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EDUCATION

- ◇ **State University of New York at Stony Brook**, Stony Brook, NY
Ph.D. in Computer Science, 1996
Advisor: Prof. Arie Kaufman; Thesis: Architectures for Real-Time Volume Visualization
- ◇ **State University of New York at Stony Brook**, Stony Brook, NY
M.Sc. in Computer Science, 1994
- ◇ **Swiss Federal Institute of Technology (ETH) Zürich**, Switzerland
M.Sc. in Electrical Engineering, 1991

RESEARCH INTERESTS

Computer graphics, computer vision, visualization, and data science.

EMPLOYMENT

- ◇ **Harvard University, School of Engineering and Applied Sciences, Cambridge, MA**
Academic Dean for Computational Sciences and Engineering, 2021–present
An Wang Professor of Computer Science, 2012–present
Affiliate Faculty Member, Harvard Center for Brain Science, 2012–present
Director, Institute of Applied Computational Science, 2013–2017
Professor of the Practice of Computer Science, 2007–2011
- ◇ **Harvard University, Initiative in Innovative Computing, Cambridge, MA**
Director of Visual Computing, 2007–2009
- ◇ **Consultant**
Expert witness in patent infringement and patent reexamination cases, source code copyright infringement, computer graphics hardware, computer graphics, computer vision, and other issues, 2007–present
Consultant for technology companies and research laboratories, 2007–present
- ◇ **Mitsubishi Electric Research Laboratories, Cambridge, MA**
Associate Director, 2001–2006
Senior Research Scientist, 1996–2007
- ◇ **Visualization Laboratory, SUNY Stony Brook, NY**
Research Assistant, 1992–1996
- ◇ **Integrated Systems Laboratory, ETH Zürich, Switzerland**
Research Assistant, 1990–1991
- ◇ **Sulzer Corp., Industrial Electronics Laboratory, Winterthur, Switzerland**
Consulting Engineer, 1988–1991

HONORS AND AWARDS

- ◇ **ACM Fellow** “for contributions to volume rendering, visualization, computer graphics, and computer vision applications,” elected in 2019

- ◇ **IEEE Fellow** “for contributions to computer vision applications,” elected in 2023
- ◇ **ACM SIGGRAPH Academy**, elected member, 2020
- ◇ **IEEE Visualization Academy**, elected member, 2019
- ◇ **IEEE Visualization Technical Achievement Award** “in recognition of seminal technical achievements in real-time volume rendering,” 2010
- ◇ **IEEE Golden Core Award**, 2010
- ◇ **IEEE Meritorious Service Award**, 2009
- ◇ **Petra T. Shattuck Excellence in Teaching Award**, Harvard Extension School, 2009
- ◇ **Dean’s Thesis Prize**, Harvard Extension School ALM in Information Technology, for Michael Tracey Zellman’s thesis “Creating and Visualizing Congressional Districts”, 2011
- ◇ **Dean’s Thesis Prize**, Harvard Extension School ALM in Information Technology, for Manish Kumar’s thesis “View-Dependent FTLV”, 2009
- ◇ **Dean’s Thesis Prize**, Harvard Extension School ALM in Information Technology, for Joseph Weber’s thesis “ProteinShader: Cartoon-Type Visualization of Macromolecules Using Programmable Graphics Cards”, 2007
- ◇ **Dean’s Thesis Prize**, Harvard Extension School ALM in Information Technology, for George P. Stathis’ thesis “Aspect-Oriented Shade Trees”, 2005
- ◇ **Distinguished Teaching Performance**, Harvard Extension School, 2002, 2003, and 2004
- ◇ **Mitsubishi Electric President’s Award**, 2000
- ◇ **Innovation Awards and Top 100 Products Award** for VolumePro, 1999
- ◇ **The Jack Heller Award** for Outstanding Contribution to the CS Department, SUNY Stony Brook, 1994
- ◇ **Swiss Academy of Technical Sciences Fellowship**, 1992
- ◇ **ABB Switzerland Research Fellowship**, 1991 and 1992
- ◇ **U.S. Government Fulbright Scholarship**, 1991–1996

PEER-REVIEWED PUBLICATIONS

◇ ACM SIGGRAPH

1. Selective Region-based Photo Color Adjustment for Graphic Designs
N. Zhao, Q. Zheng, J. Liao, Y. Cao, H. Pfister, R. WH Lau, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 40, no. 4, 2021.
2. PhotoApp: Photorealistic Appearance Editing of Head Portraits
B.R. Mallikarjun, A. Tewari, A. Dib, T. Weyrich, B. Bickel, H-P Seidel, H. Pfister, W. Matusik, L. Chevallier, M. Elgharib, C. Theobalt, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 40, no. 4, 2021.
3. An Interaction-Aware, Perceptual Model for Non-Linear Elastic Objects
M. Piovarči, D. Levin, J. Rebello, D. Chen, R. Đurikovič, H. Pfister, W. Matusik, P. Didyk, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 35, no. 4, 2016.
4. Generalizing Wave Gestures from Sparse Examples for Real-Time Character Control
H. Rhodin, J. Tompkin, K. In Kim, E. De Aguiar, H. Pfister, H-P Seidel, C. Theobalt, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 34, no. 6, 2015.
5. Blind Video Temporal Consistency
N. Bonneel, J. Tompkin, K. Sunkavalli, D. Sun, S. Paris, H. Pfister, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 34, no. 6, 2015.
6. Computational Design of Metallophone Contact Sounds
G. Bharaj, D. Levin, J. Tompkin, Y. Fei, H. Pfister, W. Matusik, C. Zheng, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 34, no. 6, 2015.

7. Interactive Intrinsic Video Editing
N. Bonneel, K. Sunkavalli, J. Tompkin, D. Sun, S. Paris, and H. Pfister, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), vol. 33, no. 6, 2014.
8. Facial Performance Enhancement Using Dynamic Shape Space Analysis
Bermano AH, Bradley D, Beeler T, Zünd F, Nowrouzezahrai D, Baran I, Sorkine O, Pfister H, Sumner W, Bickel B, ACM Transactions on Graphics (Proc. ACM SIGGRAPH). 2014.
9. Example-Based Video Color Grading
Bonneel N, Sunkavalli K, Paris S, Pfister H., ACM Transactions on Graphics (Proc. ACM SIGGRAPH). 2013; 32(4).
10. Fabricating Articulated Characters from Skinned
Meshes.Baecher M, Bickel B, James DL, Pfister H., ACM Transactions on Graphics (Proc. ACM SIGGRAPH). 2012; Vol. 31.
11. Video Face Replacement
K. Dale, K. Sunkavalli, M.K. Johnson, D. Vlastic, W. Matusik, H. Pfister, ACM Transactions on Graphics (Proc. ACM SIGGRAPH Asia), Vol. 30, 2011
12. Design and Fabrication of Materials with Desired Deformation Behavior
B. Bickel, M. Baecher, M. Otaduy, H. R. Lee, W. Matusik, H. Pfister, M. Gross, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 29, No. 3, July 2010, pp. 63:1-63:10
13. Physical Reproduction of Materials with Specified Subsurface Scattering
M. Hasan, M. Fuchs, W. Matusik, H. Pfister, S. Rusinkiewicz, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 29, No. 3, July 2010, pp. 61:1-61:10
14. Multi-scale Image Harmonization
K. Sunkavalli, M. K. Johnson, W. Matusik, H. Pfister, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 29, No. 3, July 2010, pp. 125:1-125:10
15. Capture and Modeling of Non-Linear Heterogeneous Soft Tissue
B. Bickel, M. Baecher, M. Otaduy, W. Matusik, H. Pfister, M. Gross, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 28, No. 3, July 2009, pp. 89:1-89:9
16. Factored Time-Lapse Video
K. Sunkavalli, W. Matusik, H. Pfister, S. Rusinkiewicz, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 26, No. 3, July 2007, pp. 101-111
17. Multi-Scale Capture of Facial Geometry and Motion
B. Bickel, M. Botsch, R. Angst, W. Matusik, H. Pfister, M. Gross, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 26, No. 3, July 2007, pp. 33-41
18. Analysis of Human Faces Using a Measurement-Based Skin Reflectance Model
T. Weyrich, W. Matusik, H. Pfister, B. Bickel, C. Donner, C. Tu, J. McAndless, J. Lee, A. Ngan, H.W. Jensen, M. Gross, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 25, No. 3, July 2006, pp. 1013-1024
19. A Statistical Model for Synthesis of Detailed Facial Geometry
A. Golovinskiy, W. Matusik, H. Pfister, S. Rusinkiewicz, T. Funkhouser, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 25, No. 3, July 2006, pp. 1025-1034
20. Inverse Shade Trees for Non-Parametric Material Representation and Editing
J. Lawrence, A. Ben-Artzi, C. DeCoro, W. Matusik, H. Pfister, R. Ramamoorthi, S. Rusinkiewicz, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), July 2006, pp. 735-745
21. Defocus Video Matting
M. McGuire, W. Matusik, H. Pfister, J. Hughes and F. Durand, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 24, No. 3, August 2005, pp. 567-576
22. Face Transfer with Multilinear Models
D. Vlastic, M. Brand, H. Pfister, and J. Popovic, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 24, No. 3, August 2005, pp. 426-433

