

References

1			1
2			2
3			3
4			4
5			5
6			6
7			7
8			8
9	[1]	E. H. Adelson. "Saturation and Adaptation in the Rod System," <i>Vision Research</i> , 22:1299–1312, 1982.	9
10			10
11			11
12	[2]	Adobe. Tiff 6.0 specification, 1992, http://partners.adobe.com/asn/tech/tiff/specification.jsp .	12
13			13
14			14
15	[3]	Adobe. Digital negative (DNG), 2004, www.adobe.com/products/dng/main.html .	15
16			16
17			17
18	[4]	A. O. Akyuz, E. Reinhard, and S. Pattanaik. "Color Appearance Models and Dynamic Range Reduction," in <i>First ACM Symposium on Applied Perception in Graphics and Visualization (APGV)</i> , pp. 166, New York: ACM, 2004.	18
19			19
20			20
21			21
22	[5]	S. Mann and R. W. Picard. "Being Undigital with Digital Cameras: Extending Dynamic Range by Combining Differently Exposed Pictures," in <i>IS&T's 48th Annual Conference</i> , Washington, DC: Society for Imaging Science and Technology, May 1995.	22
23			23
24			24
25			25
26			26
27	[6]	M. Ashikhmin. "A Tone Mapping Algorithm for High Contrast Images," in <i>Proceedings of 13th Eurographics Workshop on Rendering</i> , pp. 145–155, Pisa, Italy: Eurographics Association, 2002.	27
28			28
29			29
30			30
31	[7]	K. Barnard. "Practical Colour Constancy," Ph.D. thesis, Simon Fraser University, School of Computing, 1999.	31
32			32
33			33
34	[8]	P. J. Burt and E. H. Adelson. "A Multiresolution Spline with Application to Image Mosaics," <i>ACM Transactions on Graphics</i> , 2(4):217–236, 1983.	34
35			35

1	[9]	K. Chiu, M. Herf, P. Shirley, S. Swamy, C. Wang, and K. Zimmerman. "Spatially Nonuniform Scaling Functions for High Contrast Images," in <i>Proceedings of Graphics Interface '93</i> , pp. 245–253, Toronto, May 1993.	1
2			2
3			3
4			4
5	[10]	P. Choudhury and J. Tumblin. "The Trilateral Filter for High Contrast Images and Meshes," in <i>Proceedings of the Eurographics Symposium on Rendering</i> , pp. 186–196, 2003.	5
6			6
7			7
8			8
9	[11]	CIE. "An Analytic Model for Describing the Influence of Lighting Parameters upon Visual Performance: Vol 1, Technical Foundations," Technical report, CIE Pub. 19/2.1 Technical committee 3.1, 1981.	9
10			10
11			11
12			12
13	[12]	CIE. "The CIE 1997 Interim Colour Appearance Model (Simple Version)," CIECAM97s. Technical report, CIE Pub. 131, Vienna, 1998.	13
14			14
15			15
16	[13]	D. Comaniciu and P. Meer. "Mean Shift: A Robust Approach Toward Feature Space Analysis," in <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 24(5):603–619, Los Alamitos: IEEE Computer Society, 2002.	16
17			17
18			18
19			19
20	[14]	R. W. Corrigan, B. R. Lang, D. A. LeHoty, and P. A. Alioshin. "An Alternative Architecture for High Performance Display," in <i>141st SMPTE Technical Conference and Exhibition</i> , New York: SMPTE, November 1999.	20
21			21
22			22
23			23
24	[15]	S. Daly. "The Visible Difference Predictor: An Algorithm for the Assessment of Image Fidelity," in A. B. Watson (ed.), <i>Digital Images and Human Vision</i> , pp. 179–206, Cambridge, MA: MIT Press, 1993.	24
25			25
26			26
27			27
28			28
29	[16]	H. J. A. Dartnall, J. K. Bowmaker, and J. D. Mollon. "Human Visual Pigments: Microspectrophotometric Results from the Eyes of Seven Persons," in <i>Proceedings of the Royal Society of London B</i> , 220:115–130, London: The Royal Society, 1983.	29
30			30
31			31
32			32
33			33
34	[17]	P. E. Debevec. "Rendering Synthetic Objects into Real Scenes: Bridging Traditional and Image-based Graphics with Illumination and High Dy-	34
35			35

