

References

- [1] ANDREWS, H., AND HUNT. *Digital Image Restoration*. The Johns Hopkins University Press, 1977.
- [2] APODACA, A. A., AND GRITZ, L. *Advanced RenderMan: Creating CGI for motion pictures*. Morgan Kaufmann, 2000.
- [3] ASHIKHMIN, M., PREMOZE, S., AND SHIRLEY, P. A Microfacet-Based BRDF Generator. In *Proc. ACM SIGGRAPH* (July 2000), pp. 65–74.
- [4] ATI. *Pixel Shader Extension*, 2000. Specification document, available from <http://www.ati.com/online/sdk>.
- [5] ATI. *Vertex Shader Extension*, 2001. Specification document, available from <http://www.ati.com/online/sdk>.
- [6] BANKS, D. Illumination in Diverse Codimensions. In *Proc. SIGGRAPH* (July 1994), pp. 327–334.
- [7] BASTOS, R., HOFF, K., WYNN, W., AND LASTRA, A. Increased Photorealism for Interactive Architectural Walk-throughs. *1999 ACM Symposium on Interactive 3D Graphics* (April 1999), 183–190.
- [8] BERGERON, P. Shadow Volumes for Non-Planar Polygons. In *Proc. Graphics Interface* (May 1985), pp. 417–418. Extended abstract.
- [9] BERGERON, P. A General Version of Crow’s Shadow Volumes. *IEEE CG&A* 6, 9 (Sept. 1986), 17–28.
- [10] BLINN, J. Me and my (fake) shadow. *IEEE CG&A* 8, 1 (Jan. 1988), 82–86.
- [11] BLINN, J. F. Models of light reflection for computer synthesized pictures. In *Computer Graphics (SIGGRAPH ’77 Proceedings)* (July 1977), pp. 192–198.
- [12] BLINN, J. F. Simulation of wrinkled surfaces. In *Computer Graphics (SIGGRAPH ’78 Proceedings)* (Aug. 1978), pp. 286–292.
- [13] BLINN, J. F., AND NEWELL, M. E. Texture and reflection in computer generated images. *Communications of the ACM* 19 (1976), 542–546.
- [14] BLYTHE, D., GRANTHAM, B., AND KILGARD, M. J. Lighting and shading techniques for interactive applications. In *SIGGRAPH 1999 Course Notes* (Aug. 1999).
- [15] BLYTHE, D., GRANTHAM, B., KILGARD, M. J., MCREYNOLDS, T., AND NELSON, S. R. Advanced graphics programming techniques using OpenGL. In *SIGGRAPH 1999 Course Notes* (Aug. 1999).
- [16] BOLIN, M. R., AND MEYER, G. W. A Perceptually Based Adaptive Sampling Algorithm. In *Proc. ACM SIGGRAPH* (July 1998), pp. 299–310.
- [17] BROTMAN, L., AND BADLER, N. Generating Soft Shadows with a Depth Buffer Algorithm. *IEEE CG&A* 4, 10 (Oct. 1984), 71–81.
- [18] CABRAL, B., MAX, N., AND SPRINGMEYER, R. Bidirectional Reflection Functions From Surface Bump Maps. In *Proc. SIGGRAPH* (July 1987), pp. 273–281.
- [19] CABRAL, B., OLANO, M., AND NEMEC, P. Reflection space image based rendering. In *Computer Graphics (SIGGRAPH ’99 Proceedings)* (Aug. 1999), pp. 165–170.
- [20] CHIN, N., AND FEINER, S. Near Real-Time Shadow Generation Using BSP Trees. In *Proc. SIGGRAPH* (Aug. 1989), vol. 23, pp. 99–106.
- [21] CHRYSANTHOU, Y., AND SLATER, M. Shadow Volume BSP Trees for Computation of Shadows in Dynamic Scenes. In *SIGGRAPH Symp. on Interactive 3D Graphics* (Apr. 1995), pp. 45–50.
- [22] COHEN, M., AND WALLACE, J. *Radiosity and Realistic Image Synthesis*. Academic Press, 1993.
