Dr. Andrew Glassner

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March 2026

Fields of Interest

Leadership: Clear visions and guidance to teams and individuals
Computer Graphics: Creative applications, unconventional displays, procedural/neural generation
Deep Learning/AI: Algorithms, artist's production tools, ethics, storytelling, social implications
Quantum Computing: Teaching and applications to computer graphics
Visual Effects: Tools to empower artists of all types to create beautiful and meaningful imagery
Communication / Education: Teaching and sharing technical ideas in accessible, friendly ways
Interaction Design: Creating and developing interactive experiences for education and entertainment
Game Design: Applying AI concepts to create new types of games and gaming experiences
Interactive Storytelling: Participatory fiction, multiplayer games

Education

Ph.D., Computer Science, University of North Carolina at Chapel Hill, Chapel Hill, NC, 1988
M.S., Computer Science, University of North Carolina at Chapel Hill, Chapel Hill, NC, 1987
B.S., Computer Engineering, Case Western Reserve University, Cleveland, OH, 1984

Employment

Independent Consultant, Vancouver, BC, Canada
October 2025 - present
Research in AI, computer graphics, and quantum computing tools for artists and creators.
Books, presentations, and other styles of presentation to popular and technical audiences.

Distinguished Research Engineer, Wētā Digital BC, Vancouver, BC, Canada
February 2025-October 2025
Create and develop AI and computer graphics tools for artists developing visual effects.
Research in AI, quantum computing, and assistants targeted to artists and developers.

Distinguished Research Engineer, Wētā FX, Wellington, New Zealand (working from Seattle, WA)
January 2024-February 2025
Create and develop AI and computer graphics tools for artists developing visual effects.
Research in generative AI and assistants targeted to artists and developers.

Distinguished Research Scientist, Unity / Wētā Digital, San Francisco, California
January 2022-December 2023
Creation and development of novel artist's tools that combine computer graphics and deep learning.
Research in deep learning to assist artists in creating world-class visual effects for film and TV.

Principal Research Scientist, Wētā Digital, Wellington, New Zealand (working from Seattle, WA)
September 2021-December 2021
Research in deep learning and computer graphics for visual effects.

Senior Research Scientist, Wētā Digital, Wellington, New Zealand
July 2019-September 2021
Research and prototype development of deep learning tools to help visual effects artists.

Visiting Researcher, Wētā Digital, Wellington, New Zealand
December 2018-March 2019
Working with multiple departments, designed deep learning techniques to assist with research and production of world-class visual effects for feature films and television.

Independent Consultant, The Imaginary Institute, Seattle WA
February 2013 – December 2018
Wrote book on machine learning and deep learning for scientists, programmers, and engineers.
Consulting and independent research in deep learning and computer graphics
Designed, wrote, recorded, edited, and released online course in 2D computer graphics
240 videos totaling 35 hours, plus programs and other materials. www.imaginary-institute.com
Designed, wrote, and released the AU Library for 2D and 3D computer-aided animation
Wrote technical notes on geometry and computer graphics
Collaborated on projects ranging from creative uses of metameric failure to 3D computer graphics
Consulted on a wide variety of computer graphics projects
Presented online and live classes in computer graphics to diverse audiences

Visiting Expert, Tableau Software, Seattle WA
November 2014 - January 2015
Invented and prototyped new technique to help people learn how to analyze data.

Novelist, Screenwriter, Consultant, Coyote Wind, LLC, Seattle WA
May 2000 – November 2014
Novels: *Bait* (2004), *Freaks of Nurture* (2003), *Home Security* (2001)
Consultant to game and film studios in computer graphics, deep learning, and storytelling
Screenwriter: *Shackleton*, *Island Life*, *Alone in the Stars* (unproduced)

Researcher, Microsoft Research, Microsoft Corporation, Redmond, WA
July 1997 – May 2000
Research in 3D computer graphics and new media
Manager of small group

Writer-Director, The Microsoft Network, Redmond, WA
October 1996 - July 1997
Created and developed *Dead Air*, an interactive web-based mystery show for The Microsoft Network. Wrote and directed pilot episode.

Researcher, Microsoft Research, Microsoft Corporation, Redmond, WA
December 1994 - October 1996
Research in 3D computer graphics and media theory
Wrote and directed several animated and live shorts, directing teams of up to 60 people

Member of the Research Staff, Xerox PARC, Xerox Corporation, Palo Alto, CA
September 1988 - September 1994
Research in computer graphics

Visiting Scientist, Delft University of Technology, Delft, The Netherlands
May 1987 - December 1987
Organized and taught advanced computer graphics course. Research in multidimensional ray tracing.

Software Engineer
New York Institute of Technology (NYIT) Computer Graphics Laboratory
New York Institute of Technology (NYIT) Digital Sound Laboratory
September 1980 - August 1981
Designed and implemented one of the first interactive digital sound editing systems, a variety of sound synthesis algorithms, and a real-time image processing library. Modeled and animated 3D polygonal and quadric objects.

Books (Non-Fiction)

"Quantum Computing: From Concepts to Code," No Starch Press, San Francisco, 2025
"Deep Learning: A Visual Approach", No Starch Press, San Francisco, 2021
"Deep Learning: From Basics to Practice, Volumes 1 and 2", Imaginary Institute, Seattle, 2018
Both books, Chinese translation, Posts & Telecom Press, Beijing
Both books, Russian translation, DMK Press, Moscow
"Processing for Visual Artists," AK Peters, Natick, 2010
"Morphs, Mallards & Montages: Computer-aided Imagination", AK Peters, Natick, 2004
"Interactive Storytelling: Techniques for 21st Century Fiction", AK Peters, Natick, 2004
"Andrew Glassner's Other Notebook: Further Recreations in Computer Graphics", AK Peters, Natick, 2002
"Andrew Glassner's Notebook: Recreational Computer Graphics", Morgan-Kaufmann Publishers, San Francisco, 1999
"Principles of Digital Image Synthesis", (two-volume textbook), Morgan-Kaufmann Publishers, San Francisco, 1995
"Graphics Gems" Series Creator and Series Editor, volumes I - V, Academic Press, Cambridge, 1990-1995
"Graphics Gems I", Editor and Multiple Contributor, Academic Press, Cambridge, 1990
Japanese translation by Harcourt Brace Jovanovich, Japan.
Chinese translation by The National Institute for Compilation & Translation, China.
"3D Computer Graphics: A Handbook for Artists and Designers", Design Press, New York, 1989
Japanese translation 1990 by ASCII Press, Japan
"An Introduction to Ray Tracing", Editor and Contributor, Academic Press, London, 1989
"Computer Graphics User's Guide", Howard W. Sams & Co., Indianapolis, 1984
Japanese translation 1987 by ASCII Press, Japan