REFERENCES

469

- 1 namic Range Photography,” in *SIGGRAPH 98 Conference Proceedings*, Annual 1
 2 Conference Series, pp. 45–50, ACM SIGGRAPH, 1998. 2
 3 3
 4 [18] P. E. Debevec and J. Malik. “Recovering High Dynamic Range Radiance 4
 5 Maps from Photographs,” in *SIGGRAPH 97 Conference Proceedings*, Annual Con- 5
 6 ference Series, pp. 369–378, ACM SIGGRAPH, August 1997. 6
 7 7
 8 [19] J. E. Dowling. *The Retina: An Approachable Part of the Brain*. Cambridge, MA: 8
 9 Belknap Press, 1987. 9
 10 10
 11 [20] F. Drago, W. L. Martens, K. Myszkowski, and H-P Seidel. “Perceptual Eval- 11
 12 uation of Tone Mapping Operators with Regard to Similarity and Prefer- 12
 13 ence,” Technical Report MPI-I-2002-4-002, Max Plank Institut für Infor- 13
 14 matik, 2002. 14
 15 15
 16 [21] F. Drago, K. Myszkowski, T. Annen, and N. Chiba. “Adaptive Logarith- 16
 17 mic Mapping for Displaying High Contrast Scenes,” *Computer Graphics Forum*, 17
 18 22(3), 2003. 18
 19 19
 20 [22] F. Durand and J. Dorsey. “Interactive Tone Mapping,” in *Proceedings of the 11th* 20
 21 *Eurographics Workshop on Rendering*, pp. 219–230, Brno: Eurographics Associa- 21
 22 tion, 2000. 22
 23 23
 24 [23] F. Durand and J. Dorsey. “Fast Bilateral Filtering for the Display of 24
 25 High-dynamic-range Images,” *ACM Transactions on Graphics*, 21(3):257–266, 25
 26 2002. 26
 27 27
 28 [24] P. Dutré, P. Bekaert, and K. Bala. *Advanced Global Illumination*. Natick, MA: A. 28
 29 K. Peters, 2003. 29
 30 30
 31 [25] Eastman Kodak Company. Applied science fiction web site, [www.asf.com/](http://www.asf.com/products/FPS/fpsfaq.shtml) 31
 32 [products/FPS/fpsfaq.shtml](http://www.asf.com/products/FPS/fpsfaq.shtml), July 2004. 32
 33 33
 34 [26] S. R. Ellis, W. S. Kim, M. Tyler, M. W. McGreevy, and L. Stark. “Visual En- 34
 35 hancements for Perspective Displays: Perspective Parameters,” in *Proceedings* 35

1	of the <i>IEEE International Conf. on Systems, Man and Cybernetics</i> , New York: IEEE SMC	1
2	Society, 1985.	2
3		3
4	[27] M. D. Fairchild. <i>Color Appearance Models</i> (2nd ed.), West Sussex, England:	4
5	John Wiley and Sons, 2005.	5
6		6
7	[28] M. D. Fairchild. "Revision of CIECAM97s for Practical Applications," <i>Color</i>	7
8	<i>Research and Application</i> , 26:418–427, 2001.	8
9		9
10		10
11	[29] M. D. Fairchild and G. M. Johnson. "The iCAM Framework for Image Ap-	11
12	pearance, Image Differences, and Image Quality," <i>Journal of Electronic Imaging</i> ,	12
13	13:126–138, 2004.	13
14		14
15	[30] M. D. Fairchild and G. M. Johnson. "Meet iCAM: An Image Color Appear-	15
16	ance Model," in <i>IS&T/SID 10th Color Imaging Conference</i> , pp. 33–38, Scottsdale:	16
17	IS&T, 2002.	17
18		18
19		19
20	[31] M. D. Fairchild, G. M. Johnson, J. Kuang, and H. Yamaguchi. "Image Ap-	20
21	pearance Modelling and High-dynamic-range Image Rendering," in <i>First</i>	21
22	<i>ACM Symposium on Applied Perception in Graphics and Visualization (APGV)</i> , p. 159,	22
23	New York: ACM, 2004.	23
24		24
25	[32] R. Fattal, D. Lischinski, and M. Werman. "Gradient Domain High Dynamic	25
26	Range Compression," <i>ACM Transactions on Graphics</i> , 21(3):249–256, 2002.	26
27		27
28		28
29	[33] P. Ferschin, I. Tastl, and W. Purgathofer. "A Comparison of Techniques for	29
30	the Transformation of Radiosity Values to Monitor Colors," in <i>First IEEE</i>	30
31	<i>International Conference on Image Processing</i> , pp. 13–16, Piscataway: IEEE Signal	31
32	Processing Society, 1994.	32
33		33
34	[34] J. A. Ferwerda. "Elements of Early Vision for Computer Graphics," <i>IEEE</i>	34
35	<i>Computer Graphics and Applications</i> , 21(5):22–33, 2001.	35