23. 3D TV: A Scalable System for Real-Time Acquisition, Transmission, and Autostereoscopic Display of Dynamic Scenes
W. Matusik and H. Pfister, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 23, No. 3, August 2004, pp. 811-821
24. A Data-Driven Reflectance Model
W. Matusik, H. Pfister, M. Brand, L. McMillan, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 22, No. 3, July 2003, pp. 759-770
25. Image-Based 3D Photography using Opacity Hulls
W. Matusik, H. Pfister, P. Beardsley, A. Ngan, R. Ziegler, L. McMillan, ACM Transactions on Graphics (Proc. ACM SIGGRAPH), Vol. 21, No. 3, July 2002, pp. 427-437
26. Surface Splatting
M. Zwicker, H. Pfister, J. van Baar, M. Gross, Proceedings of ACM SIGGRAPH, July 2001, pp. 371-378
27. Surfels—Surface Elements as Rendering Primitives
H. Pfister, M. Zwicker, J. van Baar, M. Gross, Proceedings of ACM SIGGRAPH, July 2000, pp. 335-342
28. The VolumePro Real-Time Ray-Casting System
H. Pfister, J. Hardenbergh, J. Knittel, H. Lauer, and L. Seiler, Proceedings of ACM SIGGRAPH, August 1999, pp. 251-260
29. Design Galleries: A General Approach to Setting Parameters for Computer Graphics and Animation
J. Marks, B. Andalman, P.A. Beardsley, W. Freeman, S. Gibson, J. Hodgins, T. Kang, B. Mirtich, H. Pfister, W. Ruml, K. Ryall, J. Seims, and S. Shieber, Proceedings of ACM SIGGRAPH, August 1997, pp. 389-400

◇ **Journals**

30. Genopathomic Profiling Identifies Signatures for Immunotherapy Response of Lung Adenocarcinoma via Confounder-Aware Representation Learning
Deng J, Yang J, Hou L, Wu J, He Y, Zhao M, Ni B, Wei D, Pfister H, Zhou C, Jiang T, She Y, Wu C, and Chen C. *iScience*, vol. 25, nbr. 11, 2022.
31. Sporthesia: Augmenting Sports Videos Using Natural Language
Chen Z, Yang Q, Xie X, Beyer J, Xia H, Wu Y, and Pfister H. *IEEE Transactions on Visualization and Computer Graphics*, 2022.
32. The Quest for Omnioculars: Embedded Visualization for Augmenting Basketball Game Viewing Experiences
Lin T, Chen Z, Yang Y, Chiappalupi D, Beyer J, and Pfister H. *IEEE Transactions on Visualization and Computer Graphics*, 2022. **IEEE VIS Best Paper Honorable Mention Award.**
33. Visinity: Visual Spatial Neighborhood Analysis for Multiplexed Tissue Imaging Data
Warchol S, Krueger R, Nirmal A, Gaglia G, Jessup J, Ritch C, Hoffer J, Muhlich J, Burger M, Jacks T, Santagata S, Sorger P, and Pfister H. *IEEE Transactions on Visualization and Computer Graphics*, 2022.
34. Interactive and Visual Prompt Engineering for Ad-hoc Task Adaptation with Large Language Models
Strobelt H, Webson A, Sanh V, Hoover B, Beyer J, Pfister H, and Rush A. *IEEE Transactions on Visualization and Computer Graphics*, 2022.
35. The Ball is in Our Court: Conducting Visualization Research with Sports Experts
Lin T, Chen Z, Beyer J, Wu Y, Pfister H, and Yang Y. *IEEE Computer Graphics and Applications*, 2022.
36. MedMNIST v2: A Large-Scale Lightweight Benchmark for 2D and 3D Biomedical Image Classification

- Yang J, Shi R, Wei D, Liu Z, Zhao L, Ke B, Pfister H, and Ni B. Nature Scientific Data, 2022.
37. Three approaches to facilitate invariant neurons and generalization to out-of-distribution orientations and illuminations
Sakai A, Sunagawa T, Madan S, Suzuki K, Katoh T, Kobashi H, Pfister H, Sinha P, Boix X, and Sasaki T. Neural Networks, vol. 155, 2022.
38. Edge-Colored Directed Subgraph Enumeration on the Connectome
Matejek B, Wei D, Chen T, Tsourakakis C, Mitzenmacher M, and Pfister H. Nature Scientific Reports, 2022.
39. A Survey of Visualization and Analysis in High-Resolution Connectomics
Beyer J, Troidl J, Boorboor S, Hadwiger M, Kaufman A, and Pfister H. Computer Graphics Forum, 2022.
40. Barrio: Customizable Spatial Neighborhood Analysis and Comparison for Nanoscale Brain Structures
Troidl J, Cali C, Gröller E, Pfister H, Hadwiger M, and Beyer J. Computer Graphics Forum, 2022.
41. Scalable Biologically-Aware Skeleton Generation for Connectomic Volumes
Matejek B, Franzmeyer T, Wei D, Wang X, Zhao J, Pal agyi K, Lichtman J, and Pfister H. IEEE Transactions on Medical Imaging, 2022.
42. When and how convolutional neural networks generalize to out-of-distribution categorym-dash;viewpoint combinations
Madan S, Henry T, Dozier J, Ho H, Bhandari N, Sasaki T, Durand F, Pfister H, Boix X. Nature Machine Intelligence, vol. 4, nbr. 2, 2022.
43. Labeling Out-of-View Objects in Immersive Analytics to Support Situated Visual Searching
Lin T, Yang Y, Beyer J, and Pfister H. IEEE Transactions on Visualization and Computer Graphics, 2021.
44. Narrative Online Guides for the Interpretation of Digital-Pathology Images and Tissue-Atlas Data
Rashid R, Chen Y, Hoffer J, Muhlich JL, Lin J, Krueger R, Pfister H, Mitchell R, Santagata S, and Sorger PK. Nature Biomedical Engineering, 2021.
45. GenNI: Human-AI Collaboration for Data-Backed Text Generation
Strobelt H, Kinley J, Krueger R, Beyer J, Pfister H, and Rush AM. IEEE Transactions on Visualization and Computer Graphics, 2021.
46. Visualization Design Sprints for Online and On-Campus Courses
J. Beyer, Y. Yang, and H. Pfister. IEEE Computer Graphics and Applications, 2021.
47. Scope2Screen: Focus+Context Techniques for Pathology TumorAssessment in Multivariate Image Data
Jessup J, Krueger R, Warchol S, Hoffer J, Muhlich J, Ritch CC, Gaglia G, Coy S, Chen Y, Lin J, Santagata S, Sorger PK, and Pfister H. IEEE Transactions on Visualization and Computer Graphics (IEEE VIS), 2021.
48. Exploring the Gap between Informal Mental and Formal Statistical Models
Pfister H, Wattenberg M, Beyer J, and Nobre C. Harvard Data Science Review, 2021.
49. VICE: Visual Identification and Correction of Neural Circuit Errors
Gonda F, Wang X, Beyer J, Hadwiger M, Lichtman J, and Pfister H. Computer Graphics Forum, 2021.
50. Visualizing and Interacting with Geospatial Networks: A Survey and Design Space
S. Schöttler, Y. Yang, H. Pfister, and B. Bach. Computer Graphics Forum, 2021.
51. Genome-wide enhancer maps link risk variants to disease genes
Joseph Nasser, Drew T. Bergman, Charles P. Fulco, Philine Guckelberger, Benjamin R. Doughty, Tejal A. Patwardhan, and others. Nature, 2021.

52. Minerva: a light-weight, narrative image browser for multiplexed tissue images
Hoffer J, Rashid R, Muhlich JL, Chen Y, Russell DPW, Ruokonen J, Krueger R, Pfister H, Santagata S, and Sorger PK. *Journal of open source software*, 2020.
53. Embodied Navigation in Immersive Abstract Data Visualization: Is Overview+Detail or Zooming Better for 3D Scatterplots?
Yalong Yang, Maxime Cordeil, Johanna Beyer, Tim Dwyer, Kim Marriott, and Hanspeter Pfister. *IEEE Transactions on Visualization and Computer Graphics*, 2020.
54. A Generic Framework and Library for Exploration of Small Multiples Through Interactive Piling
Lekschas F, Zhou X, Chen W, Gehlenborg N, Bach B, and Pfister H. *IEEE Transactions on Visualization and Computer Graphics*, 2020. **IEEE InfoVis 2020 Best Paper Honorable Mention Award.**
55. Objective Observer-Relative Flow Visualization in Curved Spaces for Unsteady 2D Geophysical Flows
Rautek P, Mlejnek M, Beyer J, Troidl J, Pfister H, Theußl T, and Hadwiger M. *IEEE Transactions on Visualization and Computer Graphics*, 2021. **IEEE SciVis 2020 Best Paper Award.**
56. TimeTubesX: A Query-Driven Visual Exploration of Observable, Photometric, and Polarimetric Behaviors of Blazars
N. Sawada, M. Uemura, J. Beyer, H. Pfister, and I. Fujishiro. *IEEE Transactions on Visualization and Computer Graphics*, 2020.
57. Peax: Interactive Visual Pattern Search in Sequential Data Using Unsupervised Deep Representation Learning
Lekschas F, Peterson B, Haehn D, Ma E, Gehlenborg N, and Pfister H. *Computer Graphics Forum*, 2020. **EuroVis 2020 Best Paper Award.**
58. The Human Tumor Atlas Network: Charting Tumor Transitions across Space and Time at Single-Cell Resolution
Orit Rozenblatt-Rosen, Aviv Regev, Philipp Oberdoerffer, Tal Nawy, Anna Hupalowska, Jennifer E. Rood, Orr Ashenberg, Ethan Cerami, Robert J. Coffey, Emek Demir, Li Ding, Edward D. Esplin and others. *Cell*, 2020.
59. Facetto: Combining Unsupervised and Supervised Learning for Hierarchical Phenotype Analysis in Multi-Channel Image Data
Krueger R, Beyer J, Jang W, Kim NW, Sokolov A, Sorger PK, and Pfister H, *IEEE Transactions on Visualization and Computer Graphics*, 2020.
60. FDive: Learning Relevance Models using Pattern-based Similarity Measures
Dennig F, Polk T, Lin Z, Schreck T, Pfister H, and Behrisch M, *IEEE Transactions on Visualization and Computer Graphics*, 2020.
61. Guiro: User-Guided Matrix Reordering
Behrisch M, Schreck T, and Pfister H, *IEEE Transactions on Visualization and Computer Graphics*, 2020.
62. Pattern-Driven Navigation in 2D Multiscale Visualizations with Scalable Insets
Lekschas F, Behrisch M, Bach B, Kerpedjiev P, Gehlenborg N, and Pfister H, *IEEE Transactions on Visualization and Computer Graphics*, 2020.
63. Visual Interaction with Deep Learning Models through Collaborative Semantic Inference
Gehrmann S, Strobel H, Krueger R, Pfister H, and Rush AM, *IEEE Transactions on Visualization and Computer Graphics*, 2020.
64. Bird’s-Eye - Large-Scale Visual Analytics of City Dynamics using Social Location Data
Krueger R, Han Q, Ivanov N, Mahtal S, Thom D, Pfister H, and Ertl T, *Computer Graphics Forum*, 2019.

