BIBLIOGRAPHY

[1] John M. Airey and Ming Ouh-young. Two adaptive techniques let progressive radiosity outperform the traditional radiosity algorithm. Technical Report TR89-20, University of North Carolina at Chapel Hill, August 1989.

[2] John M. Airey, John H. Rohlf, , and Frederick P. Brooks. Towards image realism with interactive update rates in complex virtual building environments. *Computer Graphics*, 24(1):41–50, 1990. ACM Workshop on Interactive Graphics Proceedings.

[3] John Amanatides. Ray tracing with cones. *Computer Graphics*, 18(3):129–135, July 1984. ACM Siggraph '84 Conference Proceedings.

[4] John Amanatides and Don P. Mitchell. Antialiasing of interlaced video animation. *Computer Graphics*, 24(3):77–86, August 1990. ACM Siggraph '90 Conference Proceedings.

[5] James Arvo. Backward ray tracing. *Developments in Ray Tracing*, pages 259–263, 1985. ACM Siggraph '85 Course Notes.

[6] James Arvo and David Kirk. Particle transport and image synthesis. *Computer Graphics*, 24(3):63–66, August 1990. ACM Siggraph '90 Conference Proceedings.

[7] Norman F. Barnes. Color characteristics of artists' pigments. *Journal of the Optical Society of America*, May 1939.

[8] Daniel R. Baum, Holly E. Rushmeier, and James M. Winget. Improving radiosity solutions through the use of analytically determined form-factors. *Computer Graphics*, 23(3):325–334, July 1989. ACM Siggraph '89 Conference Proceedings.

[9] Daniel R. Baum, John R. Wallace, Michael F. Cohen, and Donald P. Greenberg. The back-buffer algorithm: an extension of the radiosity method to dynamic environments. *Visual Computer*, 2:325–334, February 1986.

[10] James Blinn. Simulation of wrinkled surfaces. *Computer Graphics*, 12(3):286–292, August 1978. ACM Siggraph '78 Conference Proceedings.

[11] James F. Blinn. Light reflection functions for simulation of clouds and dusty surfaces. *Computer Graphics*, 16(3):21–30, July 1982. ACM Siggraph '82 Conference Proceedings.

[12] James F. Blinn. Return of the jagg. *IEEE Computer Graphics and Applications*, 9(2):82–89, 1989.

[13] James F. Blinn. What we need around here is more aliasing. *IEEE Computer Graphics and Applications*, 9(1):75–79, 1989.

[14] C. Bouville, J. L. Dubois, I. Marchal, and M. L. Viaud. Monte-carlo integration applied to an illumination model. In *Eurographics '88*, pages 483–497, 1988.

[15] William E. Brackett, Wayne L. Fink, and William Pierpoint. Interior point-by-point calculations in obstructed spaces. *Journal of the Illumination Engineering Society*, pages 14–25, October 1983.

[16] Brian Cabral, Nelson Max, and Rebecca Springmeyer. Bidirectional reflectance functions from surface bump maps. *Computer Graphics*, 21(4):273–282, July 1987. ACM Siggraph '87 Conference Proceedings.

[17] A. T. Campbell and Donald S. Fussell. Adaptive mesh generation fo global diffuse illumination. *Computer Graphics*, 24(3):155–164, August 1990. ACM Siggraph '90 Conference Proceedings.

[18] Hong Chen and En-Hau Wu. An efficient radiosity solution for bump texture generation. *Computer Graphics*, 24(3):125–134, August 1990. ACM Siggraph '90 Conference Proceedings.

[19] Shenchang Eric Chen. Incremental radiosity: An extension of progressive radiosity to an interactive image synthesis system. *Computer Graphics*, 24(3):135–144, August 1990. ACM Siggraph '90 Conference Proceedings.

[20] Yong C. Chen. Lens effect on synthetic image generation based on light particle theory. *Visual Computer*, 3:125–136, 1987.

[21] F. J. J. Clarke and D. J. Parry. Helmholtz reciprocity: Its validity and application to reflectometry. *Lighting Research and Technology*, 17(1):1–11, 1985.

[22] Michael F. Cohen, Shenchang Eric Chen, John R. Wallace, and Donald P. Greenberg. A progressive refinement approach to fast radiosity image generation. *Computer Graphics*, 22(4):75–84, August 1988. ACM Siggraph '88 Conference Proceedings.

[23] Michael F. Cohen and Donald P. Greenberg. The hemi-cube: a radiosity solution for complex environments. *Computer Graphics*, 19(3):31–40, July 1985. ACM Siggraph '85 Conference Proceedings.