- [23] COOK, R. L. Shade Trees. In *Proc. SIGGRAPH* (July 1984), pp. 223–231.
- [24] CROW, F. Shadow Algorithms for Computer Graphics. In *Proc. SIGGRAPH* (July 1977), vol. 11, pp. 242–248.

- [25] DANA, K. J., GINNEKEN, B. V., NAYAR, S. K., AND KOENDERINK, J. J. *Columbia-Utrecht Reflectance and Texture Database*. <http://www.cs.columbia.edu/CAVE/curet/>, 1999.
- [26] DEBEVEC, P. E. Rendering synthetic objects into real scenes: Bridging traditional and image-based graphics with global illumination and high dynamic range photography. In *Computer Graphics (SIGGRAPH '98 Proceedings)* (July 1998), pp. 189–198.
- [27] DEBEVEC, P. E., AND MALIK, J. Recovering high dynamic range radiance maps from photographs. In *Computer Graphics (SIGGRAPH '97 Proceedings)* (Aug. 1997), pp. 369–378.
- [28] DEYOUNG, J., AND FOURNIER, A. Properties of Tabulated Bidirectional Reflectance Distribution Functions. In *Proc. Graphics Interface* (May 1997), pp. 47–55.
- [29] DIEFENBACH, P. *Pipeline Rendering: Interaction and Realism through Hardware-Based Multi-pass Rendering*. PhD thesis, Department of Computer and Information Science, 1996.
- [30] DIEFENBACH, P., AND BADLER, N. Pipeline Rendering: Interactive refractions, reflections and shadows. *Displays: Special Issue on Interactive Computer Graphics* 15, 3 (1994), 173–180.
- [31] DIEFENBACH, P., AND BADLER, N. Multi-Pass Pipeline Rendering: Realism For Dynamic Environments . *1997 ACM Symposium on Interactive 3D Graphics* (April 1997), 59–70.
- [32] DUFF, T. Interval arithmetic and recursive subdivision for implicit functions and constructive solid geometry. In *Proc. ACM SIGGRAPH* (July 1992), pp. 131–138.
- [33] EBERT, D. S., MUSGRAVE, F. K., PEACHEY, D., PERLIN, K., AND WORLEY, S. *Texturing and Modeling*, second ed. Academic Press, 1998.
- [34] ENGLER, D. R. VCODE: A Retargetable, Extensible, Very Fast Dynamic Code Generation System. In *Proc. ACM SIGPLAN* (1996), pp. 160–170.
- [35] ERNST, I., RÜSSELER, H., SCHULZ, H., AND WITTIG, O. Gouraud bump mapping. In *Eurographics/SIGGRAPH Workshop on Graphics Hardware* (1998), pp. 47–54.
- [36] FOURNIER, A. Separating reflection functions for linear radiosity. In *Eurographics Rendering Workshop* (June 1995), pp. 383–392.
- [37] FREEMAN, W., AND ADELSON, E. The Design and Use of Steerable Filters. *IEEE Transaction on Pattern Analysis and Machine Intelligence* 13, 9 (Sept. 1991), 891–906.
- [38] FUCHS, H., GOLDFEATHER, J., HULTQUIST, J., SPACH, S., AUSTIN, J., BROOKS, JR., F., EYLES, J., AND POULTON, J. Fast Spheres, Shadows, Textures, Transparencies, and Image Enhancements in Pixel-Planes. In *Proc. SIGGRAPH* (July 1985), vol. 19, pp. 111–120.
- [39] GOLUB, G., AND VAN LOAN, C. *Matrix Computations*. The Johns Hopkins University Press, Baltimore, Maryland, 1983.
- [40] GONDEK, J., MEYER, G., AND NEWMAN, J. Wavelength Dependent Reflectance Functions. In *Proc. ACM SIGGRAPH* (July 1994), pp. 213–220.
- [41] GOOCH, B., SLOAN, P.-P., GOOCH, A., SHIRLEY, P., AND RIESENFELD, R. Interactive technical illustration. In *ACM Symposium on Interactive 3D Graphics* (1999), pp. 31–38.