Primary Technical Publications

Jorge, J; Hürst, W; Billinghurst, M; Glassner, A.; Morie, J.F.; and Oliver, N., "Extended Reality and Artificial Intelligence's Ethical Crossroads: From Sensory Manipulation to Creative Disruption," in *IEEE Computer*, 57(9), pp. 14-20, Sept. 2024
Takikawa, T., Glassner, A., and McGuire, M, "A Dataset and Explorer for 3D Analytic Signed Distance Functions", Journal of Computer Graphics Techniques, 10(3), July-September 2021
Glassner, A, "Globs: A Primitive Shape for Graceful Blends Between Circles", Journal of Computer Graphics Techniques, 4(3), pp. 1-22, 2015
Glassner, A, "Interpreting Alpha", Journal of Computer Graphics Techniques, 4(2), pp. 30-44, 2015
Glassner, A., "Reconciling Circular and Elliptical Arcs", Journal of Graphics Tools, 15(2), 2011
Glassner, A., "Interactive Storytelling: People, Stories, and Games," Virtual Storytelling, Olivier Balet, Gerard Subsol, Patrice Torguet, Eds., Springer-Verlag, LNCS 2197, 2001, pp. 51-60
Glassner, A., "A Shape Synthesizer," IEEE Computer Graphics & Applications, May-June 1997, 17(3), pp. 40-51
Glassner, A., Marimont, D., Fishkin, K., and Stone, M., "Device Directed Rendering", ACM Transactions on Graphics, 14(1), January 1995, pp. 58-76
Glassner, A., "Dynamic Stratification", Proc. 4th Eurographics Workshop on Rendering, Michael Cohen, Claude Puech and Francois Sillion, ed., Paris, June 1993, pp. 5-14
Glassner, A., "A Dataflow Architecture for Shape Synthesis" Graphicon '92, Keldysh Institute of Applied Mathematics, Moscow, Russia. September 1992
Glassner, A., "A Tutorial on Geometric Replacements", IEEE Computer Graphics & Applications, 12(1), January 1992
Glassner, A., "Growing Complex Shapes From Simple Forms (extended abstract)", Proceedings Eurographics '91, September 1991
Glassner, A., "Ray Tracing for Image Synthesis", Academic Press Encyclopedia of Physical Science and Technology, 1991 Yearbook, Academic Press, New York, pp. 485-492, December 1990
Glassner, A. "Geometric Substitutions", Proc. Ausgraph '90, September 1990
Glassner, A., "A 2D View Controller", ACM Transactions on Graphics, 9(1), January 1990
Glassner, A., "How to Derive a Spectrum From an RGB Triplet", IEEE CG&A, 9(4), July 1989
Glassner, A., "Spacetime Ray Tracing for Animation", IEEE Computer Graphics & Applications, 8(2), March 1988
Glassner, A., "Supporting Animation in Rendering Systems", Proceedings CHI+GI '87 Workshop on Rendering Algorithms and Systems, Canadian Information Processing Society, Toronto, April 1987
Glassner, A.,"Adaptive Precision in Texture Mapping", Computer Graphics, 20(4), Siggraph '86, 1986
Glassner, A., and Fuchs, H., "Hardware Enhancements for Raster Graphics", Proceedings NATO Advanced Study Institute on Fundamental Algorithms for Computer Graphics, Fall 1985
Glassner, A., "Space Subdivision for Fast Ray Tracing", IEEE Computer Graphics &Applications, 4(10), October 1984 (reprinted in Computer Graphics: Image Synthesis, K. Joy, C. Grant, N. Max, L. Hatfield, Ed., IEEE Computer Society, 1988)
Glassner, A., "Musicbox in C: An Interactive, Graphics, Digital Sound Editor", Proceedings of the 1980 International Computer Music Conference, Fall 1980
Glassner, A., and Kowalski, M., (January 1981), "The NYIT Digital Sound Editor", The Computer Music Journal, 6(1)

