Mateu Sbert

List of Publications by Year
in descending order

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183	2,338	279701	289141
papers	citations	23 h-index	40 g-index

191	191	191	1745
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Serious games for health. Entertainment Computing, 2013, 4, 231-247.	1.8	211
2	Automatic View Selection Using Viewpoint Entropy and its Application to Image-Based Modelling. Computer Graphics Forum, 2003, 22, 689-700.	1.8	139
3	Importance-Driven Focus of Attention. IEEE Transactions on Visualization and Computer Graphics, 2006, 12, 933-940.	2.9	136
4	A unified information-theoretic framework for viewpoint selection and mesh saliency. ACM Transactions on Applied Perception, 2009, 6, 1-23.	1.2	119
5	Informational Aesthetics Measures. IEEE Computer Graphics and Applications, 2008, 28, 24-34.	1.0	116
6	Using a serious game to complement CPR instruction in a nurse faculty. Computer Methods and Programs in Biomedicine, 2015, 122, 282-291.	2.6	85
7	Categorizing art: Comparing humans and computers. Computers and Graphics, 2009, 33, 484-495.	1.4	48
8	Fast, realistic lighting for video games. IEEE Computer Graphics and Applications, 2003, 23, 54-64.	1.0	47
9	Image Segmentation Using Information Bottleneck Method. IEEE Transactions on Image Processing, 2009, 18, 1601-1612.	6.0	44
10	Multimodal Data Fusion Based on Mutual Information. IEEE Transactions on Visualization and Computer Graphics, 2012, 18, 1574-1587.	2.9	44
11	Automatic Transfer Functions Based on Informational Divergence. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 1932-1941.	2.9	42
12	From obscurances to ambient occlusion: A survey. Visual Computer, 2009, 25, 181-196.	2.5	39
13	Browsing and exploration of video sequences: A new scheme for key frame extraction and 3D visualization using entropy based Jensen divergence. Information Sciences, 2014, 278, 736-756.	4.0	39
14	Color Channel Transfer for Image Dehazing. IEEE Signal Processing Letters, 2019, 26, 1413-1417.	2.1	38
15	An Integral Geometry Based Method for Fast Form-Factor Computation. Computer Graphics Forum, 1993, 12, 409-420.	1.8	36
16	An Information Theory Framework for the Analysis of Scene Complexity. Computer Graphics Forum, 1999, 18, 95-106.	1.8	33
17	Volumetric Ambient Occlusion for Real-Time Rendering and Games. IEEE Computer Graphics and Applications, 2010, 30, 70-79.	1.0	29
18	Serious Games for e-Health Care. Gaming Media and Social Effects, 2014, , 127-146.	0.7	28

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19	A Survey of Viewpoint Selection Methods for Polygonal Models. Entropy, 2018, 20, 370.	1.1	27
20	Tsallis Mutual Information for Document Classification. Entropy, 2011, 13, 1694-1707.	1.1	26
21	Global multipath Monte Carlo algorithms for radiosity. Visual Computer, 1996, 12, 47-61.	2.5	25
22	Tsallis entropy-based information measures for shot boundary detection and keyframe selection. Signal, Image and Video Processing, 2013, 7, 507-520.	1.7	25
23	High-Dimensional Normalized Mutual Information for Image Registration Using Random Lines. Lecture Notes in Computer Science, 2006, , 264-271.	1.0	23
24	Realtime automatic selection of good molecular views. Computers and Graphics, 2006, 30, 98-110.	1.4	21
25	Viewpoint-based simplification using f-divergences. Information Sciences, 2008, 178, 2375-2388.	4.0	21
26	Viewpoint-driven simplification using mutual information. Computers and Graphics, 2008, 32, 451-463.	1.4	21
27	Medical Image Segmentation Based on Mutual Information Maximization. Lecture Notes in Computer Science, 2004, , 135-142.	1.0	21
28	Multiple importance sampling revisited: breaking the bounds. Eurasip Journal on Advances in Signal Processing, 2018, 2018, .	1.0	20
29	Image Segmentation Using Excess Entropy. Journal of Signal Processing Systems, 2009, 54, 205-214.	1.4	19
30	A novel approach for enhancing very dark image sequences. Signal Processing, 2014, 103, 309-330.	2.1	19
31	Adaptive multiple importance sampling for general functions. Visual Computer, 2017, 33, 845-855.	2.5	19
32	Hierarchical Monte Carlo Radiosity. Eurographics, 1998, , 259-268.	0.4	18
33	Optimal combination of techniques in multiple importance sampling. , 2014, , .		16
34	Real-time obscurances with color bleeding. , 2003, , .		15
35	Combined Correlated and Importance Sampling in Direct Light Source Computation and Environment Mapping. Computer Graphics Forum, 2004, 23, 585-593.	1.8	15
36	Error and complexity of random walk Monte Carlo radiosity. IEEE Transactions on Visualization and Computer Graphics, 1997, 3, 23-38.	2.9	14

