Christian U Grosse

List of Publications by Year
in descending order

88	2,806	218677	182427
papers	citations	26 h-index	51 g-index

91	91	91	2168
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Strategies for reliable automatic onset time picking of acoustic emissions and of ultrasound signals in concrete. Ultrasonics, 2005, 43, 538-546.	3.9	252
2	Continuous monitoring of setting and hardening of mortar and concrete. Construction and Building Materials, 2004, 18, 145-154.	7.2	225
3	Monitoring the setting of concrete containing blast-furnace slag by measuring the ultrasonic p-wave velocity. Cement and Concrete Research, 2008, 38, 1169-1176.	11.0	156
4	Acoustic emission analysis for the quantification of autonomous crack healing in concrete. Construction and Building Materials, 2012, 28, 333-341.	7.2	133
5	Stress Drop and Stress Redistribution in Concrete Quantified Over Time by the b-value Analysis. Structural Health Monitoring, 2006, 5, 69-81.	7.5	125
6	Localization and classification of fracture types in concrete with quantitative acoustic emission measurement techniques. NDT and E International, 1997, 30, 223-230.	3.7	119
7	Beamforming array techniques for acoustic emission monitoring of large concrete structures. Journal of Sound and Vibration, 2010, 329, 2384-2394.	3.9	115
8	Quantitative evaluation of fracture processes in concrete using signal-based acoustic emission techniques. Cement and Concrete Composites, 2006, 28, 330-336.	10.7	109
9	Ultrasound monitoring of the influence of different accelerating admixtures and cement types for shotcrete on setting and hardening behaviour. Cement and Concrete Research, 2005, 35, 2087-2094.	11.0	102
10	Recommendation of RILEM TC 212-ACD: acoustic emission and related NDE techniques for crack detection and damage evaluation in concrete*. Materials and Structures/Materiaux Et Constructions, 2010, 43, 1183-1186.	3.1	101
11	Large-scale variation in lithospheric structure along and across the Kenya rift. Nature, 1991, 354, 223-227.	27.8	91
12	Signal-Based Acoustic Emission Techniques in Civil Engineering. Journal of Materials in Civil Engineering, 2003, 15, 274-279.	2.9	81
13	Initial development of wireless acoustic emission sensor Motes for civil infrastructure state monitoring. Smart Structures and Systems, 2010, 6, 197-209.	1.9	77
14	Ultrasonic monitoring of setting and hardening of cement mortarâ€"A new device. Materials and Structures/Materiaux Et Constructions, 2000, 33, 581-583.	3.1	71
15	Evolution of Percolating Force Chains in Compressed Granular Media. Physical Review Letters, 2002, 89, 205501.	7.8	71
16	Concrete Prestressed with Textile Fabric. Journal of Advanced Concrete Technology, 2003, 1, 231-239.	1.8	66
17	Measuring the change in ultrasonic p-wave energy transmitted in fresh mortar with additives to monitor the setting. Cement and Concrete Research, 2009, 39, 868-875.	11.0	63
18	Improvements of AE technique using wavelet algorithms, coherence functions and automatic data analysis. Construction and Building Materials, 2004, 18, 203-213.	7.2	62

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19	Effect of freezeâ€“thaw damage on chloride ingress into concrete. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	3.1	53
20	Comparison of ultrasonic wave transmission and reflection measurements with P- and S-waves on early age mortar and concrete. Materials and Structures/Materiaux Et Constructions, 2005, 38, 729-738.	3.1	51
21	Time reverse modeling of acoustic emissions in a reinforced concrete beam. Ultrasonics, 2016, 65, 96-104.	3.9	46
22	Optical excitation thermography for twill/plain weaves and stitched fabric dry carbon fibre preform inspection. Composites Part A: Applied Science and Manufacturing, 2018, 107, 282-293.	7.6	40
23	Hydrophobic Properties of Biofilmâ€Enriched Hybrid Mortar. Advanced Materials, 2016, 28, 8138-8143.	21.0	38
24	Evaluation of modeÂI failure of concrete in a splitting test using acoustic emission technique. International Journal of Fracture, 2003, 124, 139-152.	2.2	29
25	Comparative Performance Tests and Validation of NDT Methods for Concrete Testing. Journal of Nondestructive Evaluation, 2008, 27, 59-65.	2.4	29
26	Observing the setting and hardening of cementitious materials by X-ray dark-field radiography. Cement and Concrete Research, 2015, 74, 19-25.	11.0	28
27	Validation of Selfâ€Healing Properties of Construction Materials through Nondestructive and Minimal Invasive Testing. Advanced Materials Interfaces, 2018, 5, 1800179.	3.7	26
28	Experimental impact cratering: A summary of the major results of the <scp>MEMIN</scp> research unit. Meteoritics and Planetary Science, 2018, 53, 1543-1568.	1.6	25
29	Damage accumulation on deformed steel bar to concrete interaction detected by acoustic emission technique. Magazine of Concrete Research, 1996, 48, 311-320.	2.0	24
30	Wireless Structural Health Monitoring Using MEMS. Key Engineering Materials, 2005, 293-294, 625-634.	0.4	24
31	MEMS Microphone Array Sensor for Air-Coupled Impact-Echo. Sensors, 2015, 15, 14932-14945.	3.8	24
32	Monitoring fresh concrete by ultrasonic transmission measurements: Exploratory multi-way analysis of the spectral information. Chemometrics and Intelligent Laboratory Systems, 2009, 95, 64-73.	3.5	21
33	Advances in Construction Materials 2007. , 2007, , .		20
34	Relating ultrasonic measurements on fresh concrete with mineral additions to the microstructure development simulated by Cemhyd3D. Cement and Concrete Composites, 2011, 33, 680-693.	10.7	19
35	Condition monitoring of concrete structures using wireless sensor networks and MEMS. , 2006, 6174, 407.		17
36	Signal-Based AE Analysis. , 2008, , 53-99.		17