Major Invited Presentations and Keynotes

“Quantum Computing for Computer Graphics,” Invited Keynote, SIBGRAPI, Brazil September 2025
“Quantum Teleportation: A Hands-On Lab”, Invited Lab, Siggraph 2025
“How Generative AI Might Affect VFX Now and In the Future”, Panel, Visual Effects Society, 2024
“Storytelling in the Age of AI”, Invited Keynote, Academy of Motion Pictures Open Source Forum 2023, February 2023
“Reinforcement Learning and Computer Graphics,” SIGGRAPH Frontiers, June 2021
“Data Science in the 21st Century, Panel, AnacondaCON, May 2021
“AR + AI + FX,” SparkFX 2021, February 2021
“The Kayfabe Life,” Keynote, IEEE AIVR, 3rd International Conference on Artificial Intelligence and Virtual Reality, December 2020
“AI+VR: Dragons and Puppies,” ACM SIGGRAPH Frontiers on VR and AI Workshop, Brisbane, Australia, November 2019
“Deep Learning For Production,” FMX 2019, Stuttgart, Germany, May 2019
“The Best of Algorithms, The Worst of Algorithms,” Keynote presentation, Visual Computing Trends, Vienna Austria, January 2019
“Our Disrupted Future: The Human Side of AI”, Plenary Keynote, Siggraph 2018 Business Symposium
“Freezing Time: 3D Sculptures from 2D Animations,” invited presentation with Eric Haines, Siggraph 2015
“Teaching Computer Graphics Online,” invited presentation, Siggraph 2014
“Introduction to Computer Graphics,” invited course, Siggraph 2013
“Modeling, Rendering, and Animation”, invited course, Siggraph 2008
“Storytelling for Visual Analytics”, Invited Keynote, IEEE Symposium on Visual Analytics Science and Technology (IEEE VAST) 2009, New Jersey, October 2009
“Stories and Graphics”, Human Interface Technology Lab, Canterbury, New Zealand, January 2007
“Recreational Computer Graphics”, Adobe Systems, September 2006
"Creating First-Person Interactive Narratives", Research Colloquium, SFU School of Interactive Arts and Technology, September 2006
“Computer Graphics and Storytelling”, Keynote Talk, Graphite 2005, New Zealand, December 2005
“Interactive Storytelling,” Keynote Talk, International Digital Media and Arts Conference, Florida, March 2005
“Stories, Games, and People”, Invited Talk, Cartoon Master, La Corona, Spain, April 2004
“Participatory Narrative”, University of Washington Animation Lecture Series, January 2002
“Do You See What I See?” Conference Keynote, IEEE Visualization 2001, San Diego, CA, October 2001
“Online Storytelling: People, Stories, and Games”, Keynote Talk, International Conference on Virtual Storytelling, Avignon, France, September 2001
“Storytelling for a Wired World”, Plenary Talk, AT&T Visualization Days, AT&T Shannon Laboratory, New Jersey, June 2001
“Graphics, Stories, and Games”, 2001 Symposium on Interactive 3D Graphics, North Carolina, March 2001
“Free Will, Structure, and Narrative: Designing Large Scale Storied Environments for Animation and Participation”, University of Washington Animation Production Series, Seattle, WA, January 2001
“Digital Storytelling for A Wired World”, Simon Fraser University Distinguished Lecture Series, Burnaby, British Columbia, November 2000
“Stories and Computers”, Microsoft Research Lecture Series, Beijing, China, April 2000
“Fiction: Audiences and Computers”, Conference keynote, Eurographics UK, Swansea UK, March 2000
“Stories and Structures”, Conference keynote, Eurographics 99, Milan, Italy, September 1999
“Active Storytelling”, Conference keynote, CGI 99, Canmore, Alberta, June 1999
“How to Render the World”, Programmer’s Keynote, Game Developer’s Conference, March 1999
“Is There Hope for New Media?”, CGIX 98, Amsterdam, February 1998
“Computer Graphics and Cultural Change”, Graphics Interface '97, Kelowna, BC, June 1997
“Art and Animation”, Computer Graphics Grand Prix '97, Tokyo, Japan, March 1997
“Networked Shape Synthesis”, Graphicon '92, Moscow, Russia, October 1992
“The Grammar of Geometric Substitutions”, 1st International Conference on Scientific Visualization, Caracas, Venezuela, October 1991
“Growing Complex Shapes From Simple Forms”, plenary talk, Eurographics '91, Austria, September 1991
“The Theory and Practice of Ray Tracing”, full-day tutorial at Eurographics '91, Austria, September 1991
“Ray Tracing”, full-day tutorial at Ausgraph '90, Melbourne, Australia, September 1990
“Geometric Substitutions”, Ausgraph '90, Melbourne, Australia, September 1990
“Ray Tracing: From Algorithms to Programs”, full-day course at Graphics Interface '89, 1989

Film and TV Credits

"Avatar 3: Fire and Ash," Visual Effects Distinguished Researcher & Engineer, 20th Century Studios, 2025
"Avatar 2: The Way of Water," Distinguished Research Scientist, 20th Century Studios, 2022
"The Lord of the Rings: The Rings of Power," Visual Effects Artist, Amazon Studios, 2022

Shows and Games

Creator / Showrunner, "Dead Air", Multiplayer murder-mystery game for The Microsoft Network, 1999
Writer and Director, "Classical Trio", the pilot episode for Dead Air, 1999
Creator, "That's Bull!", Game for The Microsoft Network, 1999 (unproduced)
Game Designer, "Demolition Construction Kit", Software toy, Dreamworks, 1999 (unproduced)
Creator, "Spaceship Mars", Massively-multiplayer game, The Microsoft Network, 1998 (unproduced)
Creator, "Island Paradise", Multiplayer online game, The Microsoft Network, 1998 (unproduced)

Novels

"Bait," Amazon Kindle, 2015
"Home Security," Amazon Kindle, 2015
"Freaks of Nurture," Amazon Kindle, 2015

Films and Scripts

"SIGGRAPH 2022 Technical Papers Trailer," Producer and Narrator, May 2022
https://youtube.com/watch?v=YGmWqQ6oz3U
"SIGGRAPH 2021 Technical Papers Trailer," Writer-Director and Narrator, May 2021
https://youtube.com/watch?v=Ros7ZXqLbFg
"SIGGRAPH 2020 Technical Papers Trailer," Writer-Director and Narrator, May 2020
https://youtube.com/watch?v=jYdMKdRUq_8
"Welcome Home," Writer-Director, science-fiction serial podcast, in pre-production, 2017
"Making Memories," Writer-Director, 3 minutes 16mm live action, Spring 2003
"1000 Cranes," Script treatment, Digital Domain, 2000
"Classical Trio," Writer-Director, episode of Dead Air, Microsoft 1999
"Flow Interface", Writer-Director, 6 minutes, live action/stills, Microsoft 1998
"Red Green Blues", Director, Composer, and Lyricist, August 1998
https://youtube.com/watch?v=2oGBnXyhabg
"Chicken Crossing", Writer-Director and Producer, 3.5 minutes, animated 3D short
Siggraph '96 Electronic Theatre, Lucy Saenger Theatre, New Orleans, August 1996
Visual Fantasy 1997, Tokyo, February 1997
Computer Graphics Grand Prix '97, Tokyo, Japan, March 1997
British Broadcasting Corporation, January-December 1997
Le Festival Du Dessin Anime et du Film D'animation, Brussels, April 1997
Fujita Vente Theatre, Japan, 1997-1998 program
10th Computer Animation Film Festival, Geneva, August 1997
"Space Dog", Writer (unproduced animated short)
"Shiela's Diner", Writer (unproduced animated short)
"Shackleton", Writer (unproduced feature screenplay)

