

# Philipp Slusallek

## List of Publications by Year in descending order

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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	Interactive Rendering with Coherent Ray Tracing. Computer Graphics Forum, 2001, 20, 153-165.	3.0	279
2	Stackless KD-Tree Traversal for High Performance GPU Ray Tracing. Computer Graphics Forum, 2007, 26, 415-424.	3.0	148
3	RPU. ACM Transactions on Graphics, 2005, 24, 434-444.	7.2	143
4	Light transport simulation with vertex connection and merging. ACM Transactions on Graphics, 2012, 31, 1-10.	7.2	134
5	Realtime Ray Tracing on GPU with BVH-based Packet Traversal. , 2007, , .		92
6	XML3D. , 2010, , .		89
7	Realtime ray tracing of dynamic scenes on an FPGA chip. Graphics Hardware, 2004, , .	0.0	76
8	Experiences with Streaming Construction of SAH KD-Trees. , 2006, , .		57
9	A parallel algorithm for construction of uniform grids. , 2009, , .		53
10	RPU. , 2005, , .		50
11	Faster Isosurface Ray Tracing Using Implicit KD-Trees. IEEE Transactions on Visualization and Computer Graphics, 2005, 11, 562-572.	4.4	48
12	B-KD trees for hardware accelerated ray tracing of dynamic scenes. , 2006, , .		48
13	Foveated Real-Time Ray Tracing for Head-Mounted Displays. Computer Graphics Forum, 2016, 35, 289-298.	3.0	40
14	Sampling procedural shaders using affine arithmetic. ACM Transactions on Graphics, 1998, 17, 158-176.	7.2	39
15	Interactive Distributed Ray Tracing of Highly Complex Models. Eurographics, 2001, , 277-288.	0.4	38
16	A Scalable Approach to Interactive Global Illumination. Computer Graphics Forum, 2003, 22, 621-630.	3.0	33
17	Efficient stack-less BVH traversal for ray tracing. , 2011, , .		33
18	Two-Level Grids for Ray Tracing on GPUs. Computer Graphics Forum, 2011, 30, 307-314.	3.0	31

#	ARTICLE	IF	CITATIONS
19	Importance Caching for Complex Illumination. Computer Graphics Forum, 2012, 31, 701-710.	3.0	31
20	Feature Adaptive Sampling for Scanning Electron Microscopy. Scientific Reports, 2016, 6, 25350.	3.3	28
21	Optimal multiple importance sampling. ACM Transactions on Graphics, 2019, 38, 1-14.	7.2	28
22	Progressive Light Transport Simulation on the GPU. ACM Transactions on Graphics, 2014, 33, 1-19.	7.2	25
23	Estimating Performance of a Ray-Tracing ASIC Design. , 2006, , .		24
24	Declarative integration of interactive 3D graphics into the world-wide web. , 2013, , .		24
25	Object partitioning considered harmful. , 2009, , .		23
26	An interactive out-of-core rendering framework for visualizing massively complex models. , 2005, , .		22
27	Combining global and local virtual lights for detailed glossy illumination. ACM Transactions on Graphics, 2010, 29, 1-8.	7.2	22
28	On geometric artifacts in cryo electron tomography. Ultramicroscopy, 2016, 163, 48-61.	1.9	22
29	Ray Tracing Animated Scenes using Motion Decomposition. Computer Graphics Forum, 2006, 25, 517-525.	3.0	21
30	Combined Scanning Transmission Electron Microscopy Tilt- and Focal Series. Microscopy and Microanalysis, 2014, 20, 548-560.	0.4	21
31	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
32	Ray tracing of spline surfaces: Bézier clipping, Chebyshev boxing, and bounding volume hierarchy - a critical comparison with new results. Visual Computer, 1997, 13, 265-282.	3.5	20
33	Predicting the gaze depth in head-mounted displays using multiple feature regression. , 2018, , .		20
34	XML3DRepo. , 2013, , .		18
35	Blast. , 2014, , .		18
36	Digital reality: a model-based approach to supervised learning from synthetic data. AI Perspectives, 2019, 1, .	3.9	18