REFERENCES

471

- 1 [35] J. A. Ferwerda, S. Pattanaik, P. Shirley, and D. P. Greenberg. “A Model of 1
2 Visual Adaptation for Realistic Image Synthesis,” in *SIGGRAPH 96 Conference* 2
3 *Proceedings*, pp. 249–258, ACM SIGGRAPH, August 1996. 3
4 4
- 5 [36] G. D. Finlayson and S. Süsstrunk. “Color Ratios and Chromatic Adapta- 5
6 tion,” in *Proceedings of IS&T CGIV*, pp. 7–10, Poitiers, France: IS&T, 2002. 6
7 7
- 8 [37] J. Foley, A. van Dam, S. Feiner, and J. Hughes. *Computer Graphics, Principles and* 8
9 *Practice* (2nd ed.), Reading, MA: Addison-Wesley, 1990. 9
10 10
- 11 [38] J. Forrester, A. Dick, P. McMenemy, and W. Lee. *The Eye: Basic Sciences in* 11
12 *Practice*. London: W. B. Saunders, 2001. 12
13 13
- 14 [39] M. Frigo and S. G. Johnson. “FFTW: An Adaptive Software Architecture 14
15 for the FFT,” in *ICASSP Conference Proceedings*, Vol. 3, pp. 1381–1384, Seattle: 15
16 IEEE, 1998. 16
17 17
- 18 [40] A. Gardner, C. Tchou, T. Hawkins, and P. Debevec. “Linear Light Source 18
19 Reflectometry,” *ACM Trans. on Graphics*, 22(3):749–758, 2003. 19
20 20
- 21 [41] W. S. Geisler. “Effects of Bleaching and Backgrounds on the Flash Response 21
22 of the Cone System,” *Journal of Physiology*, 312:413–434, 1981. 22
23 23
- 24 [42] A. S. Glassner. *Principles of Digital Image Synthesis*. San Francisco: Morgan Kauf- 24
25 mann, 1995. 25
26 26
- 27 [43] N. Goodnight, R. Wang, C. Woolley, and G. Humphreys. “Interactive 27
28 Time-dependent Tone Mapping Using Programmable Graphics Hard- 28
29 ware,” in *Proceedings of the 13th Eurographics Workshop on Rendering*, pp. 26–37, 29
30 Pisa: Eurographics Association, 2003. 30
31 31
- 32 [44] N. Graham. *Visual Pattern Analyzer*. New York: Oxford University Press, 1989. 32
33 33
- 34 [45] N. Graham and D. C. Hood. “Modeling the Dynamics of Light Adaptation: 34
35 The Merging of Two Traditions,” *Vision Research*, 32:1373–1393, 1992. 35