- [42] GORTLER, S., GRZESZCZUK, R., SZELINSKI, R., AND COHEN, M. The Lumigraph. In *Proc. SIGGRAPH* (Aug. 1996), pp. 43–54.
- [43] GREENE, N. Applications of World Projections. In *Proceedings of Graphics Interface '86* (May 1986), pp. 108–114.
- [44] GRITZ, L., AND HAHN, J. BMRT: A Global Illumination Implementation of the RenderMan Standard. *Journal of Graphics Tools* 1, 3 (1996), 29–47.
- [45] GUENTER, B., KNOBLOCK, T., AND RUF, E. Specializing shaders. In *Proc. SIGGRAPH* (Aug. 1995), pp. 343–350.

- [46] HAEBERLI, P., AND AKELEY, K. The accumulation buffer: Hardware support for high-quality rendering. In *Proc. SIGGRAPH* (Aug. 1990), pp. 309–318.
- [47] HAEBERLI, P., AND SEGAL, M. Texture mapping as a fundamental drawing primitive. In *Fourth Eurographics Workshop on Rendering* (June 1993), pp. 259–266.
- [48] HALL, R. *Illumination and Color in Computer Generated Imagery*. Springer-Verlag, New York, 1989.
- [49] HANRAHAN, P. *Radiosity and Realistic Image Synthesis*. Academic Press, 1993, ch. Rendering Concepts.
- [50] HANRAHAN, P., AND LAWSON, J. A language for shading and lighting calculations. In *Computer Graphics (SIGGRAPH '90 Proceedings)* (Aug. 1990), pp. 289–298.
- [51] HANSEN, P. Introducing pixel texture. In *Developer News*. Silicon Graphics Inc., May 1997, pp. 23–26.
- [52] HE, X., TORRANCE, K., SILLION, F., AND GREENBERG, D. A comprehensive physical model for light reflection. In *Proc. SIGGRAPH* (July 1991), pp. 175–186.
- [53] HEIDRICH, W. *High-quality Shading and Lighting for Hardware-accelerated Rendering*. PhD thesis, Universität Erlangen-Nürnberg, 1999.
- [54] HEIDRICH, W., KAUTZ, J., SLUSALLEK, P., AND SEIDEL, H.-P. Canned lightsources. In *Rendering Techniques '98 (Proceedings of Eurographics Rendering Workshop)* (1998).
- [55] HEIDRICH, W., AND SEIDEL, H. Efficient Rendering of Anisotropic Surfaces Using Computer Graphics Hardware. In *Image and Multi-dimensional DSP Workshop (IMDSP)* (1998).
- [56] HEIDRICH, W., AND SEIDEL, H.-P. View-independent environment maps. In *Eurographics/SIGGRAPH Workshop on Graphics Hardware* (1998), pp. 39–45.
- [57] HEIDRICH, W., AND SEIDEL, H.-P. Realistic, hardware-accelerated shading and lighting. In *Computer Graphics (SIGGRAPH '99 Proceedings)* (Aug. 1999).
- [58] HEIDRICH, W., SLUSALLEK, P., AND SEIDEL, H.-P. An image-based model for realistic lens systems in interactive computer graphics. In *Graphics Interface '97* (1997), pp. 68–75.
- [59] HEIDRICH, W., WESTERMANN, R., SEIDEL, H.-P., AND ERTL, T. Applications of pixel textures in visualization and realistic image synthesis. In *ACM Symposium on Interactive 3D Graphics* (1999). Accepted for publication.
- [60] INC., S. G. *Pixel Texture Extension*, Dec. 1996. Specification document, available from <http://www.opengl.org>.
- [61] JENSEN, H., AND CHRISTENSEN, P. Efficient Simulation of Light Transport in Scenes with Participating Media using Photon Maps. In *Proc. ACM SIGGRAPH* (July 1998), pp. 311–320.
- [62] KAJIYA, J. T. The rendering equation. In *Computer Graphics (SIGGRAPH '86 Proceedings)* (Aug. 1986), pp. 143–150.
