Philipp Slusallek

List of Publications by Year
in descending order

145 papers	2,456 citations	394421 19 h-index	330143 37 g-index
147 all docs	147 docs citations	147 times ranked	1240 citing authors

#	Article	IF	Citations
1	Uncertainty Quantification and Calibration of Imitation Learning Policy in Autonomous Driving. Lecture Notes in Computer Science, 2021, , 146-162.	1.3	0
2	Deep Neural Networks for Analysis of Microscopy Imagesâ€"Synthetic Data Generation and Adaptive Sampling. Crystals, 2021, 11, 258.	2.2	15
3	Correlationâ€Aware Multiple Importance Sampling for Bidirectional Rendering Algorithms. Computer Graphics Forum, 2021, 40, 231-238.	3.0	1
4	Variance-aware path guiding. ACM Transactions on Graphics, 2020, 39, .	7.2	14
5	Deep Learning for Sparse Scanning Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 158-159.	0.4	4
6	Application of Missing Wedge Inpainting in Material Science. Microscopy and Microanalysis, 2019, 25, 440-441.	0.4	0
7	Stylistic Locomotion Modeling and Synthesis using Variational Generative Models. , 2019, , .		9
8	Rodent. ACM Transactions on Graphics, 2019, 38, 1-12.	7.2	11
9	Capturing Subtle Motion Differences of Pedestrian Street Crossings. , 2019, , .		4
10	Parallel Multi-Hypothesis Algorithm for Criticality Estimation in Traffic and Collision Avoidance. , 2019, , .		6
11	Optimal multiple importance sampling. ACM Transactions on Graphics, 2019, 38, 1-14.	7.2	28
12	Adaptive gaussian mixture trajectory model for physical model control using motion capture data. , 2019, , .		1
13	Digital reality: a model-based approach to supervised learning from synthetic data. AI Perspectives, 2019, 1, .	3.9	18
14	Learning a Continuous Control of Motion Style from Natural Examples. , 2019, , .		0
15	How should a fixed budget of dwell time be spent in scanning electron microscopy to optimize image quality?. Ultramicroscopy, 2018, 191, 11-17.	1.9	21
16	A Data Layout Transformation for Vectorizing Compilers. , 2018, , .		2
17	Fact or Fiction: Maximal Image Quality with Minimal Dwell Time. Microscopy and Microanalysis, 2018, 24, 480-481.	0.4	0
18	AnyDSL: a partial evaluation framework for programming high-performance libraries. , 2018, 2, 1-30.		17

#	ARTICLE	IF	CITATIONS
19	Efficient Caustic Rendering with Lightweight Photon Mapping. Computer Graphics Forum, 2018, 37, 133-142.	3.0	6
20	Blob-based Algebraic Reconstruction Technique for Computed Laminography. Microscopy and Microanalysis, 2018, 24, 994-995.	0.4	0
21	Foveated Depth-of-Field Filtering in Head-Mounted Displays. ACM Transactions on Applied Perception, 2018, 15, 1-14.	1.9	10
22	FiVES: an aspect-oriented approach for shared virtual environments in the web. Visual Computer, 2018, 34, 1269-1282.	3.5	4
23	Exemplar-Based Inpainting Based on Dictionary Learning for Sparse Scanning Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 700-701.	0.4	8
24	Predicting the gaze depth in head-mounted displays using multiple feature regression. , 2018, , .		20
25	Exemplar-based inpainting as a solution to the missing wedge problem in electron tomography. Ultramicroscopy, 2018, 191, 1-10.	1.9	11
26	How to avoid an AI interaction singularity. Interactions, 2018, 25, 72-78.	1.0	2
27	GPU Ray Tracing using Irregular Grids. Computer Graphics Forum, 2017, 36, 477-486.	3.0	8
28	RaTrace: simple and efficient abstractions for BVH ray traversal algorithms. ACM SIGPLAN Notices, 2017, 52, 157-168.	0.2	0
29	Modelling and characterization of ductile fracture surface in Al-Si alloys by means of Voronoi tessellation. Materials Characterization, 2017, 131, 1-11.	4.4	10
30	Integrated Semantic Fault Analysis and Worker Support for Cyber-Physical Production Systems. , 2017, , .		9
31	FiVES: An Aspect-Oriented Virtual Environment Server. , 2017, , .		4
32	Spherically symmetric volume elements as basis functions for image reconstructions in computed laminography. Journal of X-Ray Science and Technology, 2017, 25, 533-546.	1.0	5
33	Dreamspace: A Platform and Tools for Collaborative Virtual Production. Smpte Motion Imaging Journal, 2017, 126, 29-36.	0.2	1
34	RaTrace: simple and efficient abstractions for BVH ray traversal algorithms. , 2017, , .		5
35	A Quality-Centered Analysis of Eye Tracking Data in Foveated Rendering. Journal of Eye Movement Research, 2017, 10, .	0.8	4
36	A Comparative Study of Three Marker Detection Algorithms in Electron Tomography. Microscopy and Microanalysis, 2016, 22, 1044-1045.	0.4	2