65. Developmental Rewiring between Cerebellar Climbing Fibers and Purkinje Cells Begins with Positive Feedback Synapse Addition
Wilson AM, Schalek R, Suissa-Peleg A, Jones TR, Knowles-Barley S, Pfister H, and Lichtman JW, *Cell Reports*, Vol. 29, No. 9. 2019.
66. Culling for Extreme-Scale Segmentation Volumes: A Hybrid Deterministic and Probabilistic Approach
Beyer J, Mohammed H, Agus M, Al-Awami AK, Pfister H, and Hadwiger M, *IEEE Transactions on Visualization and Computer Graphics*, 2019.
67. DXR: A Toolkit for Building Immersive Data Visualizations
Sicat R, Li J, Choi J, Cordeil M, Jeong W, Bach B, and Pfister H, *IEEE Transactions on Visualization and Computer Graphics*, 2019.
68. Evaluating 'Graphical Perception' with CNNs
Haehn D, Tompkin J, and Pfister H, *IEEE Transactions on Visualization and Computer Graphics*, 2019.
69. Seq2Seq-Vis: A Visual Debugging Tool for Sequence-to-Sequence Models
Strobelt H, Gehrmann S, Behrisch M, Perer A, Pfister H, and Rush AM, *IEEE Transactions on Visualization and Computer Graphics*, 2019. **IEEE VIS VAST 2018 Best Paper Honorable Mention.**
70. Commercial Visual Analytics Systems-Advances in the Big Data Analytics Field
M. Behrisch, D. Streeb, F. Stoffel, D. Seebacher, B. Matejek, S. H. Weber, S. Mittelstaedt, H. Pfister, and D. Keim, *IEEE Transactions on Visualization and Computer Graphics*, 2019.
71. HiGlass: Web-based visual exploration and analysis of genome interaction maps
Kerpedjiev, Peter and Abdennur, Nezar and Lekschas, Fritz and McCallum, Chuck and Dinkla, Kasper and Strobelt, Hendrik and Luber, Jacob M. and Ouellette, Scott B. and Azhir, Alaleh and Kumar, Nikhil and Hwang, Jeewon and Lee, Soohyun and Alver, Burak H. and Pfister, Hanspeter and Mirny, Leonid A. and Park, Peter J. and Gehlenborg, Nils, *Genome Biology*, Vol. 19, No. 1, 2018.
72. Quality Metrics for Information Visualization
Behrisch, Michael and Blumenschein, Michael and Kim, Nam Wook and Shao, Lin and El-Assady, Mennatallah and Fuchs, Johannes and Seebacher, Daniel and Diehl, Alexandra and Brandes, Ulrik and Pfister, Hanspeter and Schreck, Tobias and Weiskopf, Daniel and Keim, Daniel A., *Computer Graphics Forum*, Vol. 37, No. 3, 2018.
73. Abstractocyte: A Visual Tool for Exploring Nanoscale Astroglial Cells
H. Mohammed, A. K. Al-Awami, J. Beyer, C. Cali, P. Magistretti, H. Pfister, and M. Hadwiger, *IEEE Transactions on Visualization and Computer Graphics*, vol. 24, 2018.
74. HiPiler: Visual Exploration Of Large Genome Interaction Matrices With Interactive Small Multiples
F. Lekschas, B. Bach, P. Kerpedjiev, N. Gehlenborg, and H. Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 24, 2018.
75. LSTMVis: A Tool for Visual Analysis of Hidden State Dynamics in Recurrent Neural Networks
H. Strobelt, S. Gehrmann, H. Pfister, and A. M. Rush, *IEEE Transactions on Visualization and Computer Graphics*, vol. 24, 2018.
76. SparseLeap: Efficient Empty Space Skipping for Large-Scale Volume Rendering
M. Hadwiger, A. K. Al-Awami, J. Beyer, M. Agus, and H. Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 24, 2018.
77. The Hologram in My Hand: How Effective is Interactive Exploration of 3D Visualizations in Immersive Tangible Augmented Reality?
B. Bach, R. Sicat, J. Beyer, M. Cordeil, and H. Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 24, 2018.

78. Visualizing Nonlinear Narratives with Story Curves
N. W. Kim, B. Bach, H. Im, S. Schriber, M. Gross, and H. Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 24, 2018.
79. BubbleView: An Interface for Crowdsourcing Image Importance Maps and Tracking Visual Attention
N. W. Kim, Z. Bylinskii, M. Borkin, K. Gajos, A. Oliva, F. Durand, and H. Pfister, *ACM Transactions on Computer-Human Interaction (TOCHI)*, vol. 24, no. 5, pp. 36, 2017.
80. Scalable Interactive Visualization for Connectomics
D. Haehn, J. Hoffer, B. Matejek, A. Suissa-Peleg, A. K. Al-Awami, L. Kamensky, F. Gonda, E. Meng, W. Zhang, R. Schalek, A. Wilson, T. Parag, J. Beyer, V. Kaynig, T. R. Jones, J. Tompkin, M. Hadwiger, J. W. Lichtman, and H. Pfister, *Informatics*, vol. 4, no. 3, 2017.
81. The 4D Nucleome Project
J. Dekker, A. S. Belmont, M. Guttman, V. O. Leshyk, J. T. Lis, S. Lomvardas, L. Mirny, C. O Shea, P. Park, B. Ren, J. Politz, J. Shendure, S. Zhong, Sheng and the 4D Nucleome Network, *Nature*, vol. 549, no. 7671, pp. 219–226, 2017.
82. What eye movement and memory experiments can tell us about the human perception of visualizations
Z. Bylinskii, M. Borkin, N.-W. Kim, H. Pfister, and A. Oliva, *Journal of Vision*, vol. 17, no. 10, pp. 532–532, 2017.
83. Consistent Video Filtering for Camera Arrays
Nicolas Bonneel, James Tompkin, Deqing Sun, Oliver Wang, Kalyan Sunkavalli, Sylvain Paris, Hanspeter Pfister, *Computer Graphics Forum*, vol. 36, no. 2, pp. 397–407, May 2017.
84. The Emerging Genre of Data Comics
Benjamin Bach, Nathalie Henry Riche, Sheelagh Carpendale, Hanspeter Pfister, *IEEE Computer Graphics and Applications*, vol. 38, no. 3, pp. 6–13, 2017.
85. Screenit: Visual Analysis of Cellular Screens
Kasper Dinkla, Hendrik Strobelt, Bryan Genest, Stephan Reiling, Mark Borowsky, Hanspeter Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 23, no. 1, pp. 591–600, 2017.
86. booc.io: An Education System with Hierarchical Concept Maps and Dynamic Non-linear Learning Plans
Michail Schwab, Hendrik Strobelt, James Tompkin, Colin Fredericks, Connor Huff, Dana Higgins, Anton Strezhnev, Mayya Komisarchik, Gary King, Hanspeter Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 23, no. 1, pp. 571–580, 2017.
87. Data-Driven Guides: Supporting Expressive Design for Information Graphics
Nam Wook Kim, Eston Schweickart, Zhicheng Liu, Mira Dontcheva, Wilmot Li, Jovan Popovic, Hanspeter Pfister, *IEEE Transactions on Visualization and Computer Graphics*, vol. 23, no. 1, pp. 491–500, 2017.
88. Imaging a 1 mm³ Volume of Rat Cortex Using a MultiBeam SEM
R Schalek, D Lee, N Kasthuri, A Peleg, T Jones, V Kaynig, D Haehn, H Pfister, D Cox, JW Lichtman, *Microscopy and Microanalysis*, vol. 22, no. S3, pp. 582–583, 2016.
89. Automatic Neural Reconstruction from Petavoxel of Electron Microscopy Data
Adi Suissa-Peleg, Daniel Haehn, Seymour Knowles-Barley, Verena Kaynig, Thouis R Jones, Alyssa Wilson, Richard Schalek, Jeffery W Lichtman, Hanspeter Pfister, *Microscopy and Microanalysis*, vol. 22, no. S3, pp. 536–537, 2016.
90. Guidelines for Effective Usage of Text Highlighting Techniques
Hendrik Strobelt, Daniela Oelke, Bum Chul Kwon, Tobias Schreck, Hanspeter Pfister,