- | | | | |
|----|-------------|--|----|
| 1 | [46] | N. Greene and P. S. Heckbert. "Creating Raster Omnimax Images from | 1 |
| 2 | | Multiple Perspective View Using the Elliptical Weighted Average Filter," | 2 |
| 3 | | <i>IEEE Computer Graphics and Applications</i> , 6(6):21–27, June 1986. | 3 |
| 4 | | | 4 |
| 5 | [47] | R. Hall. <i>Illumination and Color in Computer Generated Imagery</i> . New York: Springer- | 5 |
| 6 | | Verlag, 1989. | 6 |
| 7 | | | 7 |
| 8 | [48] | E. Hecht. <i>Optics</i> (2nd ed.), Reading, MA: Addison-Wesley, 1987. | 8 |
| 9 | | | 9 |
| 10 | [49] | M. Hogan, J. Alvarado, and J. Weddell. <i>Histology of the Human Eye</i> . Philadel- | 10 |
| 11 | | phia: W. B. Saunders, 1971. | 11 |
| 12 | | | 12 |
| 13 | [50] | D. C. Hood and M. A. Finkelstein. "Comparison of Changes in Sensitivity | 13 |
| 14 | | and Sensation: Implications for the Response-intensity Function of the | 14 |
| 15 | | Human Photopic System," <i>Journal of Experimental Psychology: Human Perceptual</i> | 15 |
| 16 | | <i>Performance</i> , 5:391–405, 1979. | 16 |
| 17 | | | 17 |
| 18 | [51] | D. C. Hood and M. A. Finkelstein. "Sensitivity to Light," in K. R. Boff, L. R. | 18 |
| 19 | | Kaufman, and J. P. Thomas (eds.), <i>Handbook of Perception and Human Performance</i> , | 19 |
| 20 | | New York: Wiley, 1986. | 20 |
| 21 | | | 21 |
| 22 | | | 22 |
| 23 | [52] | D. C. Hood, M. A. Finkelstein, and E. Buckingham. "Psychophysical Tests | 23 |
| 24 | | of Models of the Response Function," <i>Vision Research</i> , 19:401–406, 1979. | 24 |
| 25 | | | 25 |
| 26 | [53] | B. K. P. Horn. "Determining Lightness from an Image," <i>CVGIP</i> , 3:277– | 26 |
| 27 | | 299, 1974. | 27 |
| 28 | | | 28 |
| 29 | [54] | R. W. G. Hunt and M. R. Luo. "The Structure of the CIECAM97 Colour | 29 |
| 30 | | Appearance Model (CIECAM97s)," in <i>CIE Expert Symposium '97</i> , Scottsdale: | 30 |
| 31 | | CIE, 1997. | 31 |
| 32 | | | 32 |
| 33 | | | 33 |
| 34 | [55] | R. W. G. Hunt. <i>The Reproduction of Colour</i> , West Sussex, England: John Wiley | 34 |
| 35 | | and Sons, 2004. | 35 |

REFERENCES

473

1	[56]	IEC. “Extended RGB Colour Space — sRGB, Multimedia Systems, and	1
2		Equipment: Colour Measurement and Management, Part 2-2, Colour	2
3		Management,” Technical Report 61966-2-2, IEC, 2003.	3
4			4
5	[57]	ITU (International Telecommunication Union), Geneva. ITU-R Recommen-	5
6		dation BT.709, Basic Parameter Values for the HDTV Standard for the Studio and for Inter-	6
7		national Programme Exchange, 1990. (Formerly CCIR Rec. 709.)	7
8			8
9			9
10	[58]	H. W. Jensen. <i>Realistic Image Synthesis Using Photon Mapping</i> . Natick, MA: A. K.	10
11		Peters, 2001.	11
12			12
13	[59]	D. J. Jobson, Z. Rahman, and G. A. Woodell. “Retinex Image Process-	13
14		ing: Improved Fidelity to Direct Visual Observation,” in <i>Proceedings of the</i>	14
15		<i>IS&T Fourth Color Imaging Conference: Color Science, Systems, and Applications</i> , Vol. 4,	15
16		pp. 124–125, Scottsdale: IS&T, 1995.	16
17			17
18			18
19	[60]	G. M. Johnson. “Cares and Concerns of CIE TC8-08: Spatial Appearance	19
20		Modeling and HDR Imaging,” in <i>SPIE/IS&T Electronic Imaging Conference</i> , San	20
21		Jose: IS&T, 2005.	21
22			22
23	[61]	G. M. Johnson and M. D. Fairchild. “Rendering HDR Images,” in <i>IS&T/SID</i>	23
24		<i>11th Color Imaging Conference</i> , pp. 36–41, Scottsdale: IS&T, 2003.	24
25			25
26	[62]	F. Kainz, R. Bogart, and D. Hess. “The OpenEXR Image File Format,” in	26
27		<i>SIGGRAPH Technical Sketches</i> , 2003. See also www.openexr.com .	27
28			28
29			29
30	[63]	S. B. Kang, M. Uyttendaele, S. Winder, and R. Szeliski. “High Dynamic	30
31		Range Video,” <i>ACM Transactions on Graphics</i> , 22(3), 2003.	31
32			32
33	[64]	N. Katoh and K. Nakabayashi. “Applying Mixed Adaptation to Various	33
34		Chromatic Adaptation Transformation (CAT) Models,” in <i>IS&T PICS Confer-</i>	34
35		ence, pp. 299–305, Montreal: IS&T, 2001.	35