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37	Image registration by compression. Information Sciences, 2010, 180, 1121-1133.	4.0	14
38	A new approach for very dark video denoising and enhancement. , 2010, , .		14
39	New Contrast Measures for Pixel Supersampling. , 2002, , 439-451.		14
40	Shape complexity based on mutual information. , 0, , .		13
41	Viewpoint-Based Ambient Occlusion. IEEE Computer Graphics and Applications, 2008, 28, 44-51.	1.0	13
42	Viewpoint information channel for illustrative volume rendering. Computers and Graphics, 2010, 34, 351-360.	1.4	13
43	Post-processing NPR effects for video games. , 2013, , .		13
44	An Informationâ€Theoretic Observation Channel for Volume Visualization. Computer Graphics Forum, 2013, 32, 411-420.	1.8	13
45	Variance Analysis of Multiâ€sample and Oneâ€sample Multiple Importance Sampling. Computer Graphics Forum, 2016, 35, 451-460.	1.8	13
46	Trajectory Shape Analysis and Anomaly Detection Utilizing Information Theory Tools. Entropy, 2017, 19, 323.	1.1	13
47	An information theoretic framework for image segmentation. , 0, , .		12
48	Information Theory-Based Automatic Multimodal Transfer Function Design. IEEE Journal of Biomedical and Health Informatics, 2013, 17, 870-880.	3.9	12
49	Selecting Video Key Frames Based on Relative Entropy and the Extreme Studentized Deviate Test. Entropy, 2016, 18, 73.	1.1	12
50	Multiple importance sampling characterization by weighted mean invariance. Visual Computer, 2018, 34, 843-852.	2.5	12
51	Compression-based Image Registration. , 2006, , .		11
52	Energy-saving light positioning using heuristic search. Engineering Applications of Artificial Intelligence, 2012, 25, 566-582.	4.3	11
53	LISSA a serious game to teach CPR and use of AED. Resuscitation, 2014, 85, S72.	1.3	11
54	Reducing complexity in polygonal meshes with view-based saliency. Computer Aided Geometric Design, 2014, 31, 279-293.	0.5	11