- [63] KAUTZ, J. Hardware Rendering with Bidirectional Reflectances. Tech. Rep. TR-99-02, Dept. Comp. Sci., U. of Waterloo, 1999.
- [64] KAUTZ, J. Interactive Reflections with Arbitrary BRDFs. Tech. Rep. TR-99-XX, Dept. Comp. Sci., U. of Waterloo, 1999.
- [65] KAUTZ, J., AND MCCOOL, M. Interactive Rendering with Arbitrary BRDFs using Separable Approximations. In *Tenth Eurographics Workshop on Rendering* (June 1999), pp. 281–292.
- [66] KAUTZ, J., AND MCCOOL, M. D. Interactive Rendering with Arbitrary BRDFs using Separable Approximations. In *Eurographics Rendering Workshop* (June 1999).
- [67] KAUTZ, J., AND MCCOOL, M. D. Approximation of Glossy Reflection with Prefiltered Environment Maps. In *Proc. Graphics Interface* (May 2000), pp. 119–126.
- [68] KAUTZ, J., VÁZQUEZ, P.-P., HEIDRICH, W., AND SEIDEL, H.-P. Unified approach to prefiltered environment maps. In *submitted* (2000).

- [69] KELLER, A. Instant Radiosity. In *Proc. SIGGRAPH* (Aug. 1997), pp. 49–56.
- [70] KILGARD, M. *OpenGL-based Real-Time Shadows*. http://reality.sgi.com/mjk_asd/tips/rts/, 1997.
- [71] KILGARD, M. J. Realizing OpenGL: Two implementations of one architecture. In *Eurographics/SIGGRAPH Workshop on Graphics Hardware* (1997).
- [72] KILGARD, M. J. A practical and robust bump-mapping technique for today’s GPU’s. Tech. rep., NVIDIA Corp., Feb. 2000. Available at <http://www.nvidia.com/>.
- [73] KOENDERINK, J., VAN DOORN, A., AND STAVRIDIS, M. Bidirectional Reflection Distribution Function Expressed in Terms of Surface Scattering Modes. In *European Conference on Computer Vision* (1996), pp. 28–39.
- [74] LAFORTUNE, E., FOO, S.-C., TORRANCE, K., AND GREENBERG, D. Non-linear approximation of reflectance functions. In *Proc. SIGGRAPH* (Aug. 1997), pp. 117–126.
- [75] LAFORTUNE, E., AND WILLEMS, Y. Using the modified Phong reflectance model for physically based rendering. Tech. Rep. CW197, Dept. Comp. Sci., K.U. Leuven, 1994.
- [76] LARSON, G. W., RUSHMEIER, H., AND PIATKO, C. A Visibility Matching Tone Reproduction Operator for High Dynamic Range Scenes. *IEEE Transactions on Visualization and Computer Graphics* 3, 4 (Oct.–Dec. 1997), 291–306.
- [77] LASTRA, A., MOLNAR, S., OLANO, M., AND WANG, Y. Real-time programmable shading. *1995 Symposium on Interactive 3D Graphics* (April 1995), 59–66. ISBN 0-89791-736-7.
- [78] LENGYEL, J. E. Real-Time Fur. In *Rendering Techniques ’00 (Proc. Eurographics Workshop on Rendering)* (2000), Springer, pp. 243–256.
- [79] LEVOY, M., AND HANRAHAN, P. Light field rendering. In *Proc. SIGGRAPH* (Aug. 1996), pp. 31–42.
- [80] LEWIS, R. Making shaders more physically plausible. In *Eurographics Workshop on Rendering* (June 1993), pp. 47–62.
- [81] LINDHOLM, E., KILGARD, M., AND MORETON, H. A User-Programmable Vertex Engine. In *Proc. ACM SIGGRAPH* (Aug. 2001).
- [82] LISCHINSKI, D., AND RAPPOPORT, A. Image-Based Rendering for Non-Diffuse Synthetic Scenes. *Ninth Eurographics Workshop on Rendering* (June 1998), 301–314.
- [83] LITWINOWICZ, P. Processing images and video for an impressionistic effect. In *Proc. SIGGRAPH* (Aug. 1997), pp. 407–414.