Commercial Apps

Designer and Programmer, "Maya Date" iPhone app, iTunes Store, 2009

Online Teaching

"2D Animation and Interaction," 8-week online video course, The Imaginary Institute, 2013
(available at https://www.youtube.com/@imaginaryinstitute670/videos)
"Introduction to Computer Graphics", Siggraph University, 2013
"Deep Learning: A Crash Course," Siggraph University, 2018 (see https://www.youtube.com/watch?v=r0Ogt-q956I)

Museum Exhibitions

The Denver Museum of Nature & Science, Denver, CO, 2013. Mayan artwork and calendar glyphs.
The Smithsonian National Museum of the American Indian, Interactive website, 2012. Mayan artwork and glyphs.
Tallinn City Museum, Estonia, 2010. "Time Pillars" exhibition. Mayan artwork and calendar glyphs.

Discography

"Theme Songs From Shows That Never Were," Composer-performer, 2021
"Firefly", CD, Composer-performer, 2000

Other Technical Publications

Glassner, A., "Clipping a Concave Polygon", in Graphics Gems V, A. Paeth, ed., Academic Press, Cambridge, 1995
Glassner, A., "Building Vertex Normals From An Unstructured Polygon List", in Graphics Gems IV, P. Heckbert, ed., Academic Press, Cambridge, 1994
Glassner, A., "Darklights", in Graphics Gems III, D. Kirk, ed., Academic Press, Cambridge, 1992
Glassner, A., "Anti-Aliasing in Triangular Pixels", in Graphics Gems III, D. Kirk, ed., Academic Press, Cambridge, 1992
Glassner, A., "Adaptive Run-Length Encoding", in Graphics Gems II, J. Arvo, ed., Academic Press, Cambridge, 1991
Glassner, A., "Maintaining Winged-Edge Models", in Graphics Gems II, J. Arvo, ed., Academic Press, Cambridge, 1991
Glassner, A., "A Simple Viewing Geometry" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990
Glassner, A., "Useful 2D Geometry" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990 (also in Gems II, III, and IV)
Glassner, A., "Useful 3D Geometry" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990 (also in Gems II, III, and IV)
Glassner, A., "Frame Buffers and Color Maps" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990
Glassner, A., "Normal Coding" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990
Glassner, A., "Interpretation of Texture Map Indices" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990
Glassner, A., "Multidimensional Sum Tables" in Graphics Gems, A. Glassner, ed., Academic Press, Cambridge, 1990
Glassner, A., "An Overview of Ray Tracing" (book chapter in "An Introduction to Ray Tracing", A. Glassner, ed., Academic Press, London, 1989
Glassner, A., "Surface Physics for Ray Tracing" (book chapter) in "An Introduction to Ray Tracing", A. Glassner, ed., Academic Press, London, 1989
Glassner, A., "A Ray Tracing Glossary" (book chapter in "An Introduction to Ray Tracing", A. Glassner, ed., Academic Press, London, 1989

Other Articles

Glassner, A., Invited Foreword for "Ray Tracing Gems 2", A. Marrs, P. Shirley, I. Wald, editors, APress, 2021
Glassner, A., "Ray Tracing in Computer Graphics", Computers in Science, September 1987, 1(2), p.18-25
Glassner, A., "Ray Tracing for Realism", Byte Magazine, December 1990, 15(2), pp. 263-271

Journal Columns

Columns in "Andrew Glassner's Notebook" in IEEE Computer Graphics & Applications:
"Speed Limit 55", vol. 26, no. 1, January 2005
"Crop Circles, Part 2", vol. 25, no. 6, November 2004
"Crop Circles, Part 1", vol. 25, no. 5, September 2004
"Digital Cubism, Part 2", vol. 25, no. 4, July 2004
"Digital Cubism, Part 1", vol. 25, no. 3, May 2004
"Around and Around", vol. 25, no. 2, March 2004
"About Face", vol. 25, no. 1, January 2004
"Everyday Visualization", vol. 24, no. 6, November 2003
"DMorph", vol. 23, no. 5, September 2003
"Venn and Now", vol. 23, no. 4, July 2003
"Image Search and Replace", vol. 23, no. 3, May 2003
"Digital Weaving, Part 3", vol. 23, no. 2, March 2003
"Digital Weaving, Part 2", vol. 23, no. 1, January 2003
"Digital Weaving, Part 1", vol. 22, no. 6, November 2002
"Getting the Picture," vol. 22, no. 5, September 2002
"Duck!", vol. 22, no. 4, July 2002
"Putting the Pieces Together", vol. 22, no. 3, May 2002
"Interactive Pop-up Card Design, Part 2", vol. 22, no. 2, March 2002
"Interactive Pop-up Card Design, Part 1", vol. 22, no. 1, January 2002
"Quantum Computing, Part 3", vol. 21, no. 6, November 2001
"Quantum Computing, Part 2", vol. 21, no. 5, September 2001
"Quantum Computing, Part 1", vol. 21, no. 4, July 2001
"A Change of Scene", vol. 21, no. 3, May 2001

