Laurent Babout

List of Publications by Year
in descending order

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63	1,635	361413	289244
papers	citations	20	40
		h-index	g-index

66	66	66	1390
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Characterization by X-ray computed tomography of decohesion, porosity growth and coalescence in model metal matrix composites. Acta Materialia, 2001, 49, 2055-2063.	7.9	162
2	On the competition between particle fracture and particle decohesion in metal matrix composites. Acta Materialia, 2004, 52, 4517-4525.	7.9	161
3	Characterization of the morphology of cellular ceramics by 3D image processing of X-ray tomography. Journal of the European Ceramic Society, 2007, 27, 1973-1981.	5.7	155
4	Damage initiation in model metallic materials: X-ray tomography and modelling. Acta Materialia, 2004, 52, 2475-2487.	7.9	144
5	Three dimensional observations and modelling of intergranular stress corrosion cracking in austenitic stainless steel. Journal of Nuclear Materials, 2006, 352, 62-74.	2.7	108
6	Material Interactions in a Novel Pinless Tool Approach to Friction Stir Spot Welding Thin Aluminum Sheet. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 1266-1282.	2.2	101
7	X-ray microtomographic observation of intergranular stress corrosion cracking in sensitised austenitic stainless steel. Materials Science and Technology, 2006, 22, 1068-1075.	1.6	91
8	Three-dimensional characterization of fatigue cracks in Ti-6246 using X-ray tomography and electron backscatter diffraction. Acta Materialia, 2009, 57, 5834-5847.	7.9	58
9	The effect of thermal oxidation on polycrystalline graphite studied by X-ray tomography. Carbon, 2005, 43, 765-774.	10.3	51
10	Numerical modelling of the effects of porosity changes on the mechanical properties of nuclear graphite. Journal of Nuclear Materials, 2006, 352, 1-5.	2.7	51
11	Damage assessment in metallic structural materials using high resolution synchrotron X-ray tomography. Nuclear Instruments & Methods in Physics Research B, 2003, 200, 303-307.	1.4	48
12	Recent results on 3D characterisation of microstructure and damage of metal matrix composites and a metallic foam using X-ray tomography. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 216-219.	5.6	47
13	Damage initiation and growth in metals. Comparison between modelling and tomography experiments. Journal of the Mechanics and Physics of Solids, 2005, 53, 2411-2434.	4.8	47
14	Selection of material for X-ray tomography analysis and DEM simulations: comparison between granular materials of biological and non-biological origins. Granular Matter, 2018, 20, 1.	2.2	44
15	Characterization of polycrystalline materials using synchrotron X-ray imaging and diffraction techniques. Jom, 2010, 62, 22-28.	1.9	42
16	Influence of wall roughness and packing density on stagnant zone formation during funnel flow discharge from a silo: An X-ray imaging study. Chemical Engineering Science, 2013, 97, 210-224.	3.8	42
17	Analysis of the bulk solid flow during gravitational silo emptying using X-ray and ECT tomography. Powder Technology, 2012, 224, 196-208.	4.2	32
18	Hole filling in 3D volumetric objects. Pattern Recognition, 2010, 43, 3548-3559.	8.1	30

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19	Three-dimensional characterization and thermal property modelling of thermally oxidized nuclear graphite. Acta Materialia, 2008, 56, 4242-4254.	7.9	24
20	Mapping the evolution of density in 3D of thermally oxidised graphite for nuclear applications. Scripta Materialia, 2006, 54, 829-834.	5.2	21
21	Study of granular flow in silo based on electrical capacitance tomography and optical imaging. Flow Measurement and Instrumentation, 2018, 62, 186-195.	2.0	16
22	A method for the 3-D quantification of bridging ligaments during crack propagation. Scripta Materialia, 2011, 65, 131-134.	5.2	15
23	On the Use of a Rotatable ECT Sensor to Investigate Dense Phase Flow: A Feasibility Study. Sensors, 2020, 20, 4854.	3.8	15
24	A Review on Fast Tomographic Imaging Techniques and Their Potential Application in Industrial Process Control. Sensors, 2022, 22, 2309.	3.8	14
25	Effectiveness of rotatable sensor to improve image accuracy of ECT system. Flow Measurement and Instrumentation, 2010, 21, 219-227.	2.0	12
26	Controlled Inline Fluid Separation Based on Smart Process Tomography Sensors. Chemie-Ingenieur-Technik, 2020, 92, 554-563.	0.8	10
27	High-resolution, in-situ, tomographic observations of stress corrosion cracking. , 2008, , 439-447.		10
28	A new data-processing approach to study particle motion using ultrafast X-ray tomography scanner: case study of gravitational mass flow. Experiments in Fluids, 2018, 59, 1.	2.4	8
29	Electrical Resistance Tomography for Control Applications: Quantitative Study of the Gas-Liquid Distribution inside A Cyclone. Sensors, 2020, 20, 6069.	3.8	8
30	3D characterization of trans- and inter-lamellar fatigue crack in (Î± + Î²) Ti alloy. Materials Characterization, 2014, 98, 130-139.	4.4	7
31	Robust algorithm for tunnel closing in 3D volumetric objects based on topological characteristics of points. Pattern Recognition Letters, 2011, 32, 2231-2238.	4.2	6
32	Control of a Gas-Liquid Inline Swirl Separator Based on Tomographic Measurements. IFAC-PapersOnLine, 2020, 53, 11483-11490.	0.9	6
33	Grain boundary control for improved intergranular stress corrosion cracking resistance in austenitic stainless steels: new approach. Energy Materials, 2006, 1, 98-102.	0.1	5
34	Multichannel Capacitive Imaging of Gas Vortex in Swirling Two-Phase Flows Using Parametric Reconstruction. IEEE Access, 2020, 8, 69557-69565.	4.2	5
35	Quantitative analysis of flow dynamics of organic granular materials inside a versatile silo model during time-lapse X-ray tomography experiments. Computers and Electronics in Agriculture, 2020, 172, 105346.	7.7	4
36	A Fast Electrical Resistivity-Based Algorithm to Measure and Visualize Two-Phase Swirling Flows. Sensors, 2022, 22, 1834.	3.8	4