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55	Improving the Interval Ray Tracing of Implicit Surfaces. Lecture Notes in Computer Science, 2006, , 655-664.	1.0	11
56	Perception-Based Illumination Information Measurement and Light Source Placement. Lecture Notes in Computer Science, 2003, , 306-316.	1.0	11
57	Weighted Importance Sampling Techniques for Monte Carlo Radiosity. Eurographics, 2000, , 35-46.	0.4	11
58	Information Theory Tools for Image Processing. Synthesis Lectures on Computer Graphics and Animation, 2014, 6, 1-164.	0.1	10
59	30â€‰:â€‰2: A Game Designed to Promote the Cardiopulmonary Resuscitation Protocol. International Journal of Computer Games Technology, 2016, 2016, 1-14.	1.6	10
60	Techniques for Computing Viewpoint Entropy of a 3D Scene. Lecture Notes in Computer Science, 2006, , 263-270.	1.0	10
61	Fast Adaptive Selection of Best Views. Lecture Notes in Computer Science, 2003, , 295-305.	1.0	9
62	Real-time Light Animation. Computer Graphics Forum, 2004, 23, 291-299.	1.8	9
63	A necessary and sufficient condition for the inequality of generalized weighted means. Journal of Inequalities and Applications, 2016, 2016, .	0.5	9
64	Gaze Information Channel in Cognitive Comprehension of Poster Reading. Entropy, 2019, 21, 444.	1.1	9
65	A Generalised-Mutual-Information-Based Oracle for Hierarchical Radiosity. Lecture Notes in Computer Science, 2007, , 105-113.	1.0	9
66	The Multi-Frame Lighting Method: A Monte Carlo Based Solution for Radiosity in Dynamic Environments. Eurographics, 1996, , 185-194.	0.4	9
67	Efficient reuse of paths for random walk radiosity. Computers and Graphics, 2008, 32, 65-81.	1.4	8
68	Information Theory Tools for Computer Graphics. Synthesis Lectures on Computer Graphics and Animation, 2009, 4, 1-153.	0.1	8
69	Specular Effects on the GPU: State of the Art. Computer Graphics Forum, 2009, 28, 1586-1617.	1.8	8
70	Registration-Based Segmentation Using the Information Bottleneck Method. Lecture Notes in Computer Science, 2007, , 130-137.	1.0	8
71	A Novel Adaptive Sampling by Tsallis Entropy. , 2007, , .		7
72	Simplification method for textured polygonal meshes based on structural appearance. Signal, Image and Video Processing, 2013, 7, 479-492.	1.7	7

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73	F-divergences driven video key frame extraction. , 2014, , .		7
74	Local Parallel Cross Pattern: A Color Texture Descriptor for Image Retrieval. Sensors, 2019, 19, 315.	2.1	7
75	Image-Based Modeling Using Viewpoint Entropy. , 2002, , 267-279.		7
76	Similarity-Based Exploded Views. Lecture Notes in Computer Science, 2008, , 154-165.	1.0	7
77	Generalizing the Balance Heuristic Estimator in Multiple Importance Sampling. Entropy, 2022, 24, 191.	1.1	7
78	Medical image registration based on random line sampling. , 2005, , .		6
79	Point sampling with uniformly distributed lines. , 2005, , .		6
80	Volumetric ambient occlusion for volumetric models. Visual Computer, 2010, 26, 687-695.	2.5	6
81	Smooth shadow boundaries with exponentially warped Gaussian filtering. Computers and Graphics, 2013, 37, 214-224.	1.4	6
82	Analysis of image informativeness measures. , 2014, , .		6
83	Information measures for terrain visualization. Computers and Geosciences, 2017, 99, 9-18.	2.0	6
84	Global Monte Carlo. A Progressive Solution. Eurographics, 1995, , 231-239.	0.4	6
85	Global multipath Monte Carlo algorithms for radiosity. Visual Computer, 1996, 12, 47-61.	2.5	6
86	Extended Ambient Term. Journal of Graphics Tools, 2000, 5, 1-7.	0.5	5
87	Computational Aesthetics 2005 Eurographics Workshop on Computational Aesthetics in Graphics, Visualization and Imaging Girona, Spain, 18-20 May 2005. Computer Graphics Forum, 2006, 25, 145-146.	1.8	5
88	Overestimation and Underestimation Biases in Photon Mapping with Non-Constant Kernels. IEEE Transactions on Visualization and Computer Graphics, 2014, 20, 1441-1450.	2.9	5
89	Surface reflectance characterization by statistical tools. , 2015, , .		5
90	Some Order Preserving Inequalities for Cross Entropy and Kullbackâ€“Leibler Divergence. Entropy, 2018, 20, 959.	1.1	5