"Tricks of the Trade", vol. 21, no. 2, March 2001
"Fill 'Er Up", vol. 21, no. 1, January 2001
"Soap Bubbles, Part 2", vol. 20, no. 6, November 2000
"Soap Bubbles, Part 1", vol. 20, no. 5, September 2000
"Texturing with Symmetry", vol. 20, no. 4, July 2000
"The Digital Ceraunoscope: Synthetic Thunder and Lightning, Part 2", vol. 20, no. 3, May 2000
"The Digital Ceraunoscope: Synthetic Thunder and Lightning, Part 1", vol. 20, no. 2, March 2000
"Celtic Knotwork, Part 3", vol. 20, no. 1, January 2000
"Celtic Knotwork, Part 2", vol. 19, no. 6, November 1999
"Celtic Knotwork, Part 1", vol. 19, no. 5, September 1999
"O Say, Can You See?", vol. 19, no. 4, July 1999
"An Open and Shut Case", vol. 19, no. 3, May 1999
"String Crossings", vol. 19, no. 2, March 1999
"Fourier Polygons", vol. 19, no. 1, January 1999
"The Triangular Manuscripts", vol. 18, no. 6, November 1998
"Know When to Fold", vol. 18, no. 5, September 1998
"Aperiodic Tiles, Part 2", vol. 18, no. 4, July 1998
"Aperiodic Tiling", vol. 18, no. 3, May 1998, pp. 83-90
"Circular Reasoning", vol. 18, no. 2, March 1998, pp. 104-108
"Upon Reflection", vol. 18, no. 1, January 1998, pp. 86-92
"Inside Moire Patterns", vol. 17, no. 6, November 1997, pp. 97-101
"The Perils of Problematic Parameterization", vol. 17, no. 5, September 1997, pp. 78-83
"Net Results", vol. 17, no. 4, July 1997, pp. 85-89
"Signs of Significance", vol. 17, no. 3, May 1997, pp. 79-82
"Situation Normal", vol. 17, no. 2, March 1997, pp. 83-87
"Going the Distance", vol. 17, no. 1, January 1997, pp. 78-84
"Hey, Buddy, How Do I Get Into the Siggraph Electronic Theatre?", co-authored with Jim Blinn, vol. 16, no. 6, November 1996, pp. 72-75
"More Origami Solids", vol. 16, no. 5, September 1996, pp. 85-91
"Origami Platonic Solids", vol. 16, no. 4, July 1996, pp. 85-91
"Frieze Groups", vol. 16, no. 3, May 1996, pp. 78-83
"Computer Generated Solar Halos and Sun Dogs", vol. 16, no. 2, Mar. 1996, pp. 77-81
"Solar Halos and Sun Dogs", vol. 16, no. 1, Jan. 1996, pp. 83-87

Other Professional Courses & Presentations

"An Introduction to the Fourier Transform", Siggraph 2025
"An Introduction to Quantum Computing", Siggraph 2025
"Hands-On Quantum Teleportation", Siggraph 2025
"An Introduction to Quantum Computing", Siggraph 2024
"An Introduction to Quantum Computing", Siggraph 2023
"A Crash Course in Machine Learning, Take 3", Siggraph 2020
"Making Machine Learning Work: From Idea to Production Tool," Siggraph 2020
"A Crash Course in Machine Learning for Computer Graphics," Siggraph Asia, 2019
"A Crash Course in Machine Learning, Version 2," Siggraph 2019
"A Crash Course in Machine Learning," Siggraph, 2018, https://www.youtube.com/watch?v=r0Ogt-q956I
"Processing for Digital Artists," Siggraph 2010
"Introductory Computer Graphics", Siggraph 2007
"Recreational Computer Graphics", Siggraph 2006, July 2006
"An Introduction to Modeling", Siggraph 1994-2005
"An Introduction to Animation", Siggraph 1994-2005
"An Introduction to Rendering", Siggraph 1994-2005
"How to Give A Great Talk", Siggraph 2001, July 2001
"Fiction 2001: The Future of Storytelling", Siggraph 2000, July 2000
"Fiction 2000: Interactive Fiction", Siggraph 1999, July 1999
"Logo Design", Art for Computer Graphicists, Siggraph 1998
"The Myth of Online Community", Computer-Human Interaction 1998, Los Angeles
"The Dishonesty of Visual Culture", Panel presentation, Siggraph 1996
"Spectrum: An Architecture for Image Synthesis, Research, Education, and Practice", in "Developing Large-Scale Graphics Software Toolkits", Siggraph 1994
"Ray Tracing Principles", First International Conference on Scientific Visualization, Caracas, Venezuela, 1991
"Spectrum: A Proposed Image Synthesis Architecture", in "Frontiers in Rendering", Siggraph 1991

“Current Trends in Ray Tracing”, in “Advanced Topics in Ray Tracing”,Siggraph 1990
“Implementation Notes for Ray Tracers”, in “Advanced Topics in Ray Tracing”, Siggraph 1990
“Some Ideas for Future Work”, in “Advanced Topics in Ray Tracing”, Siggraph 1990
“An Overview of Ray Tracing”, in “Introduction to Ray Tracing”, Siggraph 1987-89
“Surface Physics for Ray Tracing”, in “Introduction to Ray Tracing” Siggraph 1987-89
“A Ray Tracing Glossary”, in “Introduction to Ray Tracing” Siggraph 1987-89