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37	OPTIMIZATION OF 3D LOCAL ORIENTATION MAP CALCULATION IN THE MATLAB FRAMEWORK. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Åšrodowiska, 2015, 5, 22-24.	0.4	3
38	An Edge Detection Method Based on Local Gradient Estimation: Application to High-Temperature Metallic Droplet Images. Applied Sciences (Switzerland), 2022, 12, 6976.	2.5	3
39	Damage Investigation in Aluminium Alloys by X Ray Tomography. Materials Science Forum, 2006, 519-521, 821-827.	0.3	2
40	Airway Tree Segmentation from CT Scans Using Gradient-Guided 3D Region Growing. Lecture Notes in Computer Science, 2009, , 247-254.	1.3	2
41	3D Segmentation of Funnel Flow Boundary During Silo Emptying. Image Processing & Communications, 2014, 19, 141-149.	0.3	2
42	An algorithm to generate high dense packing of particles with various shapes. MATEC Web of Conferences, 2018, 219, 05004.	0.2	2
43	Investigating local orientation methods to segment microstructure with 3D solid texture. IET Image Processing, 2018, 12, 1265-1272.	2.5	2
44	Geometric Approach to Hole Segmentation and Hole Closing in 3D Volumetric Objects. Lecture Notes in Computer Science, 2009, , 255-262.	1.3	2
45	Brainstorming Sessions â€“ Towards Improving Effectiveness and Assessment of Ideas Generation. Advances in Intelligent Systems and Computing, 2018, , 128-137.	0.6	2
46	Towards Tomography-Based Real-Time Control of Multiphase Flows: A Proof of Concept in Inline Fluid Separation. Sensors, 2022, 22, 4443.	3.8	2
47	Al-ZrO2model composites elaboration by powder metallurgy. Revue De Metallurgie, 2002, 99, 1043-1049.	0.3	1
48	3D inspection of fabrication and degradation processes from X-ray (micro) tomography images using a hole closing algorithm. , 2010, , .		1
49	A New Method to Segment X-Ray Microtomography Images of Lamellar Titanium Alloy Based on Directional Filter Banks and Gray Level Gradient. Lecture Notes in Computer Science, 2012, , 105-112.	1.3	1
50	Use of radiography images and gray level co-occurrence matrix to investigate gravitational granular flow. MATEC Web of Conferences, 2018, 219, 03014.	0.2	1
51	Stagnant Zone Segmentation with U-Net. , 2019, , .		1
52	Comparison of Several Centreline Extraction Algorithms for Virtual Colonoscopy. Advances in Intelligent and Soft Computing, 2009, , 241-254.	0.2	1
53	Outer Surface Reconstruction for 3D Fractured Objects. Lecture Notes in Computer Science, 2010, , 57-64.	1.3	1
54	Local Strain Imaging during Mechanical Loading of Lamellar Microstructures in Titanium Based Alloys. Applied Mechanics and Materials, 2004, 1-2, 159-164.	0.2	0

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55	A novel computational approach to detect isolated and continuous phase in structured materials. , 2006, , .		0
56	Multistage Segmentation of Lamellae Colonies Based on Directional Filter Bank and PCA Analysis. Image Processing & Communications, 2012, 17, 93-102.	0.3	0
57	3D Reconstruction of Funnel Flow Boundary Using Automatic Point Set Extraction. Image Processing & Communications, 2015, 20, 35-43.	0.3	0
58	Comparative analysis of multitouch interactive surfaces. , 0, , .		0
59	Study of Flow Behavior of Granular Material Inside Cylindrical Silo Using Ultrafast X-Ray Imaging Technique. Image Processing & Communications, 2017, 22, 49-56.	0.3	0
60	Local concentration changes in eccentric and concentric silo discharging modes using X-ray tomography. , 2018, , .		0
61	STUDY OF DEGRADATION AND GRANULAR FLOW PROCESSES USING X-RAY IMAGING. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Åšrodowiska, 2017, 7, 5-10.	0.4	0
62	K-MEANS CLUSTERING IN TEXTURED IMAGE: EXAMPLE OF LAMELLAR MICROSTRUCTURE IN TITANIUM ALLOYS. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Åšrodowiska, 2017, 7, 43-46.	0.4	0
63	Sensing Mobile Device Orientation Through ECT Reconstructed Image Processing. Image Processing & Communications, 2017, 22, 5-12.	0.3	0