- IEEE Transactions on Visualization and Computer Graphics (InfoVis '15), vol. 22, no. 1, pp. 489-498, 2016.
91. NeuroBlocks—Visual Tracking of Segmentation and Proofreading for Large Connectomics Projects
Ali K Ai-Awami, Johanna Beyer, Daniel Haehn, Narayanan Kasthuri, Jeff W Lichtman, Hanspeter Pfister, Markus Hadwiger, IEEE Transactions on Visualization and Computer Graphics (SciVis '15), vol. 22, no. 1, pp. 738-746, 2016.
92. Beyond Memorability: Visualization Recognition and Recall
Michelle A Borkin, Zoya Bylinskii, Nam Wook Kim, Constance May Bainbridge, Chelsea S Yeh, Daniel Borkin, Hanspeter Pfister, Aude Oliva, IEEE Transactions on Visualization and Computer Graphics (InfoVis '15), vol. 22, no. 1, pp. 519-528, 2016.
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150. iBall: Augmenting Basketball Videos with Gaze-moderated Embedded Visualizations
Chen Z, Yang Q, Shan J, Lin T, Beyer J, Xia H, and Pfister H. Conference on Human Factors in Computing Systems (CHI), 2023.
151. Learning Vector Quantized Shape Code for Amodal Blastomere Instance Segmentation
Jang W-D, Wei D, Zhang X, Leahy B, Yang H, Tompkin J, Ben-Yosef D, Needleman D, and Pfister H. IEEE International Symposium on Biomedical Imaging (ISBI), 2023.
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155. MST++: Multi-stage Spectral-wise Transformer for Efficient Spectral Reconstruction
Cai Y, Lin J, Lin Z, Wang H, Zhang Y, Pfister H, Timofte R, and Van Gool L. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2022. **Winner of the NITRE 2022 Challenge on Spectral Reconstruction from RGB.**
156. Texture-based Error Analysis for Image Super-Resolution
Abdel Magid S, Lin Z, Wei D, Zhang Y, Gu J, and Pfister H. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
157. The Pattern is in the Details: An Evaluation of Interaction Techniques for Locating, Searching, and Contextualizing Details in Multivariate Matrix Visualizations
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161. Developmental Stage Classification of Embryos Using Two-Stream Neural Network with Linear-Chain Conditional Random Field
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162. Asymmetric 3D Context Fusion for Universal Lesion Detection
J. Yang, Y. He, K. Kuang, Z. Lin, H. Pfister, and B. Ni. International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2021.
163. Context Reasoning Attention Network for Image Super-Resolution
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164. RibSeg Dataset and Strong Point Cloud Baselines for Rib Segmentation from CT Scans
J. Yang, S. Gu, D. Wei, H. Pfister, and B. Ni. International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2021.
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168. Ask Me or Tell Me? Enhancing the Effectiveness of Crowdsourced Design Feedback
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169. Towards an Understanding of Situated AR Visualization for Basketball Free-Throw Training
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170. reVISit: Looking Under the Hood of Interactive Visualization Studies
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171. Parsing and Summarizing Infographics with Synthetically Trained Icon Detection
Madan S, Bylinskii Z, Nobre C, Tancik M, Recasens A, Zhong K, Alsheikh S, Oliva A, Durand F, and Pfister H. IEEE Pacific Visualization Symposium (PacificVis), 2021.
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179. SportsXR - Immersive Analytics in Sports
T. Lin, Y. Yang, J. Beyer, and H. Pfister. 4th Workshop on Immersive Analytics: Envisioning Future Productivity for Immersive Analytics at ACM CHI, 2020.
180. Exploring Visual Information Flows in Infographics
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181. ICONATE: Automatic Compound Icon Generation and Ideation
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184. Biologically-Constrained Graphs for Global Connectomics Reconstruction
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185. DataSelfie: Empowering People to Design Personalized Visuals to Represent Their Data
Kim NW, Im H, Riche NH, Wang A, Gajos KZ, and Pfister H, ACM CHI Conference, 2019.
186. DataToon: Drawing Dynamic Network Comics With Pen + Touch Interaction
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187. Visual Pattern-Driven Exploration of Big Data
Behrisch M, Krüger R, Lekschas F, Schreck T, Gehlenborg N, and Pfister H, IEEE Symposium on Big Data Visual Analytics, 2018.
188. Efficient Correction for EM Connectomics with Skeletal Representation
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189. Detecting Synapse Location & Connectivity by Signed Proximity Estimation and Pruning with Deep Nets

- Toufiq Parag, Daniel Berger, Lee Kamensky, Benedikt Staffler, Donglai Wei, Moritz Helmstaedter, Jeff W. Lichtman, and Hanspeter Pfister, European Conference on Computer Vision - Bioimage Computing Workshop (ECCVw), 2018.
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 191. Guided Proofreading of Automatic Segmentations for Connectomics
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 192. Drawing into the AR-CANVAS: Designing Embedded Visualizations for Augmented Reality
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 193. Compresso: Efficient Compression of Segmentation Data For Connectomics
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 194. Learning Visual Importance for Graphic Designs and Data Visualizations
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 195. Learning to Super-Resolve Blurry Face and Text Images
X. Xu, D. Sun, Deqing, J. Pan, Y. Zhang, H. Pfister, and M.-H. Yang, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 251–260, 2017.
 196. Personalizing Gesture Recognition Using Hierarchical Bayesian Neural Networks
A. Joshi, S. Ghosh, M. Betke, S. Sclaroff, and H. Pfister, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.
 197. Criteria Sliders: Learning Continuous Database Criteria via Interactive Ranking
J. Tompkin, K. I. Kim, H. Pfister, and C. Theobalt, Proceedings of the British Machine Vision Conference (BMVC), **Spotlight Presentation (10% Acceptance)**, 2017.
 198. ICON: An Interactive Approach to Train Deep Neural Networks for Segmentation of Neuronal Structures
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 199. Piggybacking Robots: Human-Robot Overtrust in University Dormitory Security
Serena Booth, James Tompkin, Hanspeter Pfister, Jim Waldo, Krzysztof Gajos, Radhika Nagpal, ACM/IEEE International Conference on Human-Robot Interaction, pp. 426-434, March 2017.
 200. Interactive Multicut Video Segmentation
Evgeny Levinkov, James Tompkin, Nicolas Bonneel, Steffen Kirchhoff, Bjoern Andres, Hanspeter Pfister, Pacific Graphics, October 2016.
 201. Joint 5D Pen Input for Light Field Displays
James Tompkin, Samuel Muff, James McCann, Hanspeter Pfister, Jan Kautz, Marc Alexa, Wojciech Matusik, ACM Symposium on User Interface Software & Technology (UIST), pp. 637-647, 2015.
 202. Computational Design of Walking Automata
Gaurav Bharaj, Stelian Coros, Bernhard Thomaszewski, James Tompkin, Bernd Bickel, Hanspeter Pfister, ACM SIGGRAPH/Eurographics Symposium on Computer Animation, pp. 93-100, 2015.

203. A Crowdsourced Alternative to Eye-tracking for Visualization Understanding
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TEACHING

- ◇ **CS171 / CSCI E-64 “Visualization”, Harvard College & Harvard Extension School, Spring 2008–**
<http://cs171.org/>
Introduction to key design principles and techniques for visualizing data. Covers data and image models, visual perception, interaction techniques, animation, tools from various fields, and programming of interactive visualizations.
- ◇ **CS10 / STAT10 “Elements of Data Science”, Harvard College, Spring 2020–2022**
<http://datascience10.org/>
Data science combines data, statistical analysis, and computation to gain insights and make useful inferences and predictions. This course takes a holistic approach to helping students understand the key factors involved, from data collection and exploratory data analysis to modeling, evaluation, and communication of results.
- ◇ **CS109 / CSCI E-109 “Data Science”, Harvard College & Harvard Extension School, Fall 2013–2018**
<http://cs109.org/>
This class is about learning from data, in order to gain useful predictions and insights. Separating signal from noise presents many computational and inferential challenges, which we approach from a perspective at the interface of computer science and statistics.
- ◇ **CS205 / CSCI E-205 “Computing Foundations of Computational Science”, Harvard College & Harvard Extension School, Fall 2011–2013**
<http://cs205.org/>

New applications course highlighting the use of computers in solving scientific problems. Covers fundamental computer science concepts such as computer architectures, data structures, algorithms, and parallel computing.

- ◇ **CS175 / CSCI E-234 “Introduction to Computer Graphics”, Harvard College & Harvard Extension School,
Fall 1999–2006, Spring 2007, Fall 2010**

<http://cs175.org/>

Introduction to essential computer graphics concepts and writing of computer graphics applications in OpenGL. Covers graphics processor unit (GPU) programming using the OpenGL Shading Language (GLSL).