Professional Teaching

“Social and Political Implications of Deep Learning,” Weta Digital, Wellington, NZ, March 2019
“Architectures for Deep Learning,” Weta Digital, Wellington, NZ, February 2019
“Deep Learning,” 8 lectures, Weta Digital, Wellington, NZ, December 2018-January 2019
“Computer Graphics for Animation”, Walt Disney Feature Animation, Burbank, CA, May 2000
“Modern Computer Graphics”, Disney Feature Animation, Burbank, CA, June 1999
“Art for Computer Graphicists”, Course Organizer, Chair, and Speaker, Siggraph '98
“Introduction to Computer Graphics”, Speaker, Siggraph 1995 through 2002
“Fundamentals and Overview of Computer Graphics”, Speaker, Siggraph '93, '94
“Developing Large-Scale Graphics Software Toolkits”, Speaker, Siggraph '93
“Frontiers in Rendering”, Course Organizer, Chair, and Speaker, Siggraph '92.
“Advanced Topics in Ray Tracing”, Course Organizer, Chair, and Speaker, Siggraph '91.
“State of the Art in Ray Tracing”, Eurographics '91
“Ray Tracing Fundamentals”, Ausgraph '90, Melbourne, Australia
“Introduction to Ray Tracing”, Course Organizer, Chair, and Speaker, Siggraph '89.
“Theory and Practice of Ray Tracing”, Graphics Interface '89.
“Introduction to Ray Tracing”, Course Organizer, Chair, and Speaker, Siggraph '88.
“Introduction to Ray Tracing”, Course Organizer, Chair, and Speaker, Siggraph '87.

Colloquia and Workshops

“Computer Graphics and Imagination,” Oregon State University, October 2025
“Applications of Creative Computer Graphics,” Oregon State University, October 2024
“AI and Computer Graphics,” Oregon State University, January 2024
“Computer Graphics and Imagination,” Oregon State University, October 2023
“XR and AI - Opportunities and Challenges”, Panelist, Siggraph 2023
“Research to Practice - Getting There and Back Again”, Panelist, Siggraph 2023
“Computer Graphics and AI - A New Perspective”, Panelist, Siggraph 2023
“Computer Graphics in the World”, Oregon State University, October 2022
“Creative Computer Graphics”, Oregon State University, November 2021
“Transformers and Attention,” Weta Machine Learning Monthly, May 2021
“Sequence Processing in Deep Learning,” Weta Machine Learning Monthly, February 2021
“Cool Topics in Computer Graphics,” Fakultät fur Informatik, Universität Wien, Vienna, January 2019
“Computer Graphics Applications, Technische Universität Wien, Vienna, January 2019
“The Writing of “Deep Learning: From Basics to Practice,” Facebook, March 2018
“Storytelling for Analytics”, Pacific Northwest National Laboratory, Richland, WA, August 2009
“3D and Narrative”, University of Otago, New Zealand, January 2007
“Interactive Storytelling”, Writer’s Guild of Canada, Toronto, November 2002
“Participatory Storytelling”, The Institute for Simulation and Training, University of Central Florida, April 2002
“Interactive Storytelling: People, Stories, and Games”, Florida State University, April 2002
“Stories, Teaching, and the Future”, ThinkQuest Imagine the Future National Lecture Series, February 2002
“The Future of Narrative”, University of Washington Animation Lecture Series, January 2002
“Games, Stories, Computers, and People”, Naval Postgraduate School, April 2001
“Modern Story Structure”, Electronic Arts, March 2001
“Story Structure and Interaction”, UC Berkeley, March 2001
“Stories and Computers”, Stanford University, March 2001
“Short Story Structure”, University of Washington, February 2001
“Joe’s Garage: An Interactive Digital Storytelling Workshop”, University of Central Florida, January 2001
“Digital Storytelling”, Electronic Arts Canada, December 2000
“Story Structure”, Electronic Arts, December 2000
“Participative Storytelling” Digital Domain, Los Angeles, CA, October 2000
“Participatory Stories” Sony Pictures Imageworks, Los Angeles, CA, September 2000
“Active Storytelling” Detroit New Media Association, Ann Arbor, MI, June 1999
“Active Storytelling” Interactive Multimedia Arts & Technologies, Toronto, ON, June 1999
“The Future of Media” University of Washington, Seattle, WA, November 1997

"Producing A Short Film: The Making of Chicken Crossing" Seattle Siggraph, Redmond, WA July, 1996
"New Ideas in Modeling" Pratt Institute of Art and Design, Brooklyn, NY November, 1993
"Device-Directed Rendering" Delft University of Technology, Delft, The Netherlands. June, 1993
"Color Gamut Projection for Synthetic Images" UC Santa Cruz, Santa Cruz, CA. March, 1993
"Device-Directed Rendering" Indiana University, Bloomington, IN. March, 1993
"Rendering Within Constraints" Stanford University Graphics Lunch, Stanford, CA. March, 1993
"Two Cool New Techniques for 3D Modeling", Bay Area Siggraph, San Francisco, CA. April 1992
"Geometric Substitutions and Shape Synthesis for 3D Modeling", Fry's Lecture Series, Palo Alto, CA. November, 1992
"Dancing Raisins in Your Refrigerator: Computer Graphics and Ubiquitous Computing" IBM T.J. Watson Research Center, Yorktown Heights, NY. June 1991
"Growing Complex Shapes from Simple Forms" Sun Microsystems Graphics Forum, Mountain View, CA. Nov 1991
"Modern Rendering Techniques", Mitsubishi Corp, Sunnyvale, CA. 1992
"Shape Synthesis", Apple Computer, Sunnyvale, CA. April 1991
"A Survey of Modern Image Synthesis", Santa Clara University, Santa Clara, CA. November 1992
"Survival Unix", 4-part course, Palo Alto, CA. May 1990