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91	Gestural Interaction and Visual Illusion for Lower Limbsâ€™ Neuropathic Pain Treatment. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 2217-2225.	2.7	5
92	CPRforblind: A video game to introduce cardiopulmonary resuscitation protocol to blind people. British Journal of Educational Technology, 2018, 49, 636-645.	3.9	5
93	Histogram Ordering. IEEE Access, 2021, 9, 28785-28796.	2.6	5
94	A Bounded Measure for Estimating the Benefit of Visualization (Part I): Theoretical Discourse and Conceptual Evaluation. Entropy, 2022, 24, 228.	1.1	5
95	Optimal Source Selection in Shooting Random Walk Monte Carlo Radiosity. Computer Graphics Forum, 1997, 16, C301-C308.	1.8	4
96	Bandwidth reduction for remote navigation systems through view prediction and progressive transmission. Future Generation Computer Systems, 2004, 20, 1251-1262.	4.9	4
97	Selection and 3D visualization of video key frames. , 2010, , .		4
98	Information measures for object understanding. Signal, Image and Video Processing, 2013, 7, 467-478.	1.7	4
99	Computer-aided image geometry analysis and subset selection for optimizing texture quality in photorealistic models. Computers and Geosciences, 2013, 52, 281-291.	2.0	4
100	View-Dependent Tessellation and Simulation of Ocean Surfaces. Scientific World Journal, The, 2014, 2014, 1-12.	0.8	4
101	A New Scheme for Trajectory Visualization. , 2014, , .		4
102	Heuristic-Search-Based Light Positioning According to Irradiance Intervals. Lecture Notes in Computer Science, 2009, , 128-139.	1.0	4
103	Image Information in Digital Photography. Lecture Notes in Computer Science, 2011, , 122-131.	1.0	4
104	Screen Space Soft Shadows. , 2010, , 477-491.		4
105	GPU-Based Techniques for Global Illumination Effects. Synthesis Lectures on Computer Graphics and Animation, 2008, 2, 1-275.	0.1	4
106	Rain Simulation in Dynamic Scenes. International Journal of Creative Interfaces and Computer Graphics, 2011, 2, 23-36.	0.1	4
107	Random-valued impulse noise removal using adaptive ranked-ordered impulse detector. Journal of Electronic Imaging, 2018, 27, 1.	0.5	4
108	Combining global and local global-illumination algorithms. , 2003, , .		3

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109	Reusing paths in radiosity and global illumination. Monte Carlo Methods and Applications, 2004, 10, .	0.3	3
110	Fast Multipath Radiosity using Hierarchical Subscenes. Computer Graphics Forum, 2004, 23, 43-53.	1.8	3
111	Fuzziness Driven Adaptive Sampling for Monte Carlo Global Illuminated Rendering. Lecture Notes in Computer Science, 2006, , 148-159.	1.0	3
112	A New Approach to Salt-and-Pepper Noise Removal for Color Image. , 2009, , .		3
113	Multiresolution image registration based on tree data structures. Graphical Models, 2011, 73, 111-126.	1.1	3
114	Shadow map filtering with Gaussian shadow maps. , 2011, , .		3
115	Tsallis Entropy for Geometry Simplification. Entropy, 2011, 13, 1805-1828.	1.1	3
116	The Framework of a Life Support Simulation Application. Procedia Computer Science, 2012, 15, 293-294.	1.2	3
117	Description and Solution of an Unreported Intrinsic Bias in Photon Mapping Density Estimation with Constant Kernel. Computer Graphics Forum, 2012, 31, 33-41.	1.8	3
118	3D shape retrieval using viewpoint informationâ€theoretic measures. Computer Animation and Virtual Worlds, 2015, 26, 147-156.	0.7	3
119	Key Frame Extraction Based on Motion Vector. Lecture Notes in Computer Science, 2016, , 387-395.	1.0	3
120	Shape exploration of 3D heterogeneous models based on cages. Multimedia Tools and Applications, 2017, 76, 12369-12390.	2.6	3
121	Decolorization by Fusion. IEEE Access, 2018, 6, 64071-64084.	2.6	3
122	A hardware based implementation. , 2002, , 377-388.		3
123	Modifying a game interface to take advantage of advanced I/O devices. , 2013, , .		3
124	Implementation of an Immersive Videogame. International Journal of Creative Interfaces and Computer Graphics, 2015, 6, 1-20.	0.1	3
125	A New Way to Re-using Paths. , 2007, , 741-750.		3
126	A Bounded Measure for Estimating the Benefit of Visualization (Part II): Case Studies and Empirical Evaluation. Entropy, 2022, 24, 282.	1.1	3