- ◇ **CS264 / CSCI E-292 “Massively Parallel Computing”, Harvard College & Harvard Extension School,
Fall 2009**

<http://cs264.org/>

Introduction to concepts of programming massively parallel computing resources. Covers parallel programming models, GPU programming with CUDA, cluster computing with MPI, and cloud computing with MapReduce using Hadoop and Amazon’s EC2.

- ◇ **CSCI E-236 “Advanced Topics in Computer Graphics”, Harvard Extension School,
Spring 2004–2005**

In-depth study of active research topics in computer graphics. Spring 2004: GPU programming; Spring 2005: Data Visualization.

- ◇ **INDR E-399 “Independent Study in Advanced Computer Graphics”, Harvard Extension School,
Spring 2003**

Independent study course to discuss concepts and methods of image-based modeling and rendering.

- ◇ **CSCI E-235 “Advanced Computer Graphics”, Harvard Extension School,
Spring 2002**

Introduction to several advanced concepts and methods of three-dimensional computer graphics.

ADVISING

- ◇ **Current Ph.D. Students**

- Spandan Madan, G4
- Salma Abdel Magid, G4
- Tica Lin, G4
- Jakob Troidl, G2
- Simon Warchol, G2
- Yicong Li, G1

- ◇ **Past Ph.D. Students**

- Felix Gonda
- Fritz Lekschas
- Brian Matejek
- Zudi Lin
- Daniel Haehn, Assistant Professor of Computer Science, University of Massachusetts Boston
- Nam Wook Kim, Assistant Professor of Computer Science, Boston College
- Gaurav Bahraj, Research Scientist, Technicolor

- Michelle Borkin, Assistant Professor of Computer Science, Northeastern University
- Moritz Bächer, Disney Research Zürich
- Amanda Randles, Assistant Professor of Biomedical Engineering, Duke University
- Steffen Kirchhoff, Data Scientist
- Kalyan Sunkavalli, Adobe Research
- Kevin Dale, Facebook
- Amelio Vazquez-Reina, Dataxu

◇ **Current Post-Doctoral Fellows**

- Wanhua Li, 2022-
- Siyu Huang, 2021-
- Junsik Kim, 2021-
- Zhutian Chen, 2021-
- Robert Krueger, 2018-
- Johanna Beyer, 2013-

◇ **Past Post-Doctoral Fellows**

- Carolina Nobre, 2020-2022, Assistant Professor, University of Toronto, Canada
- Donglai Wei, 2017-2022, Assistant Professor, Boston College
- Won-Dong Jang, 2018-2022, Netflix
- Yalong Yang, 2019-2022, Assistant Professor, Georgia Institute of Technology
- Adi Peleg, 2013-2020, Google
- Michael Behrisch, 2017-2019, Assistant Professor, University of Utrecht, The Netherlands
- Ronell Sicat, 2015-2019, King-Abdullah University of Science and Technology, Saudi Arabia
- Toufiq Parag, 2016-2018, Cold Spring Harbor Laboratories
- Verena Kaynig-Fittkau, 2011-2017, Adobe, Boston, MA
- Benjamin Bach, 2017, Assistant Professor at The University of Edinburgh
- Ray Thouis Jones, 2012-2017, Broad Institute, Cambridge, MA
- Hendrik Strobelt, 2014-2017, IBM Research, Cambridge, MA
- James Tompkin, 2014-2016, Assistant Professor in Computer Science, Brown University
- Kasper Dinkla, 2015-16, Software Developer at ASML, The Netherlands
- Alexander Lex, 2012-2015, Assistant Professor in Computer Science, University of Utah
- Deqing Sun, 2012-2015, Nvidia Research
- Seymour Knowles-Barley, 2012-2015, Google
- Björn Andres, 2012-2014, Junior Group Leader MPI Heidelberg
- Nicolas Bonneel, 2012-2014, CNRS France
- Ritwik Kumar, 2010-2011, Apple
- Won-Ki Jeong, 2008-2011, Assistant Professor in Computer Science, Ulsan National Institute of Science and Technology, Korea
- Milos Hasan, 2009-2010, Autodesk
- Miriah Meyer, CI Fellow, 2007-2011, Assistant Professor in Computer Science, University of Utah

◇ **Master Students, Harvard Extension School**

- Nancy R. Aulet (2012), “Sparse Interactive Training Data and Multiclass Labeling for Improving the Automatic Segmentation of SEM Brain Tissue Images”
- Larry Kyrala (2011), “FloTree: A Visualization of the Tree of Life as a Dynamic Process”
- Michael Tracey Zellman (2010), “Creating and Visualizing Congressional Districts”, **Dean’s Price for best ALM thesis in Information Technology**
- Manish Kumar (2008), “Multi-View Factored Time-Lapse Video”, **Dean’s Price for best ALM thesis in Information Technology**
- Chungling Wang (2008), “Graphical Engine of Point-Based Rendering For Java Embedded Mobile Devices”
- Alex Onik (2008), “Investigation of a Parallel Iso-Surface Extraction and Rendering System on a PC Cluster”
- Joseph Weber (2007), “ProteinShader: Cartoon-Type Visualization of Macromolecules Using Programmable Graphics Cards”, **Dean’s Price for best ALM thesis in Information Technology**
- Sarah Block (2007), “Zaidaco: A Tool for Interactive Display of Time-Varying Global Geophysical Fields”
- John Andrew Sipple (2007), “FreeView3D: A Point-based, 3D Video Application with Image-Based Rendering”
- Morteza Karyar (2006), “Image and Video Texture-based Segmentation Using Spectral Clustering”
- John A. Sogade (2006), “Online Visualization of Moon Formation using Dynamic Particle Systems”
- George Stathis (2005), “Aspect-Oriented Shade Trees”, **Dean’s Price for best ALM thesis in Information Technology**
- Jose de Corral (2005), “Using Three Dimensional Graphics for Mass Spectrometry Data Visualization”
- Kevin Blenkhorn (2004), “Rabble: A Tool for Creating and Choreographing Scripted Crowd Simulations for Special Effects in Movies”

◊ **Ph.D. Committees**

- Chit-Kwan Lin, Computer Science, Prof. H.T. Kung, SEAS
- Zak Stone, Electrical Engineering, Prof. Todd Zickler, SEAS
- Robert Schneider, Engineering Sciences, Prof. Robert Howe, SEAS
- Bern Bickel (2010), “Measurement-Based Modeling and Fabrication of Human Faces and Deformable Objects,” Prof. Markus Gross, ETH Zürich, Switzerland
- Jinho Lee (2005), “Synthesis and Analysis of Human Faces Using Multi-View, Multi-Illumination Image Ensembles”, Prof. Raghu Machiraju, The Ohio State University
- Morgan McGuire (2005), “Computational Videography with a Single-Axis, Multi-Parameter Lens Camera”, Prof. John F. Hughes, Brown University
- Matthias Zwicker (2004), “Continuous Reconstruction, Rendering, and Editing of Point-Sampled Surfaces”, Prof. Markus Gross, ETH Zürich, Switzerland
- Tulika Mitra (2000), “Mesh Compression and Its Hardware / Software Applications”, Prof. Tzi-Cker Chiueh, SUNY Stony Brook, NY
- Harvey Ray (2000), “Real-Time Ray Casting Architecture for Volume Graphics and Volume Rendering”, Prof. Deborah Silver, Rutgers University, NY

◊ **M.Sc. Committees**

- Amy (Zhao) Yu (2013), “The Observatory of Global Culture: Mapping the Patterns Of Cultural Development”, Prof. César Hidalgo, MIT

- Bernd Bickel (2005), “A Measurement-Based Skin Reflectance Model”, Prof. Markus Gross, ETH Zürich, Switzerland
- Michael Breitenstein (2005), “Pose Estimation for Face Recognition using Stereo Cameras”, Prof. Markus Gross, ETH Zürich, Switzerland
- Jeroen van Baar (1999), Prof. Fritz Post, Technical University Delft, The Netherlands
- Collin Oosterbaan (1999), Prof. Fritz Post, Technical University Delft, The Netherlands

◊ **Student Interns (Partial List)**

- Kalli Retzepi (2017), MIT Media Lab
- Xuewen Zhang (2017)
- Xiangyu Wei (2016)
- Jinshan Pan (2016)
- Jinlin Liu (2016)
- Fangyang Shen (2016)
- John Hoffer (2015-2018), Harvard Medical School
- Mike Roberts (2014-15), Stanford University
- Christian Ledergerber (2007-08), ETH Zürich
- Moritz Baecher (2007-08), ETH Zürich
- Kevin Dale (2007), University of Virginia
- Kalyan Sunkavalli (2006/07), Columbia University
- Roland Angst (2006), ETH Zürich
- Marcel Germann (2006), ETH Zürich
- Nigel Morris (2006), University of Toronto
- Bernd Bickel (2005/06), ETH Zürich
- Michael Breitenstein (2005/06), ETH Zürich
- Tim Weyrich (2003-06), ETH Zürich
- Alex Golovinski (2005), Princeton University
- Neel Yoshi (2005), UC San Diego
- Yang Wang (2005), SUNY Stony Brook
- Jason Lawrence (2004), Princeton University
- Morgan McGuire (2004), Brown University
- Thomas Annen (2004), MPI Saarbrücken
- Daniel Vlasic (2003-04), MIT
- Liu Ren (2003/04), CMU
- Addy Ngan (2002-04), MIT
- Chris Buehler (2002), MIT
- E. Scott Larsen (2003), UNC Chapel Hill
- Matt Loper (2003/04), Brown University
- Elena Jakubiak (2003), Tufts University
- Jinho Lee (2003-2005), The Ohio State University
- Matthew Koichi Grimes (2001), Georgia Institute of Technology
- Remo Ziegler (2001), ETH Zürich
- Wojciech Matusik (2000-2005), MIT