Technical Notes

Glassner, A., "Wrap: A Practical Replacement for Modulo," Imaginary Institute Tech Note #12, July 2015
Glassner, A., "Globs", Imaginary Institute Tech Note #11, February 2015
Glassner, A., "Interpreting Alpha", Imaginary Institute Tech Note #10, November 2014
Glassner, A., "AU Library Quick Reference", Imaginary Institute Tech Note #9, October 2014
Glassner, A., "Equal Spacing Along Curves", Imaginary Institute Tech Note #8, October 2014
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Glassner, A., "Measuring Distances", Imaginary Institute Tech Note #6, October 2014
Glassner, A., "Waves", Imaginary Institute Tech Note #5, October 2014
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Glassner, A., "Trig for Computer Graphics", Imaginary Institute Tech Note #2, May 2013
Glassner, A., "Solving Geometry Problems", Imaginary Institute Tech Note #1, May 2013
Glassner, A., "Andrew's Quick Guide to Python", Coyote Wind Studios, 2008
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Glassner, A., "Interactive Pop-Up Card Design", Technical Report MSR-TR-98-03, Microsoft Research, Redmond, WA, January 1988
Glassner, A., "Efficient Ray Tracing in Subdivided Space", The Ray Tracing News, 2(1), pp. 11-12, Feb 1988
Glassner, A., "Efficient Boolean Evaluation of CSG Models for Ray Tracing", The Ray Tracing News, 1(1), pp. 3-7, September 1987
Glassner, A., "The RSRT Template for Pose Interpolation", Technical Memo #87-4, Faculty of Mathematics and Informatics, Technical University of Delft, Delft. December 1987
Glassner, A., and Post, F., "Two Derivations of the Angular Interpolation Formula", Technical Memo \#87-3, Faculty of Mathematics and Informatics, Technical University of Delft, Delft, The Netherlands. Dec 1987
Glassner, A., "How to Derive a Spectrum From an RGB Triple", Technical Memo \#87-2, Faculty of Mathematics and Informatics, Technical University of Delft, Delft, The Netherlands. October 1987
Glassner, A., and Post, F., "On the Transformation of Surface Normals", Technical Memo #87-1, Faculty of Mathematics and Informatics, Technical University of Delft, Delft, October 1987
Glassner, A., "idb: An Ikonas Symbolic Debugger", University of North Carolina Chapel Hill, NC, 1985
Glassner, A., "libgik: An Ikonas Library", University of North Carolina Chapel Hill, NC. July 1985

Journal Activities

Member, Advisory Board, Journal of Computer Graphics Techniques, 2012 - present
Member, Editorial Board, Journal of Graphics, Games and GPU Tools, September 2008 - 2012
Co-Guest Editor (with Turner Whitted), Special Issue on Rendering, IEEE Computer Graphics & Applications, Volume 18, Number 2, March 1998
Member, Editorial Board, Journal of Graphics Tools, July 1995 – September 2008
Editor-in-Chief, ACM Transactions on Graphics, June 1995 - January 1997
Founding Editor, Journal of Graphics Tools, July 1995
Member, Editorial Board, IEEE Computer Graphics and Applications, Nov 1989 - 1995
Letters and Short Notes Editor, IEEE Computer Graphics & Applications, January 1990 - January 1991
Book Reviews Editor, IEEE Computer Graphics & Applications, January 1990 - January 1991
Editor, The Ray Tracing News, September 1987 - May 1989

Major Conference Activities

Member, Unified Submissions Jury, Siggraph 2024
Member, AI Creativity Track Jury, NeurIPS 2023
Member, Computer Animation Festival Jury, Siggraph 2023
Member, General Submissions Jury, Siggraph 2021
Member, General Submissions Jury, Siggraph 2020
Member, International Program Committee, International Conference in Central Europe on Computer Graphics, Visualization, and Compuuter Vision, Plzen, Czech Republic, 2015
Member, Computer Animation Festival: Real-Time Rendering Program Jury, Siggraph 2008, 2009, 2010
Member, Board of Directors, Siggraph 2009
Member, Late-Breaking Contributions Jury, Siggraph 2007
Member, Unified Program Jury, Siggraph 2007
Member, International Program Committee, First International Conference on Computer Graphics Theory and Applications, Lisboa, Portugal, 2006
Member, Program Committee, International Conference on Entertainment Computing, 2004
Member, Emerging Technologies Jury, Siggraph 2004
Member, Program Committee, International Conference on Computer Graphics and Interactive Techniques in Australasia and South East Asia, 2003
Member, ETech Advisory Committee, Siggraph 2002
Member, Computer Animation Festival Committee, Siggraph 2001
Member, Emerging Technologies Jury, Siggraph 2001
Member, Papers Committee, Siggraph 2000
Member, Art Show Jury, Siggraph 2000
Member, Emerging Technologies Jury, Siggraph 2000
Member, Papers Committee, 1999 Eurographics Rendering Workshop
Member, Panels Jury, Siggraph ’99
Member, Technical Sketches Committee, Siggraph ‘99
Member, Program Committee, International Conference on Visual Computing, Goa, India, 1999
Member, Papers Committee, 1998 Eurographics Rendering Workshop
Member, International Program Committee, 1998 Spring Conference on Computer Graphics
Member, Enhanced Realities Jury, Siggraph '98
Member, Technical Sketches Committee Jury, Siggraph '98
Member, Ongoings (Fine Art Show) Jury, Siggraph '97
Member, Electric Garden Jury, Siggraph '97
Member, Technical Sketches Committee Jury, Siggraph '97
Member, Papers Committee, Spring Computer Graphics Conference '97
Member, Papers Committee, Eurographics Rendering Workshop '97
Member, Electronic Theatre Jury, Siggraph '96
Member, Technical Sketches Committee, Siggraph '96
Member, Papers Committee, Graphics Interface '96
Member, Papers Committee, Spring Computer Graphics Conference '96
Member, Papers Committee, 1995 Eurographics Rendering Workshop
Session Chair, Texture Synthesis, Siggraph '95
Member, Papers Committee, Graphics Interface '95
Member, Papers Committee, Siggraph '95
Member, International Programme Committee, Eurographics '95
Chairman, Papers Committee, Siggraph '94
Chairman, Technical Sketches Committee, Siggraph '94
Member, International Programme Committee, Eurographics '94
Member, International Technical Committee, Compugraphics '93
Member, International Technical Committee, Graphicon '93, St. Petersburg, Russia
Session Chair, Techniques For Animation, Siggraph '93
Member, Papers Committee, Siggraph '93
Member, International Programme Committee, Eurographics '92
Member, International Programme Committee, Eurographics '91
Member, Gunther Enderle Awards Committee, Eurographics '91
Session Chair, Animation and Illustration Systems, Siggraph '91
Member, Papers Committee, Siggraph ’91