1	[65]	J. Kleinschmidt and J. E. Dowling. “Intracellular Recordings from Gecko Photoreceptors During Light and Dark Adaptation,” <i>Journal of General Physiology</i> , 66:617–648, 1975.	1
2			2
3			3
4			4
5	[66]	C. Kolb, D. Mitchell, and P. Hanrahan. “A Realistic Camera Model for Computer Graphics,” in <i>Proceedings of the 22nd Annual Conference on Computer Graphics and Interactive Techniques</i> , pp. 317–324, 1995.	5
6			6
7			7
8			8
9	[67]	G. Krawczyk, R. Mantiuk, K. Myszkowski, and H-P. Seidel. “Lightness Perception Inspired Tone Mapping,” in <i>First ACM Symposium on Applied Perception in Graphics and Visualization (APGV)</i> , p. 172, New York: ACM, 2004.	9
10			10
11			11
12			12
13	[68]	J. Kuang, H. Yamaguchi, G. M. Johnson, and M. D. Fairchild. “Testing HDR Image Rendering Algorithms,” in <i>Proceedings of IS&T/SID 12th Color Imaging Conference</i> , Scottsdale: IS&T, 2004.	13
14			14
15			15
16			16
17	[69]	E. H. Land and J. J. McCann. “Lightness and Retinex Theory,” <i>Journal of the Optical Society of America</i> , 63(1):1–11, 1971.	17
18			18
19			19
20	[70]	G. W. Larson. “LogLuv Encoding for Full-gamut, High Dynamic Range Images,” <i>Journal of Graphics Tools</i> , 3(1):15–31, 1998.	20
21			21
22			22
23	[71]	G. W. Larson. “Overcoming Gamut and Dynamic Range Limitations in Digital Images,” in <i>Proceedings of the IS&T 6th Color Imaging Conference</i> , Scottsdale: IS&T, 1998.	23
24			24
25			25
26			26
27	[72]	P. Ledda, A. Chalmers, and H. Seetzen. “HDR Displays: A Validation Against Reality,” in <i>International Conference on Systems, Man and Cybernetics</i> , The Hague, The Netherlands: IEEE, October 2004.	27
28			28
29			29
30			30
31	[73]	P. Ledda, A. Chalmers, and H. Seetzen. “A Psychological Validation of Tonemapping Operators Using a High Dynamic Range Display,” in <i>First ACM Symposium on Applied Perception in Graphics and Visualization (APGV)</i> , p. 159, New York: ACM, 2004.	31
32			32
33			33
34			34
35			35

REFERENCES

475

- | | | | |
|----|------|---|----|
| 1 | [74] | C. Li, M. R. Luo, R. W. G. Hunt, N. Moroney, M. D. Fairchild, and T. Newman. "The Performance of CIECAM02," in <i>IS&T/SID 10th Color Imaging Conference</i> , pp. 28–32, Scottsdale: IS&T, November 2002. | 1 |
| 2 | | | 2 |
| 3 | | | 3 |
| 4 | | | 4 |
| 5 | [75] | T. M. Lillesand, R. W. Kiefer, and J. W. Chipman. <i>Remote Sensing and Image Interpretation</i> (5th ed.), New York: John Wiley and Sons, 2003. | 5 |
| 6 | | | 6 |
| 7 | | | 7 |
| 8 | | | 8 |
| 9 | [76] | Bruce Lindbloom, www.brucelindbloom.com . | 9 |
| 10 | | | 10 |
| 11 | [77] | B. D. Lucas and T. Kanade. "An Iterative Image Registration Technique with an Application in Stereo Vision," in <i>Seventh International Joint Conference on Artificial Intelligence (IJCAI-81)</i> , pp. 674–679, 1981. | 11 |
| 12 | | | 12 |
| 13 | | | 13 |
| 14 | | | 14 |
| 15 | [78] | R. Mantiuk, G. Krawczyk, K. Myszkowski, and H-P. Seidel. "Perception-motivated High Dynamic Range Video Encoding," <i>ACM Transactions on Graphics</i> , 23(3), 2004. | 15 |
| 16 | | | 16 |
| 17 | | | 17 |
| 18 | | | 18 |
| 19 | [79] | W. R. Mark, R. S. Glanville, K. Akeley, and M. J. Kilgard. "Cg: A System for Programming Graphics Hardware in a C-like Language," <i>ACM Transactions on Graphics</i> , 22(3):896–907, 2003. | 19 |
| 20 | | | 20 |
| 21 | | | 21 |
| 22 | | | 22 |
| 23 | [80] | R. McDonald and K. J. Smith. "CIE94: A New Colour-difference Formula," <i>Journal for the Society of Dyers and Colourists</i> , 11:376–379, December 1995. | 23 |
| 24 | | | 24 |
| 25 | | | 25 |
| 26 | | | 26 |
| 27 | [81] | N. J. Miller, P. Y. Ngai, and D. D. Miller. "The Application of Computer Graphics in Lighting Design," <i>Journal of the IES</i> , 14:6–26, October 1984. | 27 |
| 28 | | | 28 |
| 29 | | | 29 |
| 30 | [82] | T. Mitsunaga and S. K. Nayar. "Radiometric Self Calibration," in <i>Proceedings of IEEE Conference on Computer Vision and Pattern Recognition</i> , Fort Collins, CO: IEEE, June 1999. | 30 |
| 31 | | | 31 |
| 32 | | | 32 |
| 33 | | | 33 |
| 34 | [83] | P. Moon and D. E. Spencer. "Visual Data Applied to Lighting Design," <i>Journal of the Optical Society of America</i> , 34(10):605–617, 1944. | 34 |
| 35 | | | 35 |