- Josh Steinhurst (2000), UNC Chapel Hill
- Matthias Zwicker (1999-2001), ETH Zürich
- Erwin Janssen (1999), Delft University of Technology, The Netherlands
- Kevin Kreeger (1999), SUNY Stony Brook
- Vamsidhar Juvvigunta (1999), Mississippi State University
- Emmanuelle Bourrat (1999), France
- Jeroen van Baar (1999), Delft University of Technology, The Netherlands
- Collin Oosterbaan (1999), Delft University of Technology, The Netherlands

UNIVERSITY AND DEPARTMENTAL SERVICES

◊ Committees

- Data Science Initiative, 2015-
- Data Science Education Committee, 2015-
- Director of Graduate Studies for Computational Science and Engineering, 2013-2017
- Provostial Academic Leadership Forum, 2015-2016
- Harvard CUDA Center of Excellence, Co-Chair, 2009-2016
- SEAS Computing Review Committee, Chair, 2015-2016
- FAS Docket Committee, 2012-2013
- FAS Committee on Graduate Education, 2011-2012
- FAS Faculty Council, elected member, 2011-2014
- SEAS Committee on Higher Degrees (CHD) for CS/AM, 2011-2014
- SEAS Institute for Applied Computational Science Curriculum Advisory Committee, 2010-2007
- SEAS Computing Advisory Group, 2008-2010
- SEAS Computer Science Graduate and M.Sc. Curriculum Review Committee, 2010
- Organizer, SEAS Distinguished Lectures in Computational Science, 2010
- SEAS January Term Advisory Committee, 2010
- Board of Freshmen Advisors, 2007-present
- Radcliffe Gendered Space Conference Planning Committee, 2009
- Radcliffe Fellowship Review Committee, 2009-2010
- Computer Science Faculty Search Committee, 2008-2009
- IIC Director of Visual Computing, 2007-2009

PROFESSIONAL ACTIVITIES

◊ National Committees

- Panelist on DOE ASCR review boards, 2010-
- Panelist on NSF CCF and CISE review boards, 2005-
- Director, ACM SIGGRAPH Executive Committee, 2020-
- Director, IEEE Computer Society Visualization and Graphics Technical Committee, 2001-
- Elected Chair of the IEEE Computer Society Visualization and Graphics Technical Committee (VGTC), 2004–2008
<http://tab.computer.org/vgtc/>

- Executive Committee Member of the IEEE Computer Society Technical Activities Board (TAB), 2005–2008
 - Member of the IEEE Computer Society Conferences and Tutorials Board (C & T), 2006–2008
 - Co-editor of the 2006 NIH/NSF Visualization Research Challenges Report, sponsored by the National Institute of Health (NIH) and the National Science Foundation (NSF)
<http://tab.computer.org/vgtc/vrc/>
 - 1998 Joint Working Group on Computer-Aided Diagnosis and 3-D Image Analysis and Display, sponsored by the U.S. Public Health Service's Office on Women's Health and the National Cancer Institute, Boston, MA
- ◇ **Advisory Boards**
- Advisory Board of the Computer Science Department at SUNY Stony Brook, Stony Brook, NY, 2003–
 - Technical Advisory Board of iMedia, the International Certificate Program for New Media, Providence, RI, 2003–2007
- ◇ **Editorial Boards**
- Associate Editor, ACM Transactions on Graphics, 2009–2014
 - Associate Editor, Journal of Graphics Tools (www.jgt.com), 2005–2014
 - Associate Editor, IEEE Transactions on Visualization and Computer Graphics (TVCG), 2002–2005
 - Guest Editor, Special Issue of The Visual Computer 22(6), 2006
 - Guest Editor, Special Issue on “ Point-Based Computer Graphics” of IEEE Computer Graphics and Applications, 24(4), 2004
- ◇ **Conference Committees**
- Papers chair, ACM SIGGRAPH, 2012
 - Papers co-chair, EuroVis, 2011–2012
 - Papers co-chair, IEEE Visualization 2009–2010
 - Chair, Sketches Program, ACM SIGGRAPH 2006
 - Papers co-chair, ACM Symposium on Interactive 3D Graphics and Games, 2005
 - Papers co-chair, Computer Graphics International, 2005
 - Co-chair, IEEE / Eurographics Symposium on Point-Based Graphics, 2004
 - Co-chair, ACM SIGGRAPH / Eurographics Graphics Hardware, 2001 / 2003
 - General Chair, IEEE Visualization Conference, 2002
 - Program co-chair, IEEE Visualization, 2001
 - Program co-chair, ACM SIGGRAPH / Eurographics Graphics Hardware, 1998 / 2000
 - Papers co-chair, ACM SIGGRAPH / Eurographics Graphics Hardware, 1999
 - Panels co-chair, IEEE Visualization, 1999
- ◇ **International Papers and Program Committees**
- ACM SIGGRAPH, 2001–2002, 2004–2005, 2007, 2009, 2010–2011, 2021
 - ACM SIGGRAPH Asia, 2008, 2011
 - IEEE Visualization (VIS) 1998–2000, 2003–04, 2019–2021
 - IEEE Virtual Reality (VR), 2020
 - Medical Image Computing and Computer Assisted Interventions (MICCAI), 2019
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019, 2021–2022

- ACM Conference on Human Factors in Computing Systems (CHI), 2020
- IEEE International Symposium on Mixed and Augmented Reality (ISMAR), 2021
- IEEE/Eurographics Symposium on Visualization (EuroVis) 2000, 2001, 2020
- ACM Symposium on User Interface Software and Technology (UIST), 2019
- MICCAI Workshop on High-Performance Medical Image Computing for Image-Assisted Clinical Intervention and Decision-Making, 2010
- ACM SIGGRAPH Sketches, 2005
- Eurographics 2000-2004, 2006
- Vision, Modeling, and Visualization, 2004
- Advanced 3D Imaging for Safety and Security Workshop, 2005
- Graphics Interface, 2002-03
- Symposium on Point Based Graphics, 2004-2006
- International Workshop on Volume Graphics, 2001, 2003
- ACM / IEEE Symposium on Volume Visualization 1998, 2000, 2002, 2004
- Spring Conference on Computer Graphics, 1999-2001
- ACM SIGGRAPH / Eurographics Graphics Hardware 1996-98, 2005-06
- ◇ **Journal Reviewing**
 - ACM Transactions on Graphics
 - IEEE Transactions on Visualization and Computer Graphics
 - IEEE Transactions on Pattern Analysis and Machine Intelligence
 - IEEE Transactions on Medical Imaging
 - IEEE Micro
 - IEEE Computer Graphics & Applications
 - Computers & Graphics
 - The Visual Computer
 - Journal of Graphics Tools
 - Book reviews for Prentice Hall, Charles River Media, Springer
- ◇ **Associations**
 - ACM Fellow and member of ACM SIGGRAPH
 - Senior member of the IEEE and IEEE Computer Society
 - Member of the Eurographics Association
- ◇ **Other**
 - Student Volunteer, ACM SIGGRAPH 1994-96. IEEE Visualization 1992-95
 - Co-founder of the Computer Science Graduate Research Conference, SUNY Stony Brook, 1993-1995

LECTURES AND PUBLICITY

- ◇ **Invited Keynote Presentations and Distinguished Lectures**
 - Towards Visually Interactive Neural Probabilistic Models, Keynote, Symposium on Visual Data Science (VDS), 2021
 - Towards Visually Interactive Neural Probabilistic Models, Khoury College Distinguished Lecture, Northeastern University, 2019

- Visual Computing in Connectomics, Keynote, Imaging Workshop, KAUST Conference on Computational Imaging and Visualization, 2016, Saudi Arabia
- High-Throughput Science, Keynote, GPU Technology Conference, 2009, San Jose, CA
- Quo Vadis, VolVis? Keynote, IEEE Volume Visualization Symposium 2004, Austin, TX
- Data-Driven Computer Graphics, Keynote, Pacific Graphics 2003, Canmore, Canada
- Data-Driven Computer Graphics, ACCAD Distinguished Lecture, The Ohio State University, 2004
- Data-Driven Visualization, Keynote, Eurographics / IEEE Symposium on Visualization 2001, Ascona, Switzerland
- Real-Time Volume Visualization with VolumePro, Keynote, Japanese Visualization Conference 1999, Tokyo, Japan
- Real-Time Volume Visualization with VolumePro, Keynote, International Workshop on Volume Graphics 1999, Swansea, United Kingdom