#	ARTICLE	IF	CITATIONS
37	Applying Ray Tracing for Virtual Reality and Industrial Design. , 2006, , .		17
38	High-speed volume ray casting with CUDA. , 2008, , .		17
39	AnyDSL: a partial evaluation framework for programming high-performance libraries. , 2018, 2, 1-30.		17
40	Bounded Radiosity - Illumination on General Surfaces and Clusters. Computer Graphics Forum, 1997, 16, C309-C317.	3.0	16
41	RTfact: Generic concepts for flexible and high performance ray tracing. , 2008, , .		16
42	Xflow. , 2012, , .		16
43	Interactive ray tracing of free-form surfaces. , 2004, , .		15
44	Microtiles: Extracting Building Blocks from Correspondences. Computer Graphics Forum, 2012, 31, 1597-1606.	3.0	15
45	The Ettention software package. Ultramicroscopy, 2016, 161, 110-118.	1.9	15
46	Deep Neural Networks for Analysis of Microscopy Imagesâ€™ Synthetic Data Generation and Adaptive Sampling. Crystals, 2021, 11, 258.	2.2	15
47	A virtual memory architecture for real-time ray tracing hardware. Computers and Graphics, 2003, 27, 693-699.	2.5	14
48	Variance-aware path guiding. ACM Transactions on Graphics, 2020, 39, .	7.2	14
49	Network-integrated multimedia middleware (NMM). , 2008, , .		13
50	RTSG. , 2009, , .		13
51	Progressive Lightcuts for GPU. , 2012, , .		12
52	Shallow embedding of DSLs via online partial evaluation. , 2015, , .		12
53	Progressive Stochastic Reconstruction Technique (PSRT) for cryo electron tomography. Journal of Structural Biology, 2015, 189, 195-206.	2.8	12
54	An analysis of eye-tracking data in foveated ray tracing. , 2016, , .		12

#	ARTICLE	IF	CITATIONS
55	Using Procedural RenderMan Shaders for Global Illumination. Computer Graphics Forum, 1995, 14, 311-324.	3.0	11
56	Exemplar-based inpainting as a solution to the missing wedge problem in electron tomography. Ultramicroscopy, 2018, 191, 1-10.	1.9	11
57	Rodent. ACM Transactions on Graphics, 2019, 38, 1-12.	7.2	11
58	Exploring the use of ray tracing for future games. , 2006, , .		10
59	Configurable instances of 3D models for declarative 3D in the web. , 2014, , .		10
60	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
61	Foveated Depth-of-Field Filtering in Head-Mounted Displays. ACM Transactions on Applied Perception, 2018, 15, 1-14.	1.9	10
62	DRONE: A Flexible Framework for Distributed Rendering and Display. Lecture Notes in Computer Science, 2009, , 975-986.	1.3	10
63	Measuring properties of molecular surfaces using ray casting. , 2010, , .		9
64	Integrated Semantic Fault Analysis and Worker Support for Cyber-Physical Production Systems. , 2017, , .		9
65	Stylistic Locomotion Modeling and Synthesis using Variational Generative Models. , 2019, , .		9
66	Implementing RenderMan - Practice, Problems and Enhancements. Computer Graphics Forum, 1994, 13, 443-454.	3.0	8
67	Interactive Ray Tracing on Commodity PC Clusters. Lecture Notes in Computer Science, 2003, , 499-508.	1.3	8
68	GPU Ray Tracing using Irregular Grids. Computer Graphics Forum, 2017, 36, 477-486.	3.0	8
69	Exemplar-Based Inpainting Based on Dictionary Learning for Sparse Scanning Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 700-701.	0.4	8
70	Massive model visualization techniques. , 2008, , .		7
71	Real-Time Ray Tracing of Complex Molecular Scenes. , 2010, , .		7
72	Bidirectional light transport with vertex merging. , 2011, , .		7

