydispersity. Cement and Concrete Research, 2021, 143, 106383.	4.6	11
18	The “Slugs-test” for extrusion-based additive manufacturing: Protocol, analysis and practical limits. Cement and Concrete Composites, 2021, 121, 104074.	4.6	25

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19	A first-order physical model for the prediction of shear-induced particle migration and lubricating layer formation during concrete pumping. Cement and Concrete Research, 2021, 147, 106530.	4.6	15
20	Yield stress of aerated cement paste. Cement and Concrete Research, 2020, 127, 105922.	4.6	24
21	Influence of flexible fibers on the yield stress of fresh cement pastes and mortars. Cement and Concrete Research, 2020, 138, 106221.	4.6	20
22	Water absorption of recycled aggregates: Measurements, influence of temperature and practical consequences. Cement and Concrete Research, 2020, 137, 106196.	4.6	35
23	Numerical simulations of concrete processing: From standard formative casting to additive manufacturing. Cement and Concrete Research, 2020, 135, 106075.	4.6	54
24	Additive manufacturing of cantilever - From masonry to concrete 3D printing. Automation in Construction, 2020, 116, 103184.	4.8	58
25	â€œThe Slug Testâ€ Inline Assessment of Yield Stress for Extrusion-Based Additive Manufacturing. RILEM Bookseries, 2020, , 216-224.	0.2	9
26	Penetration Study of Liquid in Powder Bed for 3D Powder-Bed Printing. RILEM Bookseries, 2020, , 379-386.	0.2	2
27	Drying of 3D Printed Mortar Filaments at Early Age Assessed by X-Ray Computed Tomography. RILEM Bookseries, 2020, , 564-571.	0.2	0
28	Environmental Impacts of 6-Axes Robotic Arm for 3D Concrete Printing. RILEM Bookseries, 2020, , 1023-1030.	0.2	1
29	Characterisation of the Layer Pressing Strategy for Concrete 3D Printing. RILEM Bookseries, 2020, , 185-195.	0.2	6
30	Recent advances on yield stress and elasticity of fresh cement-based materials. Cement and Concrete Research, 2019, 124, 105798.	4.6	109
31	Stability criterion for fresh cement foams. Cement and Concrete Research, 2019, 125, 105865.	4.6	33
32	Weak bond strength between successive layers in extrusion-based additive manufacturing: measurement and physical origin. Cement and Concrete Research, 2019, 123, 105787.	4.6	134
33	Digital Concrete: A Review. Cement and Concrete Research, 2019, 123, 105780.	4.6	310
34	Optimal cement paste yield stress for the production of stable cement foams. Cement and Concrete Research, 2019, 120, 142-151.	4.6	45
35	Durability of cement pastes exposed to external sulfate attack and leaching: Physical and chemical aspects. Cement and Concrete Research, 2019, 116, 134-145.	4.6	136
36	Enhancing Printable Concrete Thixotropy by High Shear Mixing. RILEM Bookseries, 2019, , 94-101.	0.2	1

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37	Robustness of self-compacting recycled concrete: analysis of sensitivity parameters. <i>Materials and Structures/Materiaux Et Constructions</i> , 2018, 51, 1.	1.3	15
38	Rheological requirements for printable concretes. <i>Cement and Concrete Research</i> , 2018, 112, 76-85.	4.6	651
39	Water absorption measurement of fine porous aggregates using an evaporative method: Experimental results and physical analysis. <i>Cement and Concrete Research</i> , 2018, 104, 61-67.	4.6	13
40	Non-adsorbing polymers and yield stress of cement paste: Effect of depletion forces. <i>Cement and Concrete Research</i> , 2018, 111, 209-217.	4.6	51
41	The role of early age structural build-up in digital fabrication with concrete. <i>Cement and Concrete Research</i> , 2018, 112, 86-95.	4.6	275