- [84] LOKOVIC, T., AND VEACH, E. Deep Shadow Maps. In *Proc. ACM SIGGRAPH* (July 2000), pp. 385–392.
- [85] LOZANO, R., ET AL. Colorimetry. Tech. Rep. 15.2, Commission internationale de l’éclairage (CIE), 1986.
- [86] MCCOOL, M. Analytic Antialiasing With Prism Splines. In *Proc. SIGGRAPH* (Aug. 1995), pp. 429–436.
- [87] MCCOOL, M. Shadow Volume Reconstruction. Tech. Rep. CS-98-06, University of Waterloo Department of Computer Science, 1998.
- [88] MCCOOL, M. D. Shadow Volume Reconstruction from Depth Maps. *ACM Trans. on Graphics* 19, 1 (Jan. 2000), 1–26.
- [89] MCCOOL, M. D., ANG, J., AND AHMAD, A. Homomorphic Factorization of BRDFs for High-Performance Rendering. In *Proc. ACM SIGGRAPH* (Aug. 2001).
- [90] MCCOOL, M. D., AND HEIDRICH, W. Texture Shaders. In *Proc. Eurographics/SIGGRAPH Workshop on Graphics Hardware* (1999), pp. 117–126.
- [91] MCREYNOLDS, T., BLYTHE, D., GRANTHAM, B., AND NELSON, S. Advanced graphics programming techniques using OpenGL. In *SIGGRAPH 1998 Course Notes* (July 1998).
- [92] MEYER, G. W. Wavelength Selection for Synthetic Image Generation. *CVGIP* 41 (1988), 57–79.

- [93] MILLER, G., AND HOFFMAN, R. Illumination and Reflection Maps: Simulated Objects in Simulated and Real Environments. In *SIGGRAPH '84 Course Notes – Advanced Computer Graphics Animation* (July 1984).
- [94] MILLER, G. S. P., RUBIN, S., AND PONCELEON, D. Lazy Decompression of Surface Light Fields for Precomputed Global Illumination. *Nineth Eurographics Workshop on Rendering* (June 1998), 281–292.
- [95] MINNAERT, M. The reciprocity principle in lunar photometry. *Astrophysical Journal* 93 (May 1941), 403–410.
- [96] MITCHELL, D. P. Robust ray intersection with interval arithmetic. In *Proc. Graphics Interface* (May 1990), pp. 68–74.
- [97] MÖLLER, T., AND HAINES, E. *Real-Time Rendering*. A. K. Peters, 1999.
- [98] MOLNAR, S., EYLES, J., AND POULTON, J. PixelFlow: High-speed rendering using image composition. In *Proc. SIGGRAPH* (July 1992), pp. 231–240.
- [99] NAYAR, S. K. Catadioptric omnidirectional camera. In *IEEE Conference on Computer Vision and Pattern Recognition* (June 1997), pp. 482–488.
- [100] NEUMANN, L., AND NEUMANN, A. Photosimulation: interreflection with arbitrary reflectance models and illuminations. *Computer Graphics Forum* 8, 1 (Mar. 1989), 21–34.
- [101] OFEK, E., AND RAPPOPORT, A. Interactive reflections on curved objects. In *Proc. SIGGRAPH* (July 1998), pp. 333–342.
- [102] OLANO, M. *A Programmable Pipeline for Graphics Hardware*. PhD thesis, University of North Carolina at Chapel Hill, 1999.
- [103] OLANO, M., AND LASTRA, A. A shading language on graphics hardware: The pixelflow shading system. In *Proc. SIGGRAPH* (July 1998), pp. 159–168.
- [104] OWENS, J. D., DALLY, W. J., KAPASI, U. J., RIXNER, S., MATTSON, P., AND MOWERY, B. Polygon Rendering on a Stream Architecture. In *Proc. Eurographics/SIGGRAPH Workshop on Graphics Hardware* (2000), pp. 23–32.
- [105] PEACHEY, D. Solid texturing of complex surfaces. In *Proc. ACM SIGGRAPH* (July 1985), pp. 279–286.