#	Article	IF	Citations
37	Dictionary-based Filling of the Missing Wedge in Electron Tomography. Microscopy and Microanalysis, 2016, 22, 554-555.	0.4	4
38	Building Construction Sets by Tiling Grammar Simplification. Computer Graphics Forum, 2016, 35, 13-25.	3.0	6
39	An analysis of eye-tracking data in foveated ray tracing. , 2016, , .		12
40	Combined Tilt- and Focal-Series Tomography for HAADF-STEM. Microscopy Today, 2016, 24, 26-31.	0.3	1
41	The basic building blocks of declarative 3D on the web. , 2016, , .		1
42	Advanced recording schemes for electron tomography. MRS Bulletin, 2016, 41, 537-541.	3.5	3
43	Foveated Real–Time Ray Tracing for Head–Mounted Displays. Computer Graphics Forum, 2016, 35, 289-298.	3.0	40
44	â€œSmart Microscopyâ€: Feature Based Adaptive Sampling for Focused Ion Beam Scanning Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 632-633.	0.4	0
45	Feature Adaptive Sampling for Scanning Electron Microscopy. Scientific Reports, 2016, 6, 25350.	3.3	28
46	On geometric artifacts in cryo electron tomography. Ultramicroscopy, 2016, 163, 48-61.	1.9	22
47	The Ettention software package. Ultramicroscopy, 2016, 161, 110-118.	1.9	15
48	Shallow embedding of DSLs via online partial evaluation. ACM SIGPLAN Notices, 2016, 51, 11-20.	0.2	4
49	Matched Backprojection Operator for Combined Scanning Transmission Electron Microscopy Tilt- and Focal Series. Microscopy and Microanalysis, 2015, 21, 725-738.	0.4	6
50	Marker Detection in Electron Tomography: A Comparative Study. Microscopy and Microanalysis, 2015, 21, 1591-1601.	0.4	5
51	The XML3D architecture. , 2015, , .		1
52	Ettention: Building Blocks for Iterative Reconstruction Algorithms. Microscopy and Microanalysis, 2015, 21, 1601-1602.	0.4	1
53	Reconstruction Strategies for Combined Tilt- and Focal Series Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2015, 21, 2337-2338.	0.4	0
54	Plugin free remote visualization in the browser. , 2015, , .		1

#	ARTICLE	IF	CITATIONS
55	Shallow embedding of DSLs via online partial evaluation. , 2015, , .		12
56	Progressive Stochastic Reconstruction Technique (PSRT) for cryo electron tomography. Journal of Structural Biology, 2015, 189, 195-206.	2.8	12
57	A CSS integration model for declarative 3D. , 2015, , .		4
58	Interaction Techniques for Wall-Sized Screens. , 2015, , .		1
59	Code Refinement of Stencil Codes. Parallel Processing Letters, 2014, 24, 1441003.	0.6	7
60	Configurable instances of 3D models for declarative 3D in the web. , 2014, , .		10
61	Blast. , 2014, , .		18
62	Target-Specific Refinement of Multigrid Codes. , 2014, , .		1
63	Specialization through dynamic staging. , 2014, , .		2
64	shade.js: Adaptive Material Descriptions. Computer Graphics Forum, 2014, 33, 51-60.	3.0	5
65	Progressive Light Transport Simulation on the GPU. ACM Transactions on Graphics, 2014, 33, 1-19.	7.2	25
66	TFS: Combined Tilt- and Focal Series Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 786-787.	0.4	2
67	Combined Scanning Transmission Electron Microscopy Tilt- and Focal Series. Microscopy and Microanalysis, 2014, 20, 548-560.	0.4	21
68	XML3D and Xflow: Combining Declarative 3D for the Web with Generic Data Flows. IEEE Computer Graphics and Applications, 2013, 33, 38-47.	1.2	7
69	xml3d.js: Architecture of a Polyfill implementation of XML3D. , 2013, , .		3
70	From real cities to virtual worlds using an open modular architecture. Visual Computer, 2013, 29, 141-153.	3.5	3
71	A Collaborative Virtual Workspace for Factory Configuration and Evaluation. , 2013, , .		3
72	Declarative integration of interactive 3D graphics into the world-wide web. , 2013, , .		24