[24] Micheal F. Cohen, Donald P. Greenberg, David S. Immel, and Philip J. Brock. An efficient radioisty approach for realistic image synthesis. *IEEE Computer Graphics and Applications*, 6(2):26–35, 1986.

[25] Robert L. Cook. Stochastic sampling in computer graphics. *ACM Transactions on Graphics*, 5(1):51–72, January 1986.

[26] Robert L. Cook, Thomas Porter, and Loren Carpenter. Distributed ray tracing. *Computer Graphics*, 18(4):165–174, July 1984. ACM Siggraph '84 Conference Proceedings.

[27] Robert L. Cook and Kennneth E. Torrance. A reflectance model for computer graphics. *Computer Graphics*, 15(3):307–316, August 1981. ACM Siggraph '81 Conference Proceedings.

[28] R. C. Corlett. Direct monte carlo calculation of radiative heat transfer in vacuum. *Journal of Heat Transfer*, pages 376–382, November 1966.

[29] O. Devillers. Tools to study the efficiency of space subdivision structures for ray tracing. In *Second Annual Conference on Computer Graphics in Paris*, pages 467–481, September 1989.

[30] Mark A. Z. Dippe and Erling Henry Wold. Antialiasing through stochastic sampling. *Computer Graphics*, 19(3):69–78, July 1985. ACM Siggraph '85 Conference Proceedings.

[31] Walter G. Driscoll. *Handbook of Optics*. McGraw-Hill, New York, N.Y., 1978.

[32] Mark e. Lee, Richard A. Redner, and Samuel P. Uselton. Statistically optimized sampling for distributed ray tracing. *Computer Graphics*, 19(3):61–68, July 1985. ACM Siggraph '85 Conference Proceedings.

[33] David S. Falk, Dieter R. Brill, and David G. Stork. *Seeing the Light: Optics in Nature, Photography, Color, Vision, and Holography*. Harper and Row, New York, N.Y., 1986.

[34] Robert L. Feller, editor. *Artists' Pigments: A Handbook of their History and Characteristics*. Cambridge University Press, London., 1986.

[35] Eugene L. Fiume. *The Mathematical Structure of Raster Graphics*. Academic Press, San Diego, CA, 1989.

[36] James D. Foley, Andries van Dam, Steven K. Feiner, and John F. Hughes. *Computer Graphics: Principles and Practice*. Addison-Wesley, Reading, MA, second edition, 1990.

[37] Alain Fournier and Eugene Fiume. Constant-time filtering with space-variant kernels. *Computer Graphics*, 22(4):229–238, August 1988. ACM Siggraph '88 Conference Proceedings.

[38] Andrew S. Glassner. Space subdivision for fast ray tracing. *IEEE Computer Graphics and Applications*, 4(10):15–22, 1984.

[39] Andrew S. Glassner. How to derive a spectrum from an rgb triplet. *IEEE Computer Graphics and Applications*, 9(7):95–99, 1989.

[40] Cindy M. Goral, Kenneth E. Torrance, and Donald P. Greenberg. Modeling the interaction of light between diffuse surfaces. *Computer Graphics*, 18(4):213–222, July 1984. ACM Siggraph '84 Conference Proceedings.

[41] Paul Haeberli. The accumulation buffer: Hardware support for high-quality rendering. *Computer Graphics*, 24(3):309–318, August 1990. ACM Siggraph '90 Conference Proceedings.

[42] David Edward Hall. An analysis and modification of shao's radiosity method for computer graphics image synthesis. Master's thesis, Department of Mechanical Engineering, Georgia Institute of Technology, March 1990.

[43] Roy Hall. *Illumination and Color in Computer Generated Imagery*. Springer-Verlag, New York, N.Y., 1988.

[44] Roy Hall and Donald P. Greenberg. A testbed for realistic image synthesis. *IEEE Computer Graphics and Applications*, 3(8):10–20, 1983.

[45] John H. Halton. A retrospective and prospective of the monte carlo method. *SIAM Review*, 12(1):1–63, January 1970.

[46] J. M. Hammerley and D. C. Handscomb. *Monte Carlo Methods*. Wiley, New York, N.Y., 1964.

[47] Pat Hanrahan and Jim Lawson. A language for shading and lighting calculations. *Computer Graphics*, 24(3):289–298, August 1990. ACM Siggraph '90 Conference Proceedings.

[48] Pat Hanrahan and David Salzman. A rapid hierarchical radiosity algorithm for unoccluded environments. In *Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics*, pages 151–171, June 1990.

[49] Eugene Hecht and Alfred Zajac. *Optics*. Addison-Wesley, Reading, MA, 1974.