- [106] PEERCY, M. Linear Color Representations for Full Spectral Rendering. In *Proc. ACM SIGGRAPH* (Aug. 1993), pp. 191–198.
- [107] PEERCY, M., AIREY, J., AND CABRAL, B. Efficient bump mapping hardware. In *Computer Graphics (SIGGRAPH '97 Proceedings)* (Aug. 1997), pp. 303–306.
- [108] PEERCY, M. S., OLANO, M., AIREY, J., AND UNGAR, P. J. Interactive multi-pass programmable shading. *Proceedings of SIGGRAPH 2000* (July 2000), 425–432. ISBN 1-58113-208-5.
- [109] PERLIN, K. An image synthesizer. *Computer Graphics (Proceedings of SIGGRAPH 85)* 19, 3 (July 1985), 287–296.
- [110] PHONG, B.-T. Illumination for computer generated pictures. *Comm. ACM* 18, 6 (June 1975), 311–317.
- [111] POULIN, P., AND FOURNIER, A. A model for anisotropic reflection. In *Proc. SIGGRAPH* (Aug. 1990), pp. 273–282.
- [112] PRESS, W., TEUKOLSKY, S., VETTERLING, W., AND FLANNERY, B. *Numerical Recipes in C: The Art of Scientific Computing (2nd ed.)*. Cambridge University Press, 1992.
- [113] PROUDFOOT, K., MARK, W. R., HANRAHAN, P., AND TZVETKOV, S. A Real-Time Procedural Shading System for Programmable Graphics Hardware. In *Proc. ACM SIGGRAPH* (Aug. 2001), p. to appear.
- [114] RASO, M., AND FOURNIER, A. A Piecewise Polynomial Approach to Shading Using Spectral Distributions. In *Proc. Graphics Interface* (June 1991), pp. 40–46.
- [115] REEVES, W., SALESIN, D., AND COOK, R. Rendering Antialiased Shadows with Depth Maps. In *Proc. SIGGRAPH* (July 1987), vol. 21, pp. 283–291.
- [116] ROSSIGNAC, J., AND REQUICHA, A. Depth-Buffering Display Techniques for Constructive Solid Geometry. *IEEE CG&A* 6, 9 (1986), 29–39.

- [117] RUSINKIEWICZ, S. A new change of variables for efficient BRDF representation. In *Eurographics Workshop on Rendering* (June 1998), pp. 11–23.
- [118] SALISBURY, M., WONG, M., HUGHES, J., AND SALESIN, D. Orientable textures for image-based pen-and-ink illustration. In *Proc. SIGGRAPH* (Aug. 1997), pp. 401–406.
- [119] SCHILLING, A., KNITTEL, G., AND STRASSER, W. Texram: A smart memory for texturing. *IEEE Computer Graphics and Applications* 16, 3 (May 1996), 32–41.
- [120] SCHLICK, C. A customizable reflectance model for everyday rendering. In *Eurographics Workshop on Rendering* (June 1993), pp. 73–84.
- [121] SCHRAMM, M., GONDEK, J., AND MEYER, G. Light Scattering Simulations using Complex Subsurface Models. In *Proc. Graphics Interface* (May 1997), pp. 56–67.
- [122] SCHRÖDER, P., AND SWELDENS, W. Spherical Wavelets: Efficiently Representing Functions on the Sphere. In *Proc. SIGGRAPH* (Aug. 1995), pp. 161–172.
- [123] SEGAL, M., AND AKELEY, K. *The OpenGL Graphics System: A Specification (Version 1.2.1)*, 1999.
- [124] SEGAL, M., KOROBKIN, C., VAN WIDENFELT, R., FORAN, J., AND HAEBERLI, P. Fast shadow and lighting effects using texture mapping. In *Computer Graphics (SIGGRAPH '92 Proceedings)* (July 1992), pp. 249–252.
- [125] SLOAN, P.-P. J., AND COHEN, M. F. Interactive Horizon Mapping. In *Rendering Techniques '00 (Proc. Eurographics Workshop on Rendering)* (2000), Springer, pp. 281–286.