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127	Optimal ray shooting in Monte Carlo radiosity. Computers and Graphics, 2002, 26, 351-354.	1.4	2
128	Reuse of paths in light source animation. , 0, , .		2
129	A new refinement criterion for adaptive sampling in path tracing. , 2010, , .		2
130	Hierarchical clustering based on the information bottleneck method using a control process. Pattern Analysis and Applications, 2015, 18, 619-637.	3.1	2
131	A group-based signal filtering approach for trajectory abstraction and restoration. Neural Computing and Applications, 2018, 29, 371-387.	3.2	2
132	Multi-Exposure Image Fusion Based on Information-Theoretic Channel. , 2018, , .		2
133	Gaze Information Channel. Lecture Notes in Computer Science, 2018, , 575-585.	1.0	2
134	IBVis: Interactive Visual Analytics for Information Bottleneck Based Trajectory Clustering. Entropy, 2018, 20, 159.	1.1	2
135	Gaze Information Channel in Van Goghâ€™s Paintings. Entropy, 2020, 22, 540.	1.1	2
136	Medical Image Registration Based on BSP and Quad-Tree Partitioning. Lecture Notes in Computer Science, 2006, , 1-8.	1.0	2
137	XaIBO: An Extension of aIB for Trajectory Clustering with Outlier. Lecture Notes in Computer Science, 2015, , 423-431.	1.0	2
138	A new Form Factor Analogy and its Application to Stochastic Global Illumination Algorithms. Eurographics, 1998, , 35-44.	0.4	2
139	Application of Quasi-Monte Carlo Sampling to the Multi Path Method for Radiosity. , 2000, , 163-176.		2
140	From 2D to 3D: A Case Study of NPR and Stereoscopic Cinema. Lecture Notes in Computer Science, 2017, , 87-98.	1.0	2
141	Efficient Ray Tracing Using Interval Analysis. , 2008, , 1351-1360.		2
142	Random walk radiosity with generalized absorption probabilities. , 0, , .		1
143	Optimal Absorption Probabilities for Random Walk Radiosity. Graphical Models, 2000, 62, 56-70.	1.1	1
144	View-dependent information theory quality measures for pixel sampling and scene discretization in flatland. , 0, , .		1