42	The heterogeneous nature of bleeding in cement pastes. <i>Cement and Concrete Research</i> , 2017, 95, 108-116.	4.6	34
43	Effect of surfactants on the yield stress of cement paste. <i>Cement and Concrete Research</i> , 2017, 100, 32-39.	4.6	101
44	Flow of fresh concrete through reinforced elements: Experimental validation of the porous analogy numerical method. <i>Cement and Concrete Research</i> , 2016, 88, 1-6.	4.6	39
45	Organic admixtures and cement particles: Competitive adsorption and its macroscopic rheological consequences. <i>Cement and Concrete Research</i> , 2016, 80, 1-9.	4.6	86
46	Effect of particle morphological parameters on sand grains packing properties and rheology of model mortars. <i>Cement and Concrete Research</i> , 2016, 80, 44-51.	4.6	104
47	Numerical simulations of concrete flow: A benchmark comparison. <i>Cement and Concrete Research</i> , 2016, 79, 265-271.	4.6	81
48	Steady state flows of fresh cement pastes and concretes: simplified underlying physics. <i>Advances in Applied Ceramics</i> , 2015, 114, 402-405.	0.6	7
49	Effect of polyacrylamide on rheology of fresh cement pastes. <i>Cement and Concrete Research</i> , 2015, 76, 98-106.	4.6	97
50	Assessment of potential concrete and mortar rheometry artifacts using magnetic resonance imaging. <i>Cement and Concrete Research</i> , 2015, 71, 29-35.	4.6	29
51	A multinuclear static NMR study of geopolymerisation. <i>Cement and Concrete Research</i> , 2015, 75, 104-109.	4.6	55
52	Fiber orientation during casting of UHPFRC: electrical resistivity measurements, image analysis and numerical simulations. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015, 48, 947-957.	1.3	19
53	Rheology of Limestone Calcined Clays Cement Pastes. A Comparative Approach with Pure Portland Cement Pastes. <i>RILEM Bookseries</i> , 2015, , 595-595.	0.2	0
54	Adsorbing polymers and viscosity of cement pastes. <i>Cement and Concrete Research</i> , 2014, 63, 12-19.	4.6	119

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55	Simulation of fresh concrete flow using Discrete Element Method (DEM): theory and applications. Materials and Structures/Materiaux Et Constructions, 2014, 47, 615-630.	1.3	108
56	Cement paste content and water absorption of recycled concrete coarse aggregates. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1451-1465.	1.3	75
57	Field validation of models for predicting lateral form pressure exerted by SCC. Cement and Concrete Composites, 2014, 54, 70-79.	4.6	50
58	Flow properties of MK-based geopolymer pastes. A comparative study with standard Portland cement pastes. Soft Matter, 2014, 10, 1134.	1.2	132
59	Cellulose ethers and yield stress of cement pastes. Cement and Concrete Research, 2014, 55, 14-21.	4.6	97
60	Consequences of competitive adsorption between polymers on the rheological behaviour of cement pastes. Cement and Concrete Composites, 2014, 54, 17-20.	4.6	45
61	Physical Phenomena Involved in Flows of Fresh Cementitious Materials. RILEM State-of-the-Art Reports, 2014, , 1-24.	0.3	3
62	Computational Fluid Dynamics. RILEM State-of-the-Art Reports, 2014, , 25-63.	0.3	1
63	Advanced Methods and Future Perspectives. RILEM State-of-the-Art Reports, 2014, , 125-146.	0.3	0
64	Cellulose ethers and water retention. Cement and Concrete Research, 2013, 53, 176-184.	4.6	83
65	Lubrication layer properties during concrete pumping. Cement and Concrete Research, 2013, 45, 69-78.	4.6	174
66	Carbonation kinetics of a bed of recycled concrete aggregates: A laboratory study on model materials. Cement and Concrete Research, 2013, 46, 50-65.	4.6	135