- [126] SLUSALLEK, P., STAMMINGER, M., HEIDRICH, W., POPP, J.-C., AND SEIDEL, H.-P. Composite Lighting Simulations with Lighting Networks. *IEEE CG&A* 18, 2 (Mar. 1998), 22–31.
- [127] SNYDER, J. M. Interval analysis for computer graphics. In *Proc. ACM SIGGRAPH* (July 1992), vol. 26, pp. 121–130.
- [128] SOLER, C., AND SILLION, F. X. Fast Calculation of Soft Shadow Textures Using Convolution. In *Proc. ACM SIGGRAPH* (1998), pp. 321–332.
- [129] STÜRZLINGER, W., AND BASTOS, R. Interactive Rendering of Globally Illuminated Glossy Scenes. In *Eighth Eurographics Workshop on Rendering Workshop* (June 1997), Eurographics, pp. 93–102.
- [130] TRENDALL, C., AND STEWART, A. J. General Calculations using Graphics Hardware, with Applications to Interactive Caustics. In *Rendering Techniques '00 (Proc. Eurographics Workshop on Rendering)* (2000), Springer, pp. 287–298.
- [131] TUMBLIN, J., AND RUSHMEIER, H. Tone reproduction for realistic images. *IEEE CG&A* 13, 6 (Nov. 1993), 42–48.
- [132] UPSTILL, S. *The RenderMan companion: A Programmer's Guide to Realistic Computer Graphics*. Addison-Wesley, 1990.
- [133] VEACH, E., AND GUIBAS, L. Bidirectional Estimators for Light Transport. In *Fifth Eurographics Workshop on Rendering* (June 1994), pp. 147–162.
- [134] VEACH, E., AND GUIBAS, L. Optimally Combining Sampling Techniques for Monte Carlo Rendering. In *Proc. SIGGRAPH* (Aug. 1995), pp. 419–428.
- [135] VLACHOS, A., PETERS, J., BOYD, C., AND MITCHELL, J. L. Curved pn triangles. *2001 ACM Symposium on Interactive 3D Graphics* (March 2001), 159–166. ISBN 1-58113-292-1.
- [136] VOORHIES, D., AND FORAN, J. Reflection Vector Shading Hardware. In *Proc. SIGGRAPH* (July 1994), pp. 163–166.
- [137] WALTER, B., ALPPAY, G., LAFORTUNE, E., FERNANDEZ, S., AND GREENBERG, D. Fitting virtual lights For non-diffuse walkthroughs. In *Proc. SIGGRAPH* (Aug. 1997), pp. 45–48.
- [138] WANGER, L. The effect of shadow quality on the perception of spatial relationships in computer generated imagery. In *SIGGRAPH Symp. on Interactive 3D Graphics* (Mar. 1992), pp. 39–42.
- [139] WARD, G. Measuring and modeling anisotropic reflection. In *Proc. SIGGRAPH* (July 1992), pp. 265–272.

- [140] WARD, G. Towards More Practical Reflectance Measurements and Models. In *Graphics Interface '92 Workshop on Local Illumination* (May 1992), pp. 15–21.
- [141] WARD, G. The RADIANCE lighting simulation and rendering system. In *Proc. ACM SIGGRAPH* (July 1994), pp. 459–472.
- [142] WESTIN, S., ARVO, J., AND TORRANCE, K. Predicting Reflectance Functions From Complex Surfaces. In *Proc. SIGGRAPH* (July 1992), pp. 255–264.
- [143] WILLIAMS, L. Casting curved shadows on curved surfaces. In *Proc. SIGGRAPH* (Aug. 1978), vol. 12, pp. 270–274.
- [144] WILLIAMS, L. Pyramidal parametrics. In *Computer Graphics (SIGGRAPH '83 Proceedings)* (July 1983), pp. 1–11.
- [145] WOO, A., POULIN, P., AND FOURNIER, A. A Survey of Shadow Algorithms. *IEEE CG&A* 10, 6 (Nov. 1990), 13–32.