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37	Wireless High-Resolution Acceleration Measurements for Structural Health Monitoring of Wind Turbine Towers. Data-Enabled Discovery and Applications, 2019, 3, 1.	1.2	16
38	A hybrid wireless sensor network for acoustic emission testing in SHM. , 2008, , .		14
39	Monitoring the effect of admixtures on early-age concrete behaviour by ultrasonic, calorimetric, strength and rheometer measurements. Magazine of Concrete Research, 2011, 63, 707-721.	2.0	14
40	Application of nondestructive testing methods to study the damage zone underneath impact craters of MEMIN laboratory experiments. Meteoritics and Planetary Science, 2013, 48, 87-98.	1.6	13
41	Bacterial Additives Improve the Water Resistance of Mortar. ACS Sustainable Chemistry and Engineering, 2020, 8, 5704-5715.	6.7	13
42	Anwendungen der Schallemissionsanalyse an Betonbauwerken. Bautechnik, 2013, 90, 721-731.	0.1	12
43	Delamination detection on a concrete bridge deck using impact echo scanning. Structural Concrete, 2021, 22, 806-812.	3.1	12
44	Influence of fiber alignment on pseudoductility and microcracking in a cementitious carbon fiber composite material. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	3.1	12
45	Acoustic emission (AE) evaluation of reinforced concrete structures. , 2010, , 185-214.		9
46	Fiberâ€Optic Photoacoustic Generator Realized by Inkjetâ€Printing of CNTâ€PDMS Composites on Fiber End Faces. Macromolecular Materials and Engineering, 2021, 306, 2000563.	3.6	9
47	Local Acoustic Resonance Spectroscopy (LARS) for Glass Fiber-Reinforced Polymer Applications. Journal of Nondestructive Evaluation, 2014, 33, 23-33.	2.4	8
48	Concrete wave dispersion interpretation through Mindlin's strain gradient elastic theory. Journal of the Acoustical Society of America, 2017, 142, EL89-EL94.	1.1	8
49	Fully Inkjet-Printed Carbon Nanotube-PDMS-Based Strain Sensor: Temperature Response, Compressive and Tensile Bending Properties, and Fatigue Investigations. IEEE Access, 2021, 9, 72207-72216.	4.2	8
50	Source Localization. , 2008, , 101-147.		8
51	Acoustic emission beamforming for enhanced damage detection. , 2008, , .		5
52	Comparative Study of State of the Art Nondestructive Testing Methods with the Local Acoustic Resonance Spectroscopy to Detect Damages in GFRP. Journal of Nondestructive Evaluation, 2015, 34, 1.	2.4	5
53	Nondestructive imaging of hypervelocity impactâ€induced damage zones beneath laboratoryâ€created craters by means of ultrasound travelâ€time tomography. Meteoritics and Planetary Science, 2018, 53, 1756-1772.	1.6	5
54	Evaluation of the Behavior of Carbon Short Fiber Reinforced Concrete (CSFRC) Based on a Multi-Sensory Experimental Investigation and a Numerical Multiscale Approach. Materials, 2021, 14, 7005.	2.9	5