◇ **Courses and Workshops**

- IEEE VisWeek 2010, Large-Scale Visual Analytics in Biology, in “Extreme Scale Visual Analytics,” one day workshop, H. Pfister and L. Wilkinson (organizers and speakers), P. McCormick, H. Park, and D. Ebert (organizers).
- IEEE International Symposium on Biomedical Imaging, General Purpose Computing using Graphics Hardware, in “High Performance Medical Image Computing”, D. Blezek, H. Pfister, and E. Borisch (organizers and speakers).
- SIGGRAPH 2004, Acquisition of Point-Sampled Geometry and Appearance, in “Point-Based Computer Graphics”, M. Gross and H. Pfister (organizers and speakers), M. Alexa, M. Pauly, M. Stamminger, M. Zwicker.
- Eurographics 2003, Acquisition of Point-Sampled Geometry and Appearance, in “Point-Based Computer Graphics”, M. Gross and H. Pfister (organizers and speakers), M. Alexa, M. Pauly, M. Stamminger, M. Zwicker.
- Eurographics 2002, Acquisition of Point-Sampled Geometry and Appearance, in “Point-Based Computer Graphics”, M. Gross and H. Pfister (organizers and speakers), M. Alexa, M. Pauly, M. Stamminger, M. Zwicker.
- SIGGRAPH 2002, Image-Based 3D Photography, in “Image-Based Modeling”, R. Grzeszczuk (organizer and speaker), J.-Y. Bouguet, L. McMillan, M. Pollefeys, K. Nishino, H. Pfister.
- Visualization 2001, Point-Based Computer Graphics and Visualization, in “Multiresolution Techniques for Surfaces and Volumes”, M. Gross and K. Joy (organizers and speakers), R. Hammersley, A. Hubeli, H.-Q. Lu, H. Pfister.
- SIGGRAPH 2001, New Directions in Shape Representations, H. Pfister, A. Rockwood (organizers and speakers), S. Frisken, M. Gross, L. McMillan, H. Moreton, R. Perry, W. Sweldens.
- SIGGRAPH 2001, Surface Light Fields, R. Grzeszczuk (organizer and speaker), J.-Y. Bouguet, L. McMillan, H. Pfister, M. Pollefeys, Y. Sato, D. Wood, Y. Yu.
- SIGGRAPH 2001, Interactive Ray Tracing, P. Slusallek (organizer and speaker), S. G. Parker, H. Pfister, T. J. Purcell, E. Reinhard.
- Visualization 2000, Discrete Surface and Volume Representations, in “Multiresolution Techniques for Surfaces and Volumes”, M. Gross and K. Joy (organizers and speakers), R. Hammersley, A. Hubeli, H.-Q. Lu, H. Pfister.
- Eurographics 2000, The VolumePro System, in “Volume Visualization and Volume Rendering Techniques”, M. Meissner (organizer and speaker), H. Pfister, R. Westerman, C. Wittenbrink.

- Spring School on Scientific Visualization, Volume Rendering, Bonn Roettgen, Germany, March 2000, Organizers: M. Rumpf, D. Saupe, and M. Ohlberger.
- Visualization '99, Real-Time Ray Casting, in "Volume Graphics", A. Kaufman (organizer and speaker), R. Avila, J. Hardenbergh, S. Gibson, H. Pfister, M. Sramek, J. E. Swan II.
- SIGGRAPH 1999, Real-Time Ray Casting, in "Volume Graphics", A. Kaufman (organizer and speaker), R. Avila, B. Lorensen, S. Gibson, H. Pfister, M. Sramek, J. E. Swan II.
- Eurographics '98, Wavelet-Domain Volume Morphing, in "Hierarchical Methods for Computer Graphics", M. Gross (organizer and speaker), L. Kobbelt, H. Pfister, O. Staadt, and R. Westerman.
- SIGGRAPH '98, Architectures for Volume Rendering, in "Advances in Volume Visualization", A. Kaufman (organizer and speaker), B. Lorensen, H. Pfister, C. Silva, and L. Sobierajski.
- Visualization '97, Architectures for Volume Rendering, in "Volume Visualization: Principles and Practice", A. Kaufman (organizer and speaker), R. Avila, B. Lorensen, H. Pfister, L. Sobierajski, R. Yagel.
- SIGGRAPH '97, Architectures for Volume Rendering, in "Advances in Volume Visualization", A. Kaufman (organizer and speaker), R. Avila, B. Lorensen, H. Pfister, L. Sobierajski, and R. Yagel.

◇ **Panels**

- IEEE VisWeek 2009, "The Impact of Future Hardware on Visualization," H. Pfister (organizer), D. Luebke, L. Seiler, J. Ahrens, T. Ertl
- Harvard University IIC Seminar, 2005, "Computer Science and Visual Depiction: The Choices We Make," F. Frankel (organizer), P. Rheingans, F. Durand, H. Pfister
- Image and Meaning 2, 2005, "Connecting with Computer Science," F. Durand (moderator), M. Agrawala, P. Hanrahan, D. Salesin, H. Pfister
- IEEE Visualization 2004, "The Future Visualization Platform," G. Johnson (organizer), D. Ebert, C. Hansen, D. Kirk, B. Mark, H. Pfister
- ACM SIGGRAPH 2001, "Computer Games & Vis: If you can't beat them, join them," T. -M. Rhyne (organizer), P. Doenges, C. Hecker, B. Hibbard, H. Pfister, N. Robins
- Volume Graphics 2001, "Volume Graphics - Hip, Hype, or Hope?," H. Pfister (organizer), M. Halle, K. Kreeger, H. Lauer, L. Sobierajski Avila
- IEEE Visualization 2000, "The Transfer Function Bake-Off," H. Pfister (organizer), B. Lorensen (referee), C. Bajaj, G. Kindlmann, W. Schroeder. **Best Panel Award**
- IEEE Visualization 2000, "The Impact of Computer Games on Scientific & Information Visualization: If you can't beat them, join them," T.-M. Rhyne (organizer), P. Doenges, B. Hibbard, H. Pfister, N. Robins
- IEEE Visualization '99, "Why the PC will be the most pervasive visualization platform in 2001," H. Pfister (chair), M. Cox, P. N. Glaskowsky, B. Lorensen, R. Greco
- IEEE Visualization '98, "Why is Real-Time Volume Rendering No Longer a Year Away?," A. Kaufman (organizer), M. Brady, B. Lorensen, F. Kitson, H. Pfister
- IEEE Visualization '96, "Real-Time Accelerators for Volume Rendering," A. Kaufman (organizer), J. C. Goble, J. Hesser, G. Knittel, H. Pfister
- Symposium on Volume Visualization 1996, "Name Your Poison - The Future of Hardware vs. Software Volume Rendering Acceleration," C. Hansen (organizer), R. Avila, B. Lichtenbelt, B. Murphy, H. Pfister, S. Whitman
- ACM SIGGRAPH '96, "Imaging Features of Advanced Graphics Architectures," B. Murphy (organizer), R. Crane, K. Akeley, S. Howell, H. Pfister

◇ **Industry Forum Presentations**

- VolumePro: A Second Generation Volume Rendering Engine, Microprocessor Forum 1999, L. Seiler and H. Pfister, San Jose, CA
- The VG500 Real-Time Ray-Casting ASIC, Hot Chips 1999, Stanford University
- Implementation of the VolumePro Real-Time Volume Rendering System, Microprocessor Forum 1998, San Jose, CA

◊ **Invited Talks**

- “High-Throughput Connectomics with MapRecurse,” HHMI Janelia High Resolution Circuit Reconstruction Conference, 2016
- “High-Throughput Connectomics,” Argonne National Labs, 2016
- “Visual Computing in Connectomics,” HHMI Janelia Farms Conference on BioImage Informatics II, 2011
- “High-Throughput Science,” Harvard Graduate School of Arts and Sciences Alumni Day, 2011
- “Visualization in Biology,” DIGITAL CULTURE Technology Platform Colloquium — 1, Harvard Graduate School of Design, 2011
- “High-Throughput Computing in Connectomics,” HHMI Janelia Farms Conference on What Can Computer Vision Do for Neuroscience and Vice Versa?, 2010
- “GPUs for High-Throughput Science,” NASA Goddard Space Flight Center Information Science and Technology Colloquium, 2010
- “Domain Specific Languages,” Nvidia GPU Technology Conference, 2010
- “Harvard’s CUDA Center of Excellence Update,” Nvidia GPU Technology Conference, 2010
- “Volume Rendering of Large, Complex Biological Data,” 4D Treatment Planning Workshop, 2010
- “Network Visualization in Biology,” GraphEx / Lincoln Labs; Connecting the Dots symposium, 2010
- “The Connectome – Discovering the Wiring Diagram of the Brain,” MGH Radiation Oncology group; Fall Workshop on Computational Geometry, 2009
- “Segmentation and Visualization of Petascale Neural EM Data,” MPG/HHMI Conference on High Resolution Circuit Reconstruction, 2009
- “High-Throughput Science”, ETH Zürich, Microsoft Research New England; Rensselaer Polytechnic Institute (RPI); BBN Technologies, 2009-10
- “Petascale Analysis of Neural Circuitry – The Connectome,” Harvard/Riken GPGPU Symposium; IIC Open House, 2008
- “The Connectome”, Center for Brain Science, Harvard University, 2008
- “What can Computer Science do to help Humans see BIG Data?,” AAAS Annual Meeting, 2008
- “The DyBuster Dyslexia Software,” Harvard CfA Science and Dyslexia NSF Advisory, 2007
- “From Pictures to Insights”, Adobe; Harvard University; Tufts University; University of Utah, 2007-08
- “Algorithms for Petascale Analysis of Neural Circuitry – The Connectome,” Microsoft e-Science Workshop, 2007
- “The Interactive Digital Canvas at the Harvard IIC,” Apple Computer, 2006
- “The Connectome Project at the Harvard IIC,” ATI / AMD, 2006