#	Article	IF	Citations
73	Declarative AR and image processing on the web with Xflow. , 2013, , .		5
74	Progressive stochastic reconstruction technique for cryo electron tomography. , 2013, , .		0
75	XML3DRepo. , 2013, , .		18
76	Adaptive Quantization Visibility Caching. Computer Graphics Forum, 2013, 32, 399-408.	3.0	3
77	An Open Modular Middleware for Interoperable Virtual Environments. , 2013, , .		4
78	Progressive Lightcuts for GPU. , 2012, , .		12
79	Reverse genlock for synchronous tiled display walls with Smart Internet Displays. , 2012, , .		0
80	Light transport simulation with vertex connection and merging. ACM Transactions on Graphics, 2012, 31, 1-10.	7.2	134
81	Microtiles: Extracting Building Blocks from Correspondences. Computer Graphics Forum, 2012, 31, 1597-1606.	3.0	15
82	Xflow. , 2012, , .		16
83	Importance Caching for Complex Illumination. Computer Graphics Forum, 2012, 31, 701-710.	3.0	31
84	An Open Modular Architecture for Effective Integration of Virtual Worlds in the Web. , 2011, , .		5
85	Twoâ€Level Grids for Ray Tracing on GPUs. Computer Graphics Forum, 2011, 30, 307-314.	3.0	31
86	Stream processing on GPUs using distributed multimedia middleware. Concurrency Computation Practice and Experience, 2011, 23, 669-680.	2.2	1
87	Bidirectional light transport with vertex merging. , 2011, , .		7
88	Efficient stack-less BVH traversal for ray tracing. , 2011, , .		33
89	ISReal: A Platform for Intelligent Simulated Realities. Communications in Computer and Information Science, 2011, , 201-213.	0.5	3
90	Integration of Realtime Ray Tracing into Interactive Virtual Reality Systems. , 2011, , 83-90.		0

#	Article	IF	Citations
91	Measuring properties of molecular surfaces using ray casting. , 2010, , .		9
92	XML3D. , 2010, , .		89
93	Combining global and local virtual lights for detailed glossy illumination. ACM Transactions on Graphics, 2010, 29, 1-8.	7.2	22
94	Real-Time Ray Tracing of Complex Molecular Scenes. , 2010, , .		7
95	Stream Processing on GPUs Using Distributed Multimedia Middleware. Lecture Notes in Computer Science, 2010, , 429-438.	1.3	1
96	Object partitioning considered harmful. , 2009, , .		23
97	A parallel algorithm for construction of uniform grids. , 2009, , .		53
98	DRONE: A Flexible Framework for Distributed Rendering and Display. Lecture Notes in Computer Science, 2009, , 975-986.	1.3	10
99	RTSG. , 2009, , .		13
100	Extending X3D for distributed multimedia processing and control. , 2009, , .		2
101	Efficient CPUâ€based Volume Ray Tracing Techniques. Computer Graphics Forum, 2008, 27, 1687-1709.	3.0	2
102	Bounded Radiosity - Illumination on General Surfaces and Clusters. Computer Graphics Forum, 2008, 16, C309-C317.	3.0	0
103	RTfact: Generic concepts for flexible and high performance ray tracing. , 2008, , .		16
104	High-speed volume ray casting with CUDA. , 2008, , .		17
105	Network-integrated multimedia middleware (NMM). , 2008, , .		13
106	Interactive massive model rendering. , 2008, , .		2
107	Massive model visualization using realtime ray tracing. , 2008, , .		0
108	Massive model visualization techniques. , 2008, , .		7