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55	Structural health monitoring with wireless sensors to enhance sustainability in structural engineering. IABSE Symposium Report, 2007, , .	0.0	4
56	Quantitative impact characterization of aeronautical CFRP materials with non-destructive testing methods. , 2015, , .		4
57	Local Acoustic Resonance Spectroscopy. , 2018, , 1-24.		4
58	Selection and evaluation of spherical acquisition trajectories for industrial computed tomography. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, .	2.1	4
59	A novel optical air-coupled ultrasound NDE sensing technique compared with infrared thermographic NDT on impacted composite materials. , 2018, , .		4
60	Monitoring of Wind Turbine Structures using Stationary Sensors and Short-term Optical Techniques. , 0, , .		4
61	Bridge Monitoring using Multihop Wireless Sensor Networks. , 2006, , 21.		3
62	Integrating broad-band high-fidelity acoustic emission sensors and array processing to study drying shrinkage cracking in concrete. , 2007, , .		3
63	AE in Biological Materials. Springer Tracts in Civil Engineering, 2022, , 583-619.	0.5	3
64	Acoustic Emission Data From Pull-Out Tests of Reinforced Concrete Analysed with Respect to Passive Us-Tomography. Acoustical Imaging, 1995, , 635-647.	0.2	3
65	Ultrasonic Techniques for Determination and Monitoring Various Properties of Cementitious Materials at Early Ages. Springer Tracts in Civil Engineering, 2020, , 23-68.	0.5	3
66	Sensing methods in civil engineering for an efficient construction management. , 2007, , 549-561.		3
67	Wireless Structural Health Monitoring Using MEMS. Key Engineering Materials, 0, , 625-634.	0.4	3
68	Measurement systems to detect the time-dependant development of concrete spalling under fire exposure. MATEC Web of Conferences, 2013, 6, 03006.	0.2	2
69	AE Applied to Fresh Concrete. Springer Tracts in Civil Engineering, 2022, , 339-359.	0.5	2
70	Combination of inspection and monitoring techniques for the detection of fractures in concrete with self-healing properties. , 0, , .		2
71	Localization and Mode Determination of Fracture Events by Acoustic Emission. , 2008, , 41-66.		2
72	Improvements of AE technique using wavelet algorithms, coherence functions and automatic data analysis. Construction and Building Materials, 2003, 18, 203-203.	7.2	1

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73	Ereignisbasierte Messwerterfassung in drahtlosen Sensornetzwerken fÃ¼r die StrukturÃ¼berwachungEvent-based Data Acquisition in Wireless Sensor Networks for Structural Health Monitoring. TM Technisches Messen, 2009, 76, 568-577.	0.7	1
74	Leveraging real-time hydrologic data for the control of large-scale water distribution systems in the Sierra Nevada. , 2011, , .		1
75	Wireless monitoring of structural components of wind turbines including tower and foundations. Journal of Physics: Conference Series, 2016, 753, 072033.	0.4	1
76	Image-Based Histological Evaluation of Scaffold-Free 3D Osteoblast Cultures. Journal of Functional Morphology and Kinesiology, 2017, 2, 42.	2.4	1
77	Source Localization. Springer Tracts in Civil Engineering, 2022, , 117-171.	0.5	1
78	Signal-Based AE Analysis. Springer Tracts in Civil Engineering, 2022, , 73-116.	0.5	1
79	Acoustic Emission Characterization of Fresh Cement-Based Materials. Springer Tracts in Civil Engineering, 2020, , 1-22.	0.5	1
80	Wireless Sensing and Acoustic Emission Array Techniques. , 2008, , 367-381.		1
81	Novel failure diagnostic methods for smart card systems. , 2014, , .		0
82	ZerstÃ¶rungsfreie PrÃ¼fung: Notwendiges Ãœbel oder Chance fÃ¼r die Bauwirtschaft?. Beton- Und Stahlbetonbau, 2015, 110, 499-500.	0.4	0
83	Biofilms: Hydrophobic Properties of Biofilmâ€Enriched Hybrid Mortar (Adv. Mater. 37/2016). Advanced Materials, 2016, 28, 8315-8315.	21.0	0
84	Concrete Structures. RILEM State-of-the-Art Reports, 2016, , 5-25.	0.7	0
85	Experimental investigation of wave dispersion in hardened concrete and reference liquid media. Proceedings of SPIE, 2017, , .	0.8	0
86	Wave Propagation in Heterogeneous Media. Part 1: Effective Velocities in Fractured Media. , 2002, , 469-475.		0
87	Local Acoustic Resonance Spectroscopy. , 2019, , 271-294.		0
88	Brief Review of the Scientific Work of Prof. Dr.-Ing. Hans W. Reinhardt. , 2007, , 1-13.		0