[50] Paul S. Heckbert. Filtering by repeated integration. *Computer Graphics*, 20(4):315–321, August 1986. ACM Siggraph '86 Conference Proceedings.

[51] Paul S. Heckbert. Fundamentals of texture mapping and image warping. Master's thesis, Department of E.E. and C.S., Georgia Institute of Technology, June 1989.

[52] Paul S. Heckbert. Writing a ray tracer. In Andrew S. Glassner, editor, *An Introduction to Ray Tracing*. Academic Press, San Diego, CA, 1989.

[53] Paul S. Heckbert. Adaptive radiosity textures for bidirectional ray tracing. *Computer Graphics*, 24(3):145–154, August 1990. ACM Siggraph '90 Conference Proceedings.

[54] J. R. Howell. Thermal radiation in participating media: The past, the present, and some possible futures. *Journal of Heat Transfer*, 110:1220–1227, November 1988.

[55] J. R. Howell and M. Perlmutter. Monte carlo solution of thermal transfer through radiant media between gray walls. *Journal of Heat Transfer*, pages 116–122, February 1964.

[56] David S. Immel, Michael F. Cohen, and Donald P. Greenberg. A radiosity method for non-diffuse environments. *Computer Graphics*, 20(4):133–142, August 1986. ACM Siggraph '86 Conference Proceedings.

[57] American National Standard Institute. Nomenclature and definitions for illumination engineering. ANSI Report, 1986. ANSI/IES RP-16-1986.

[58] Theodore M. Jenkins, Walter R. Nelson, and Alessandro Rindi, editors. *Monte Carlo Transport of Electrons and Photons*. Plenum Press, New York, N.Y., 1988.

[59] J. Kajiya and M. Ullner. Filtering high quality text for display on raster scan devices. *Computer Graphics*, 15(3):7–15, August 1981. ACM Siggraph '81 Conference Proceedings.

[60] James T. Kajiya. Anisotropic reflection models. *Computer Graphics*, 19(3):15–22, July 1985. ACM Siggraph '85 Conference Proceedings.

[61] James T. Kajiya. The rendering equation. *Computer Graphics*, 20(4):143–150, August 1986. ACM Siggraph '86 Conference Proceedings.

[62] James T. Kajiya and B. P. Von Herzen. Ray tracing volume densities. *Computer Graphics*, 18(4):165–174, July 1984. ACM Siggraph '84 Conference Proceedings.

[63] Malvin H. Kalos and Paula A. Whitlock. *Monte Carlo Methods*. John Wiley and Sons, New York, N.Y., 1986.

[64] Douglas Scott Kay. Transparancy, refraction and ray tracing for computer synthesized images. Master's thesis, Cornell University, January 1979.

[65] David Kirk and James Arvo. The ray tracing kernal. In *Proceedins of Ausgraph*, pages 75–82, July 1988.

[66] David Kirk and James Arvo. The ray tracing kernal. In *Proceedins of Ausgraph*, pages 75–82, July 1988.

[67] R. Victor Klassen. Modeling the effect of the atmosphere on light. *ACM Transactions on Graphics*, 6(3):215–237, July 1987.

[68] Mark Levoy. Display of surfaces from volume data. *IEEE Computer Graphics and Applications*, 8(3):29–37, 1988.

[69] Thomas J. V. Malley. A shading method for computer generated images. Master's thesis, University of Utah, June 1988.

[70] Nelson L. Max. Antialiasing scan-line data. *IEEE Computer Graphics and Applications*, 10(1):18–30, January 1990.

[71] Gary W. Meyer. Wavelength selection for synthetic image generation. *Computer Vision, Graphics, and Image Processing*, 41:57–79, 1988.

[72] Gary W. Meyer, Holly E. Rushmeyer, Michael F. Cohen, Donald P. Greenberg, and Kenneth E. Torrance. An experimental evaluation of computer graphics imagery. *ACM Transactions on Graphics*, 5(1):30–50, January 1986.

[73] W. E. Knowles Middleton and A. G. Mungall. The luminous directional reflectance of snow. *Journal of the Optical Society of America*, 42(8):572–579, August 1952.

[74] Don P. Mitchell and Arun N. Netravali. Reconstruction filters in computer graphics. *Computer Graphics*, 22(4):221–228, August 1988. ACM Siggraph '88 Conference Proceedings.

[75] Hans P. Moravec. 3d graphics and the wave theory. *Computer Graphics*, 15(3):289–296, August 1981. ACM Siggraph '81 Conference Proceedings.