#	Article	IF	Citations
109	Massive model visualization using realtime ray tracing. , 2008, , .		0
110	Guest Editors' Introduction: Real-Time Interaction with Complex Models. IEEE Computer Graphics and Applications, 2007, 27, 17-19.	1.2	1
111	Realtime Ray Tracing on GPU with BVH-based Packet Traversal. , 2007, , .		92
112	Adaptive Spatial Sample Caching. , 2007, , .		5
113	Stackless KDâ€Tree Traversal for High Performance GPU Ray Tracing. Computer Graphics Forum, 2007, 26, 415-424.	3.0	148
114	Experiences with Streaming Construction of SAH KD-Trees. , 2006, , .		57
115	Estimating Performance of a Ray-Tracing ASIC Design. , 2006, , .		24
116	Applying Ray Tracing for Virtual Reality and Industrial Design. , 2006, , .		17
117	Ray Tracing Animated Scenes using Motion Decomposition. Computer Graphics Forum, 2006, 25, 517-525.	3.0	21
118	Interactive ray tracing of skinned animations. Visual Computer, 2006, 22, 785-792.	3.5	4
119	Exploring the use of ray tracing for future games. , 2006, , .		10
120	Terrain Guided Multi-Level Instancing of Highly Complex Plant Populations. , 2006, , .		5
121	B-KD trees for hardware accelerated ray tracing of dynamic scenes. , 2006, , .		48
122	Introduction to real-time ray tracing. , 2005, , .		6
123	RPU. , 2005, , .		50
124	Realtime ray tracing for current and future games. , 2005, , .		3
125	Faster Isosurface Ray Tracing Using Implicit KD-Trees. IEEE Transactions on Visualization and Computer Graphics, 2005, 11, 562-572.	4.4	48
126	RPU. ACM Transactions on Graphics, 2005, 24, 434-444.	7.2	143

#	Article	IF	Citations
127	An interactive out-of-core rendering framework for visualizing massively complex models. , 2005, , .		22
128	Interactive visualization of exceptionally complex industrial CAD datasets. , 2004, , .		1
129	Interactive ray tracing of free-form surfaces. , 2004, , .		15
130	Realtime ray tracing of dynamic scenes on an FPGA chip. Graphics Hardware, 2004, , .	0.0	76
131	A Scalable Approach to Interactive Global Illumination. Computer Graphics Forum, 2003, 22, 621-630.	3.0	33
132	A virtual memory architecture for real-time ray tracing hardware. Computers and Graphics, 2003, 27, 693-699.	2.5	14
133	Interactive Ray Tracing on Commodity PC Clusters. Lecture Notes in Computer Science, 2003, , 499-508.	1.3	8
134	When will ray-tracing replace rasterization?. , 2002, , .		6
135	Interactive Rendering with Coherent Ray Tracing. Computer Graphics Forum, 2001, 20, 153-165.	3.0	279
136	Interactive Distributed Ray Tracing of Highly Complex Models. Eurographics, 2001, , 277-288.	0.4	38
137	Transparent distributed processing for rendering. , 1999, , .		2
138	Sampling procedural shaders using affine arithmetic. ACM Transactions on Graphics, 1998, 17, 158-176.	7.2	39
139	Hierarchical Techniques for Global Illumination Computations â€" Recent Trends and Developments. , 1998, , 181-194.		0
140	Bounded Radiosity - Illumination on General Surfaces and Clusters. Computer Graphics Forum, 1997, 16, C309-C317.	3.0	16
141	Ray tracing of spline surfaces: Bï¿½zier clipping, Chebyshev boxing, and bounding volume hierarchy - a critical comparison with new results. Visual Computer, 1997, 13, 265-282.	3.5	20
142	Towards an Open Rendering Kernel for Image Synthesis. Eurographics, 1996, , 51-60.	0.4	3
143	Using Procedural RenderMan Shaders for Global Illurnination. Computer Graphics Forum, 1995, 14, 311-324.	3.0	11
144	A platform for visualizing curves and surfaces. CAD Computer Aided Design, 1995, 27, 559-566.	2.7	1

#	ARTICLE	IF	CITATIONS
145	Implementing RenderMan - Practice, Problems and Enhancements. Computer Graphics Forum, 1994, 13, 443-454.	3.0	8