- “Visualization of Ultra-Large Scientific Datasets at Harvard IIC,” Nvidia; ATI / AMD, 2006
- “Making Faces,” Harvard CS 1 guest lecture, 2006-2009
- “Great Ideas in Face Modeling,” Harvard CS 1 guest lecture, 2005
- “Visual Computing Research at MERL”, MIT, Computer Vision Group, 2005
- “3D TV – Fact, not Fiction”, Stanford University; Microsoft Research, 2004
- “Data-Driven Computer Graphics”, NIPS 2004 workshop on Learning in Graphics and Vision; Brown University; Worcester Polytechnic Institute (WPI)
- “Image-Based 3D Photography”, MIT; CMU, 2002-03
- “The VolumePro Real-Time Volume Rendering System”, IBM; National Center for Atmospheric Research (NCAR); Chevron; Exxon; San Diego Super-Computing Center (SDSC); Stanford University, 1998
- “The EM-Cube and Cube-4 Volume Rendering Architectures,” Hewlett-Packard; General Electric; Intel; Mitsubishi Electric; SUNY Stony Brook; ETH Zürich; Asea Brown Boveri Corp. (ABB), 1996-98

◇ **Invited Seminar and Workshop Participation**

- HHMI / Janelia Farms Conference, “BioImage Informatics II,” 2011
- HHMI / Janelia Farms Conference, “What Can Computer Vision Do for Neuroscience and Vice Versa?,” 2010
- HHMI / Janelia Farms Conference, “Neural Circuit Reconstruction,” 2007, 2009
- Dagstuhl Seminar “Scientific Visualization,” 2000, 2005, 2009, 2011
- Dagstuhl Seminar “Visual Computing,” 2007
- Dagstuhl Seminar “Hierarchical Methods in Computer Graphics,” 1998

◇ **Press & Media Coverage**

- “Perfect clones, down to the last computer-generated wrinkle”, by Celeste Biever, New Scientist Print Edition, April 2007
- “Explorer: The Science of Surveillance”, National Geographic Explorer, April 2006. Extensive TV coverage of the 3D face recognition project at MERL.
- TV coverage of the V-J day sailor project on NBC Nightly News, ABC Good Morning America, and ABC World News Tonight, August 2005
<http://www.nwc.navy.mil/museum/VJDaySailor/>
- “The Kiss’ revisited”, CNN American Morning, August 2005. TV coverage of the V-J Day sailor project on CNN.
- “Meeting of the Minds” by Diana Phillips Mahoney. Computer Graphics World, January 2002. Visualization researchers and game developers are discovering a common ground in new graphics technologies.
- “Computer Games’ Influence on Scientific and Information Visualization”, by Theresa-Marie Rhyne, IEEE Computer, December 2000
- “Picture Perfect Primitives”, by D. Mahoney, Computer Graphics World, September 2000. Surface Elements as Rendering Primitives.
- “A New View on Volumes”, by D. Mahoney, Computer Graphics World, July 2000. Review of volume graphics technology including VolumePro.
- “VolumePro vg1000 Expands 3D Vision”, by Peter N. Glaskowsky, Microprocessor Report, November 1999
- “This Board Speaks Volumes”, by J. Donlean, Computer Graphics World, December 1998

- “VolumePro Takes New Approach to 3D”, by Peter N. Glaskowsky, Microprocessor Report, Vol. 12, No. 15, November 16, 1998
- “Applications and alternatives for 3D acceleration”, by Jon Peddie, The Peddie Report, Volume XI, Number 41 - October 19, 1998
- “Accelerators Strain 3-D Graphics Development”, by Rick Boyd-Meritt, EE Times, October 15, 1998
- “Mitsubishi VolumePro: Volume Visualization Hardware for PCs”, by Roy Latham, Real Time Graphics, Vol. 7, No. 4, October/November 1998
- “Visualizing Volumes”, by Diana Phillips Mahoney, Computer Graphics World, July 1997

PATENTS

◇ **Granted**

1. Narrative visualization system, A. A. Schriber, N. W. Kim, H. Pfister, M. Gross. U.S. Patent No. 10,726,591, Jul 28, 2020.
2. Fabrication of materials with desired characteristics from base materials having determined characteristics, B. Bickel, W. Matusik, M. Otaduy, M. Gross, H. Pfister. U.S. Patent No. 8,565,909, Mar 1, 2012.
3. Method and system for decoding and displaying 3D light fields, A. Vetro, S. Yea, W. Matusik, H. Pfister, M. Zwicker. U.S. Patent No. 8,044,994, Feb 21, 2008.
4. Method and system for acquiring, encoding, decoding and displaying 3D light fields, A. Vetro, S. Yea, W. Matusik, H. Pfister, M. Zwicker. U.S. Patent No. 7,916,934, Feb 21, 2008.
5. Method and system for determining poses of objects from range images using adaptive sampling of pose spaces, H. Pfister, I.K. Park, M. German, M. Breitenstein. U.S. Patent No. 7,844,106, Mar 19, 2009.
6. Method and system for determining objects poses from range images, H. Pfister, M. Germann, M. Breitenstein. U.S. Patent No. 7,844,105, Oct 23, 2008.
7. System and method for factorizing light in a sequence of images, H. Pfister, W. Matusik, K. Sunkavalli, S. Rusinkiewicz. U.S. Patent No. 7,756,356, July 13, 2010.
8. Method and system for acquiring and displaying 3D light fields, W. Matusik, H. Pfister, M. Zwicker, F. Durand. U.S. Patent No. 7,609,906, October 27, 2009.
9. Bilinear illumination model for robust face recognition, J. Lee, B. Moghaddam, H. Pfister, R. Machiraju. U.S. Patent No. 7,609,860, October 27, 2009.
10. Method and system for generating bi-linear models for faces, J. Lee, B. Moghaddam, H. Pfister, R. Machiraju. U.S. Patent No. 7,609,859, October 27, 2009.
11. System and method for image matting, M. McGuire, W. Matusik, H. Pfister, J. Hughes, F. Durand. U.S. Patent No. 7,599,555, October 6, 2009.
12. Method for determining optimal viewpoints for 3D face modeling and face recognition, B. Moghaddam, H. Pfister, J. Lee. U.S. Patent No. 7,426,292, September 16, 2008.
13. Method for encoding and decoding free viewpoint videos, E. Lamboray, M. Waschbuesch, S. Wurmlin, M. Gross, H. Pfister. U.S. Patent No. 7,324,594, January 29, 2008.
14. Skin reflectance model for representing and rendering faces, T. Weyrich, W. Matusik, H. Pfister, H.W. Jensen, A. Ngan, M. Gross. U.S. Patent No. 7,319,467, January 15, 2008.
15. Sample rate adaptive filtering for volume rendering, H. Pfister, M. Zwicker, W. Chen, L. Ren. U.S. Patent No. 7,298,372, November 20, 2007.
16. Rendering deformable and animated surface reflectance fields, H. Pfister, T. Weyrich, M. Gross. U.S. Patent No. 7,230,620, June 12, 2007.

17. Scene reflectance functions under natural illumination, H. Pfister, W. Matusik, M. Loper. U.S. Patent No. 7,218,324, May 15, 2007.
18. Object space EWA splatting of point-based 3D models, H. Pfister, L. Ren, M. Zwicker, U.S. Patent No. 7,215,340, May 8, 2007.
19. Constructing heads from 3D models and 2D silhouettes, J. Lee, B. Moghaddam, H. Pfister, R. Machiraju. U.S. Patent No. 7,212,664, May 1, 2007.
20. System and method for interactively rendering objects with surface light fields and view-dependent opacity, D. Vlasic, H. Pfister, W. Matusik. U.S. Patent No. 7,194,125, March 20, 2007.
21. Three-dimensional scene reconstruction from labeled two-dimensional images, R. Ziegler, W. Matusik, H. Pfister. U.S. Patent No. 7,142,726, November 28, 2006.
22. Image-based 3D modeling rendering system, H. Pfister, W. Matusik, H. Pfister, A. Ngan, L. McMillan, P. Beardsley. U.S. Patent No. 6,903,738, June 7, 2005.
23. Modeling and rendering of surface reflectance fields of 3D objects, W. Matusik, H. Pfister, A. Ngan, L. McMillan, R. Ziegler. U.S. Patent No. 6,831,641, December 14, 2004.
24. Rendering Compressed Surface Reflectance Fields of 3D Objects, H. Pfister, W. Matusik, U.S. Patent No. 6,803,910, October 12, 2004.
25. Image-Based 3D Digitizer, W. Matusik, H. Pfister, P. Beardsley, L. McMillan, U.S. Patent No. 6,792,140, August 26, 2004.
26. Modeling 3D Objects with Opacity Hulls, W. Matusik, H. Pfister, A. Ngan, L. McMillan, U.S. Patent No. 6,791,542, September 14, 2004.
27. Rendering Discrete Sample Points Projected to a Screen Space with a Continuous Resampling Filter, M. Zwicker, H. Pfister, J. van Baar, M. Gross, U.S. Patent No. 6,744,435, June 1, 2004.
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