67	Mechanical properties and compositional heterogeneities of fresh geopolymer pastes. Cement and Concrete Research, 2013, 48, 9-16.	4.6	98
68	Patterns of gravity induced aggregate migration during casting of fluid concretes. Cement and Concrete Research, 2012, 42, 1571-1578.	4.6	31
69	Free surface flow of a suspension of rigid particles in a non-Newtonian fluid: A lattice Boltzmann approach. Journal of Non-Newtonian Fluid Mechanics, 2012, 179-180, 32-42.	1.0	50
70	The origins of thixotropy of fresh cement pastes. Cement and Concrete Research, 2012, 42, 148-157.	4.6	612
71	Flow induced particle migration in fresh concrete: Theoretical frame, numerical simulations and experimental results on model fluids. Cement and Concrete Research, 2012, 42, 633-641.	4.6	106
72	Yield stress and bleeding of fresh cement pastes. Cement and Concrete Research, 2012, 42, 937-944.	4.6	196

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73	Concrete: An eco material that needs to be improved. Journal of the European Ceramic Society, 2012, 32, 2787-2798.	2.8	285
74	Flow Simulation of Fresh Concrete under a Slipform Machine. Road Materials and Pavement Design, 2011, 12, 547-566.	2.0	7
75	Properties of fresh and hardened concrete. Cement and Concrete Research, 2011, 41, 775-792.	4.6	234
76	Simple tools for fiber orientation prediction in industrial practice. Cement and Concrete Research, 2011, 41, 993-1000.	4.6	164
77	Flow of fresh concrete through steel bars: A porous medium analogy. Cement and Concrete Research, 2011, 41, 496-503.	4.6	31
78	An environmental evaluation of geopolymer based concrete production: reviewing current research trends. Journal of Cleaner Production, 2011, 19, 1229-1238.	4.6	895
79	Optimization of casting process parameters for homogeneous aggregate distribution in self-compacting concrete: A feasibility study. , 2011, , .		3
80	The extrusion of a model yield stress fluid imaged by MRI velocimetry. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 394-408.	1.0	30
81	Steady state flow of cement suspensions: A micromechanical state of the art. Cement and Concrete Research, 2010, 40, 77-84.	4.6	382
82	Rheology of fiber reinforced cementitious materials: classification and prediction. Cement and Concrete Research, 2010, 40, 226-234.	4.6	204
83	Cement production technology improvement compared to factor 4 objectives. Cement and Concrete Research, 2010, 40, 820-826.	4.6	227
84	Computational Modeling of SCC Flow through Reinforced Sections. , 2010, , 187-195.		0
85	Study of two concrete mix-design strategies to reach carbon mitigation objectives. Cement and Concrete Composites, 2009, 31, 397-402.	4.6	162
86	Passing ability of fresh concrete: A probabilistic approach. Cement and Concrete Research, 2009, 39, 227-232.	4.6	37
87	Yield stress during setting of cement pastes from penetration tests. Cement and Concrete Research, 2009, 39, 401-408.	4.6	168
88	SCC formwork pressure: Influence of steel rebars. Cement and Concrete Research, 2009, 39, 524-528.	4.6	45
89	Distinct-layer casting of SCC: The mechanical consequences of thixotropy. Cement and Concrete Research, 2008, 38, 624-632.	4.6	190
90	Lateral stress exerted by fresh cement paste on formwork: Laboratory experiments. Cement and Concrete Research, 2008, 38, 459-466.	4.6	60

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91	Modelling thixotropic behavior of fresh cement pastes from MRI measurements. Cement and Concrete Research, 2008, 38, 616-623.	4.6	33
92	From ordinary rheology concrete to self compacting concrete: A transition between frictional and hydrodynamic interactions. Cement and Concrete Research, 2008, 38, 890-896.	4.6	157