[76] J.F. Murray-Coleman and A. M. Smith. The automated measurement of brdfs and their application to luminaire modeling. *Journal of the Illumination Engineering Society*, 19(1):87–99, January 1990.

[77] Eihachiro Nakamae, Kazufumi Kaneda, Takashi Okamoto, and Tomoyuki Nishita. A lighting model aiming at drive simulators. *Computer Graphics*, 24(3):395–404, August 1990. ACM Siggraph '90 Conference Proceedings.

[78] Laszlo Neuman and Attila Neumann. Photosimulation: Interreflection with arbitrary reflectance models and illumination. *Computer Graphics Forum*, 8:21–34, 1989.

[79] Tomoyuki Nishita and Eihachiro Nakamae. Continuous tone representation of three-dimensional objects taking account of shadows and interreflection. *Computer Graphics*, 19(3):23–30, July 1985. ACM Siggraph '85 Conference Proceedings.

[80] K. A. O'Donnell and E. R. Mendez. Experimental study of scattering from characterized random surfaces. *Journal of the Optical Society of America*, 4(7):1194–1205, July 1987.

[81] James Painter and Kenneth Sloan. Antialiased ray tracing by adaptive progressive refinement. *Computer Graphics*, 23(3):281–288, July 1989. ACM Siggraph '89 Conference Proceedings.

[82] Edward D. Palik. *Handbook of Optical Constants of Solids*. Academic Press, New York, N.Y., 1985.

[83] G. D. Parfitt and K. S. Sing, editors. *Characterization of Powder Surfaces*. Academic Press, New York, N.Y., 1976.

[84] Ken Perlin. An image synthesizer. *Computer Graphics*, 19(3):287–296, July 1985. ACM Siggraph '85 Conference Proceedings.

[85] Ken Perlin and Eric M. Hoffert. Hypertexture. *Computer Graphics*, 23(3):253–262, July 1989. ACM Siggraph '89 Conference Proceedings.

[86] Michael Potmesil and Indranil Chakravarty. A lens and aperture model for synthetic image generation. *Computer Graphics*, 15(3):297–305, August 1981. ACM Siggraph '81 Conference Proceedings.

[87] Pierre Poulin and Alain Fournier. A model for anisotropic reflection. *Computer Graphics*, 24(3):267–282, August 1990. ACM Siggraph '90 Conference Proceedings.

[88] Claude Puech, Francois Sillion, and Christophe Vedel. Improving interaction with radiosity-based lighting simulation programs. *Computer Graphics*, 24(1):51–57, 1990. ACM Workshop on Interactive Graphics Proceedings.

[89] Hazel Rossotti. *Colour: Why the World Isn't Grey*. Princeton University Press, Princeton, N. J., 1983.

[90] H. E. Rushmeier, D. R. Baum, and D. E. Hall. Accelerating the hemo-cube algorithm for calculating form factors. In *ASME Heat Transfer Conference*, pages 45–52, June 1990.

[91] Holly Rushmeier and Greg Ward. Experimental comparison and evaluation. *Radiosity*, 1990. ACM Siggraph '90 Course Notes.

[92] Holly E. Rushmeier. *Realistic Image Synthesis for Scenes with Radiatively Participating Media*. PhD thesis, Cornell University, May 1988.

[93] Holly E. Rushmeier and Kenneth E. Torrance. The zonal method for calculating light intensities in the presence of a participating medium. *Computer Graphics*, 21(4):293–302, July 1987. ACM Siggraph '87 Conference Proceedings.

[94] Holly E. Rushmeier and Kenneth E. Torrance. Extending the radiosity method to include specularly reflecting and translucent materials. *ACM Transaction on Graphics*, 9(1):1–27, January 1990.

[95] Bertrand Le Saec and Christophe Schlick. A progressive ray-tracing-based radiosity with general reflectance functions. In *Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics*, pages 103–116, June 1990.

[96] L. G. Schultz and F. R. Tangherlini. Optical constants of silver, gold, copper, and aluminum ii. the index of refraction n. *Journal of the Optical Society of America*, 44(5):362–368, May 1954.

[97] Y. A. Screider. *The Monte Carlo Method.* Pergamon Press, New York, N.Y., 1966.

[98] Peter Shirley. *Physically Based Lighting Calculations for Computer Graphics.* PhD thesis, University of Illinois at Urbana-Champaign, November 1990.

[99] Peter Shirley. Physically based lighting calculations for computer graphics: A modern perspective. In *Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics*, pages 67–81, June 1990.

[100] Peter Shirley. A ray tracing algorithm for global illumination. *Graphics Interface '90*, May 1990.