Academic Teaching

Guest lecture, AI for Games, Oregon State University, Oregon, 2023
Guest lecture, Topics in Computer Graphics, Oregon State University, Oregon, ’22, ’21, ‘20
Guest lecture on Structure for Short Stories and Films
University of Washington, Seattle, WA, Fall ’97, ’98, ’99, ’00, ‘01
“Advanced Computer Graphics” (a one-semester class)
Faculty of Mathematics and Informatics, Delft University of Technology, Delft, The Netherlands. Fall 1987. Class organizer and teacher.
“Ray Tracing and Radiosity: Fundamental Algorithms of Photorealistic Image Synthesis”,
The Berkeley Series in Visual Computing, University of California Berkeley, Berkeley, CA.
April 1991. 3-day short course organizer and teacher. Co-instructor, Peter Shirley.
“The Theory and Practice of Ray Tracing”,
The Berkeley Series in Visual Computing, University of California Berkeley, Berkeley, CA.
October 1989. 3-day short course organizer and teacher. Co-instructor, Jim Arvo.
Guest lecture, Stanford University, Stanford, CA. February 1991
Guest lectures and Teaching Assistant, University of North Carolina, Chapel Hill, NC. April 1988

Patents

Glassner, A., “A Method for Constructing and Folding Pop-up Cards,” US Patent 6,311,142.
Glassner, A., “Image Rendering System with Local, Adaptive Estimation of Incident Diffuse Energy”, US Patent 5,488,700.
Glassner, A., D. Marimont and M. Stone, “Method of Rendering a Color Image for an Output Medium From Symbolic Image Data”, US Patent 5,384,901
Glassner, A., D. Marimont and M. Stone, “Rendering a Color Image for an Output Medium from Symbolic Image Data”, European Patent 93308229.9
Glassner, A., “Methods for Converting Concave Polyhedra to Their Convex Hulls”, US Patent 5,428,717
Glassner, A., “Sequencing and Scheduling Moves for Converting Concave Polyhedra to Their Convex Hulls”, US Patent 5,317,681
Glassner, A., “Object-local Sampling Histories for Efficient Path Tracing”, US Patent 5,305,430

Open-Source Software Releases

Luminescence: An Online Loom for Weaving Cloth, Javascript, 2015
Loom simulator featuring a powerful weaving language for large patterns
https://github.com/blueberrymusic/Luminescence
The AU Library: Animation and rendering library for Processing, Java, 2014
Multi-purpose library for creating animations in Processing
https://github.com/blueberrymusic/AULib
Animation Loops, Processing, 2015-present
Animations published at https://www.tumblr.com/blog/theimaginaryinstitute
Spectrum: Open-architecture system for modern rendering system research, C, 2008
An open framework for ray tracing, radiosity, and other research

GitHub Repos

https://github.com/blueberrymusic
https://gist.github.com/blueberrymusic

Cover Images

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“DDR Box”, ACM Transactions on Graphics, ACM, January 1995
“Computing Reviews” (cover quote), vol. 23, no. 6, June 1993
“Graphics Gems III”, Art Director, Academic Press, 1992
“Graphics Gems II”, Art Director, Academic Press, 1991
“Graphics Gems”, Art Director, Academic Press, 1990
“Subdivided Icosahedra”, Arts & Letters, Bryan College, Fall 1988
“Dino's Lunch”, IEEE Computer Graphics & Applications, 8(3), May 1988
“Celtic Study 1”, Computer Graphics, 21(2), April 1987
“Sinc City”, IEEE Computer Graphics & Applications, 4(10), October 1984
“Three Rings”, Computer Graphics User's Guide, 1984

Consultation Clients

(partial list due to confidentiality agreements)
AT&T Shannon Labs
Electronic Arts
Electronic Arts Canada
IBM
Macromedia
Maxis
Microsoft Research
Radical Entertainment
Tableau Software
The Walt Disney Studios

Expert Witness Work

(partial list due to confidentiality agreements)
2017: McRO, Inc. dba Planet Blue vs. Bethesda Softworks, LLC
Worked with defendant (law firm confidential). Patent analysis.
2015-16: Diamond Grading Technologies LLC v. Gemological Institute of America Inc.
Worked with Paul Hastings LLP for defendant. Patent analysis and declaration for petition for Patent Office *inter partes* review.
2014-15: Zii Labs vs. Apple. Worked with Kirkland & Ellis for defendant.
2013-14: DSS vs. Coupons, Inc. (confidential agreement dispute). Worked with Farella Braun + Martel LLP for defendant. Analysis, reports, and deposition.
2011-12: S3 v Apple (ITC patent dispute). Worked with O'Melveny & Myers for defendant.
Patent, product, and prior art analysis.
2008-9: Patent-related confidential arbitration. Worked with Kirkland & Ellis for defendant.
Reports, deposition, and testimony.
2007-8: Bowoto v ChevronTexaco. Worked with Hadsell & Stormer for plaintiff.
Evidence analysis, reports, and deposition.
2001-2: Macromedia v Adobe (patent dispute). Worked with Fenwick & West for plaintiff.
Reports and deposition.

Cover and Logo Designs

"Deep Learning: From Basics to Practice," Volume 1, 2018
"Deep Learning: From Basics to Practice," Volume 2, 2018
"Home Security," Book Cover, 2015
"Freaks of Nurture," Book Cover, 2015
"Bait," Book Cover, 2015
The Imaginary Institute, Logo, Seattle, 2013
Coyote Wind Studios LLC, Logo, Seattle, 2002
AK Peters Publishers, Logo, Cambridge, 1993
PAPAGENA Project (European Community Esprit III), Logo, 1993
VIEW Project, Logo, Chapel Hill, 1987
First Workshop on Interactive 3D Graphics, Logo, 1988