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73	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
74	Code Refinement of Stencil Codes. Parallel Processing Letters, 2014, 24, 1441003.	0.6	7
75	When will ray-tracing replace rasterization?. , 2002, , .		6
76	Introduction to real-time ray tracing. , 2005, , .		6
77	Matched Backprojection Operator for Combined Scanning Transmission Electron Microscopy Tilt- and Focal Series. Microscopy and Microanalysis, 2015, 21, 725-738.	0.4	6
78	Building Construction Sets by Tiling Grammar Simplification. Computer Graphics Forum, 2016, 35, 13-25.	3.0	6
79	Efficient Caustic Rendering with Lightweight Photon Mapping. Computer Graphics Forum, 2018, 37, 133-142.	3.0	6
80	Parallel Multi-Hypothesis Algorithm for Criticality Estimation in Traffic and Collision Avoidance. , 2019, , .		6
81	Terrain Guided Multi-Level Instancing of Highly Complex Plant Populations. , 2006, , .		5
82	Adaptive Spatial Sample Caching. , 2007, , .		5
83	An Open Modular Architecture for Effective Integration of Virtual Worlds in the Web. , 2011, , .		5
84	Declarative AR and image processing on the web with Xflow. , 2013, , .		5
85	shade.js: Adaptive Material Descriptions. Computer Graphics Forum, 2014, 33, 51-60.	3.0	5
86	Marker Detection in Electron Tomography: A Comparative Study. Microscopy and Microanalysis, 2015, 21, 1591-1601.	0.4	5
87	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
88	RaTrace: simple and efficient abstractions for BVH ray traversal algorithms. , 2017, , .		5
89	Interactive ray tracing of skinned animations. Visual Computer, 2006, 22, 785-792.	3.5	4
90	An Open Modular Middleware for Interoperable Virtual Environments. , 2013, , .		4

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91	A CSS integration model for declarative 3D. , 2015, , .		4
92	Dictionary-based Filling of the Missing Wedge in Electron Tomography. Microscopy and Microanalysis, 2016, 22, 554-555.	0.4	4
93	FIVES: An Aspect-Oriented Virtual Environment Server. , 2017, , .		4
94	FIVES: an aspect-oriented approach for shared virtual environments in the web. Visual Computer, 2018, 34, 1269-1282.	3.5	4
95	Deep Learning for Sparse Scanning Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 158-159.	0.4	4
96	Capturing Subtle Motion Differences of Pedestrian Street Crossings. , 2019, , .		4
97	Shallow embedding of DSLs via online partial evaluation. ACM SIGPLAN Notices, 2016, 51, 11-20.	0.2	4
98	A Quality-Centered Analysis of Eye Tracking Data in Foveated Rendering. Journal of Eye Movement Research, 2017, 10, .	0.8	4
99	Realtime ray tracing for current and future games. , 2005, , .		3
100	xml3d.js: Architecture of a Polyfill implementation of XML3D. , 2013, , .		3
101	From real cities to virtual worlds using an open modular architecture. Visual Computer, 2013, 29, 141-153.	3.5	3
102	A Collaborative Virtual Workspace for Factory Configuration and Evaluation. , 2013, , .		3
103	Adaptive Quantization Visibility Caching. Computer Graphics Forum, 2013, 32, 399-408.	3.0	3
104	Advanced recording schemes for electron tomography. MRS Bulletin, 2016, 41, 537-541.	3.5	3
105	ISReal: A Platform for Intelligent Simulated Realities. Communications in Computer and Information Science, 2011, , 201-213.	0.5	3
106	Towards an Open Rendering Kernel for Image Synthesis. Eurographics, 1996, , 51-60.	0.4	3
107	Transparent distributed processing for rendering. , 1999, , .		2
108	Efficient CPU-based Volume Ray Tracing Techniques. Computer Graphics Forum, 2008, 27, 1687-1709.	3.0	2