[101] Peter Shirley and Henry Neeman. Volume visualization at the center for supercomputing research and development. In *Proceedings of the Chapel Hill Workshop on Volume Visualization*, pages 17–20, May 1989.

[102] Robert Siegel and John R. Howell. *Thermal Radiation Heat Transfer.* McGraw-Hill, New York, N.Y., 1981.

[103] Francois Sillion and Claude Puech. A general two-pass method integrating specular and diffuse reflection. *Computer Graphics*, 23(3):335–344, July 1989. ACM Siggraph '89 Conference Proceedings.

[104] Brian E. Smits and Gary W. Meyer. Newton's colors: Simulating interference phenomena in realistic image synthesis. In *Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics*, pages 185–194, June 1990.

[105] Jerome Spanier and Ely M. Gelbard. *Monte Carlo Principles and Neutron Transport Problems.* Addison-Wesley, New York, N.Y., 1969.

[106] E. M. Sparrow and R. D. Cess. *Radiation Heat Transfer.* Brooks/Cole, Belmont, Ca., 1970.

[107] Stephen N. Spencer. The hemisphere radiosity method: A tale of two algorithms. In *Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics*, pages 127–135, June 1990.

[108] Dan Stanger. Monte carlo procedures in lighting design. *Journal of the Illumination Engineering Society*, pages 14–25, July 1984.

[109] A. H. Stroud. *Approximate Calculation of Multiple Integrals*. Prentics-Hall, Englewood Cliffs, N. J., 1971.

[110] Atsushi Takagi, Hiroshi Takaoka, Tetsuya Oshima, and Yoshinori Ogata. Accurate rendering technique based on colorimetric conception. *Computer Graphics*, 24(3):263–272, August 1990. ACM Siggraph '90 Conference Proceedings.

[111] Pierre Tellier and Kadi Bouatouch. Vers un modele d'eclairement realiste. Technical Report 464, IRISA, Campus de Beaulieu, April 1989.

[112] Spencer W. Thomas. Dispersive refraction in ray tracing. *Visual Computer*, 2:3–8, 1986.

[113] J. S. Toor and R. Viskanta. A numerical experiment of radiant heat interchange by the monte carlo method. *International Journal of Heat and Mass Transfer*, 11:883–897, 1968.

[114] Craig Upson and Micheal Keeler. V-buffer: Visible volume rendering. *Computer Graphics*, 22(4):59–64, July 1988. ACM Siggraph '88 Conference Proceedings.

[115] Steve Upstill. *The Renderman Companion*. Addison-Wesley, Reading, MA, 1990.

[116] H. C. van de Hulst. *Light Scattering by Small Particles*. Dover, New York, N.Y., 1981. Reprint of 1957 Wiley Edition.

[117] John R. Wallace, Michael F. Cohen, and Donald P. Greenberg. A two-pass solution to the rendering equation: a synthesis of ray tracing and radiosity methods. *Computer Graphics*, 21(4):311–320, July 1987. ACM Siggraph '87 Conference Proceedings.

[118] John R. Wallace, Kells A. Elmquist, and Eric A. Haines. A ray tracing algorithm for progressive radiosity. *Computer Graphics*, 23(3):335–344, July 1989. ACM Siggraph '89 Conference Proceedings.

[119] Gregory J. Ward, Francis M. Rubinstein, and Robert D. Clear. A ray tracing solution for diffuse interreflection. *Computer Graphics*, 22(4):85–92, August 1988. ACM Siggraph '88 Conference Proceedings.

[120] Mark Watt. Light-water interaction using backward beam tracing. *Computer Graphics*, 24(3):377–386, August 1990. ACM Siggraph '90 Conference Proceedings.

[121] Turner Whitted. An improved illumination model for shaded display. *Communications of the ACM*, 23(6):343–349, June 1980.

[122] Samuel J. Williamson and Herman Z. Cummins. *Light and Color in Nature and Art*. Wiley, New York, N.Y., 1983.

[123] Hau Xu, Qun-Sheng Peng, and You-Dong Liang. Accelerating radiosity method for complex scenes. In *Eurographics '89*, pages 51–61, 1989.

[124] Sidney J. Yakowitz. *Computational Probability and Simulation*. Addison-Wesley, New York, N.Y., 1977.

[125] Shigeki Yokoi, Kosuke Kurashige, and Jun ichiro Toriwaki. Rendering gems with asterism or chatoyancy. *Visual Computer*, 2:307–312, February 1986.

[126] S. K. Zeremba. The mathematical basis of monte carlo and quasi-monte carlo methods. *SIAM Review*, 10(3):303–314, July 1968.