93	Effect of coarse particle volume fraction on the yield stress and thixotropy of cementitious materials. Cement and Concrete Research, 2008, 38, 1276-1285.	4.6	228
94	Thixotropic Behavior of Fresh Cement Pastes from Inclined Plane Flow Measurements. Applied Rheology, 2008, 18, 14251-1-14251-8.	3.5	5
95	General Probabilistic Approach to the Filtration Process. Physical Review Letters, 2007, 98, 114502.	2.9	88
96	Flow and jamming of granular mixtures through obstacles. Europhysics Letters, 2007, 79, 14001.	0.7	28
97	Computational modeling of concrete flow: General overview. Cement and Concrete Research, 2007, 37, 1298-1307.	4.6	172
98	SCC casting prediction for the realization of prototype VHPC-precambered composite beams. Materials and Structures/Materiaux Et Constructions, 2007, 40, 877-887.	1.3	33
99	The LCPC BOX: a cheap and simple technique for yield stress measurements of SCC. Materials and Structures/Materiaux Et Constructions, 2007, 40, 889-896.	1.3	71
100	Rheology of fresh concrete: from measurements to predictions of casting processes. Materials and Structures/Materiaux Et Constructions, 2007, 40, 1001-1012.	1.3	166
101	Quantification de la thixotropie des mat�riaux cimentaires et de ses effet. Revue Europ�enne De G�nie Civil, 2006, 10, 45-63.	0.0	4
102	Linking yield stress measurements: Spread test versus Viskomat. Cement and Concrete Research, 2006, 36, 99-109.	4.6	63
103	Correlation between L-box test and rheological parameters of a homogeneous yield stress fluid. Cement and Concrete Research, 2006, 36, 1789-1796.	4.6	94
104	A thixotropy model for fresh fluid concretes: Theory, validation and applications. Cement and Concrete Research, 2006, 36, 1797-1806.	4.6	620
105	Identification of Bingham fluid flow parameters using a simple squeeze test. Journal of Non-Newtonian Fluid Mechanics, 2006, 135, 1-7.	1.0	28
106	Ecoulements d'affaissement et d'�talement. Revue Europ�enne De G�nie Civil, 2006, 10, 25-44.	0.0	2
107	Quantification de la thixotropie des mat�riaux cimentaires et de ses effets. Revue Europ�enne De G�nie Civil, 2006, 10, 45-63.	0.0	6
108	From mini-cone test to Abrams cone test: measurement of cement-based materials yield stress using slump tests. Cement and Concrete Research, 2005, 35, 817-822.	4.6	307

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109	Steady and transient flow behaviour of fresh cement pastes. Cement and Concrete Research, 2005, 35, 1656-1664.	4.6	226
110	The Marsh cone: a test or a rheological apparatus?. Cement and Concrete Research, 2005, 35, 823-830.	4.6	100
111	The squeezing test: a tool to identify firm cement-based material's rheological behaviour and evaluate their extrusion ability. Cement and Concrete Research, 2005, 35, 1891-1899.	4.6	101
112	Rheological behavior of cement pastes from MRI velocimetry. Cement and Concrete Research, 2005, 35, 1873-1881.	4.6	116
113	The Marsh Cone as a viscometer: theoretical analysis and practical limits. Materials and Structures/Materiaux Et Constructions, 2005, 38, 25-30.	1.3	5
114	Thixotropy modelling at local and macroscopic scales. Journal of Non-Newtonian Fluid Mechanics, 2004, 117, 85-95.	1.0	101
115	Induced heterogeneity in saturated flowing granular media. Powder Technology, 2003, 138, 68-72.	2.1	16
116	Plastic Fluid Flow Parameters Identification Using a Simple Squeezing Test. Applied Rheology, 2003, 13, 132-141.	3.5	47
117	Digital Concrete: Opportunities and Challenges. RILEM Technical Letters, 0, 1, 67-75.	0.0	429
118	Rheology of Fiber-reinforced Cementitious Materials: Basic Concepts and Application to UHPFRC. , 0, , 575-578.		1