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145	Point-Based Modeling from a Single Image. Lecture Notes in Computer Science, 2004, , 245-251.	1.0	1
146	Combining light animation with obscurances for glossy environments. Computer Animation and Virtual Worlds, 2004, 15, 463-470.	0.7	1
147	A Monte Carlo-Based Fiber Tracking Algorithm using Diffusion Tensor MRI. , 2006, , .		1
148	Adaptive sampling based on fuzzy inference. , 2006, , .		1
149	A New Approach to Impulse Noise Removal for Color Image. , 2007, , .		1
150	A New Adaptive Sampling Technique for Monte Carlo Global Illumination. , 2007, , .		1
151	Efficient Animation Rendering Based on Spatio-Temporal Coherence. , 2009, , .		1
152	Incremental Reuse of Paths in Random Walk Radiosity. Lecture Notes in Computer Science, 2010, , 379-386.	1.0	1
153	Marker-Based Framework for Structural Health Monitoring of Civil Infrastructure. Applied Mechanics and Materials, 0, 378, 539-545.	0.2	1
154	Tutorial on information theory in visualization. , 2017, , .		1
155	Augmented film narrative by use of non-photorealistic rendering. , 2017, , .		1
156	Pupillary Reactivity to Non-Photorealistic Rendering: A Case Study of Immersion in 3D Cinema. , 2018, , .		1
157	Interpreting Social Accounting Matrix (SAM) as an Information Channel. Entropy, 2020, 22, 1346.	1.1	1
158	Systematic Sampling in Image-Synthesis. Lecture Notes in Computer Science, 2006, , 449-458.	1.0	1
159	A Multiple Depth Buffer Implementation for Radiosity. Lecture Notes in Computer Science, 2003, , 346-355.	1.0	1
160	Bandwidth Reduction Techniques for Remote Navigation Systems. Lecture Notes in Computer Science, 2002, , 249-257.	1.0	1
161	Information-Theory-Based Oracles for Hierarchical Radiosity. Lecture Notes in Computer Science, 2003, , 275-284.	1.0	1
162	Information Theory Tools for Scene Discretization. Eurographics, 1999, , 95-106.	0.4	1

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163	Fast Agglomerative Information Bottleneck Based Trajectory Clustering. Lecture Notes in Computer Science, 2016, , 425-433.	1.0	1
164	Stochastic Orders on Two-Dimensional Space: Application to Cross Entropy. Lecture Notes in Computer Science, 2020, , 28-40.	1.0	1
165	Random walk radiosity with infinite path length. Computers and Graphics, 1998, 22, 161-166.	1.4	0
166	Estimation of the Probability of Congestion Using Monte Carlo Method in OPS Networks. , 0, , .		0
167	Fast GPU-based reuse of paths in radiosity. Monte Carlo Methods and Applications, 2007, 13, .	0.3	0
168	Improving Multipath Radiosity with Bundles of Parallel Lines. Computer Graphics Forum, 2008, 27, 1632-1646.	1.8	0
169	Optimal Source Selection in Shooting Random Walk Monte Carlo Radiosity. Computer Graphics Forum, 1997, 16, C301.	1.8	0
170	Partial, multi-scale precomputed radiance transfer. , 2010, , .		0
171	Information theory in computer graphics and visualization. , 2011, , .		0
172	Flower modelling using natural interface and 3Gmap L-systems. , 2013, , .		0
173	Viewpoint information-theoretic measures for 3D shape similarity. , 2013, , .		0
174	Test Installation of a Marker-Based Framework for Structural Health Monitoring of Bridges. Applied Mechanics and Materials, 0, 477-478, 813-816.	0.2	0
175	Fast TLS Denoising Algorithm Using Grid Technique. , 2015, , .		0
176	Stochastic Order and Generalized Weighted Mean Invariance. Entropy, 2021, 23, 662.	1.1	0
177	Guaranteed Adaptive Antialiasing Using Interval Arithmetic. Lecture Notes in Computer Science, 2007, , 166-169.	1.0	0
178	A unified information theory framework for viewpoint selection and mesh saliency. , 2007, , .		0
179	Information Theory Tools for Viewpoint Selection, Mesh Saliency and Geometry Simplification. Studies in Computational Intelligence, 2009, , 41-61.	0.7	0
180	Rain Simulation in Dynamic Scenes. , 2012, , 291-305.		0

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181	Modeling of Flowers with Inverse Grammar Generation Interface. International Journal of Creative Interfaces and Computer Graphics, 2012, 3, 23-41.	0.1	0
182	Gathering for Free in Random Walk Radiosity. Eurographics, 1999, , 89-94.	0.4	0
183	POST-PROCESSING EXPRESSIVE RENDERING EFFECTS FOR VISUAL DEFICIENCY. , 2014, , .		0