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109	Interactive massive model rendering. , 2008, , .		2
110	Specialization through dynamic staging. , 2014, , .		2
111	TFS: Combined Tilt- and Focal Series Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 786-787.	0.4	2
112	A Comparative Study of Three Marker Detection Algorithms in Electron Tomography. Microscopy and Microanalysis, 2016, 22, 1044-1045.	0.4	2
113	A Data Layout Transformation for Vectorizing Compilers. , 2018, , .		2
114	Extending X3D for distributed multimedia processing and control. , 2009, , .		2
115	How to avoid an AI interaction singularity. Interactions, 2018, 25, 72-78.	1.0	2
116	A platform for visualizing curves and surfaces. CAD Computer Aided Design, 1995, 27, 559-566.	2.7	1
117	Interactive visualization of exceptionally complex industrial CAD datasets. , 2004, , .		1
118	Guest Editors' Introduction: Real-Time Interaction with Complex Models. IEEE Computer Graphics and Applications, 2007, 27, 17-19.	1.2	1
119	Stream processing on GPUs using distributed multimedia middleware. Concurrency Computation Practice and Experience, 2011, 23, 669-680.	2.2	1
120	Target-Specific Refinement of Multigrid Codes. , 2014, , .		1
121	The XML3D architecture. , 2015, , .		1
122	Ettenion: Building Blocks for Iterative Reconstruction Algorithms. Microscopy and Microanalysis, 2015, 21, 1601-1602.	0.4	1
123	Plugin free remote visualization in the browser. , 2015, , .		1
124	Combined Tilt- and Focal-Series Tomography for HAADF-STEM. Microscopy Today, 2016, 24, 26-31.	0.3	1
125	The basic building blocks of declarative 3D on the web. , 2016, , .		1
126	Dreamspace: A Platform and Tools for Collaborative Virtual Production. Smpte Motion Imaging Journal, 2017, 126, 29-36.	0.2	1



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127	Adaptive gaussian mixture trajectory model for physical model control using motion capture data. , 2019, , .		1
128	Correlation-aware Multiple Importance Sampling for Bidirectional Rendering Algorithms. Computer Graphics Forum, 2021, 40, 231-238.	3.0	1
129	Interaction Techniques for Wall-Sized Screens. , 2015, , .		1
130	Stream Processing on GPUs Using Distributed Multimedia Middleware. Lecture Notes in Computer Science, 2010, , 429-438.	1.3	1
131	Bounded Radiosity - Illumination on General Surfaces and Clusters. Computer Graphics Forum, 2008, 16, C309-C317.	3.0	0
132	Massive model visualization using realtime ray tracing. , 2008, , .		0
133	Reverse genlock for synchronous tiled display walls with Smart Internet Displays. , 2012, , .		0
134	Progressive stochastic reconstruction technique for cryo electron tomography. , 2013, , .		0
135	Reconstruction Strategies for Combined Tilt- and Focal Series Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2015, 21, 2337-2338.	0.4	0
136	Smart Microscopy: Feature Based Adaptive Sampling for Focused Ion Beam Scanning Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 632-633.	0.4	0
137	RaTrace: simple and efficient abstractions for BVH ray traversal algorithms. ACM SIGPLAN Notices, 2017, 52, 157-168.	0.2	0
138	Fact or Fiction: Maximal Image Quality with Minimal Dwell Time. Microscopy and Microanalysis, 2018, 24, 480-481.	0.4	0
139	Blob-based Algebraic Reconstruction Technique for Computed Laminography. Microscopy and Microanalysis, 2018, 24, 994-995.	0.4	0
140	Application of Missing Wedge Inpainting in Material Science. Microscopy and Microanalysis, 2019, 25, 440-441.	0.4	0
141	Uncertainty Quantification and Calibration of Imitation Learning Policy in Autonomous Driving. Lecture Notes in Computer Science, 2021, , 146-162.	1.3	0
142	Massive model visualization using realtime ray tracing. , 2008, , .		0
143	Integration of Realtime Ray Tracing into Interactive Virtual Reality Systems. , 2011, , 83-90.		0
144	Hierarchical Techniques for Global Illumination Computations - Recent Trends and Developments. , 1998, , 181-194.		0

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145	Learning a Continuous Control of Motion Style from Natural Examples. , 2019, , .		0