1	[84]	N. Moroney, M. D. Fairchild, R. W. G. Hunt, C. J. Li, M. R. Luo, and T. Newman. "The CIECAM02 Color Appearance Model," in <i>IS&T 10th Color Imaging Conference</i> , pp. 23–27, Scottsdale: IS&T, 2002.	1
2			2
3			3
4			4
5	[85]	N. Moroney. "Usage Guidelines for CIECAM97s," in <i>Proceedings of the Conference on Image Processing, Image Quality, Image Capture Systems (PICS-00)</i> , pp. 164–168, Springfield: IS&T, 2000.	5
6			6
7			7
8			8
9	[86]	N. Moroney and I. Tastl. "A Comparison of Retinex and iCAM for Scene Rendering," <i>Journal of Electronic Imaging</i> , 13(1), 2004.	9
10			10
11			11
12	[87]	K. I. Naka and W. A. H. Rushton. "S-potentials from Luminosity Units in the Retina of Fish (Cyprinidae)," <i>Journal of Physiology</i> , 185:587–599, 1966.	12
13			13
14			14
15	[88]	S. K. Nayar and R. M. Bolle. "Reflectance-based Object Recognition," Technical Report CUCS-055-92, Columbia University, 1992.	15
16			16
17			17
18	[89]	S. G. de Groot and J. W. Gebhard. "Pupil Size as Determined by Adapting Luminance," <i>Journal of the Optical Society of America</i> , 42:492–495, 1952.	18
19			19
20			20
21	[90]	J. von Kries. "Chromatic Adaptation," in D. L. MacAdam (ed.), <i>Sources of Color Science</i> , pp. 120–126, Cambridge, MA: MIT Press, 1902/1970.	21
22			22
23			23
24	[91]	A. V. Oppenheim, R. Schafer, and T. Stockham. "Nonlinear Filtering of Multiplied and Convolved Signals," in <i>Proceedings of the IEEE</i> , 56(8):1264–1291, 1968.	24
25			25
26			26
27			27
28	[92]	S. E. Palmer. <i>Vision Science: Photons to Phenomenology</i> . Cambridge, MA: MIT Press, 1999.	28
29			29
30			30
31	[93]	D. Pascale. "A Review of RGB Color Spaces," Technical Report, The Babel-Color Company, 2003.	31
32			32
33			33
34	[94]	S. N. Pattanaik, J. A. Ferwerda, M. D. Fairchild, and D. P. Greenberg. "A Multiscale Model of Adaptation and Spatial Vision for Realistic Im-	34
35			35

REFERENCES

477

- 1 age Display,” in *SIGGRAPH 98 Conference Proceedings*, pp. 287–298, ACM SIG- 1
 2 GRAPH, July 1998. 2
 3 3
 4 [95] S. N. Pattanaik, J. Tumblin, H. Yee, and D. P. Greenberg. “Time-dependent 4
 5 Visual Adaptation for Fast Realistic Display,” in *SIGGRAPH 2000 Conference* 5
 6 *Proceedings*, pp. 47–54, ACM SIGGRAPH, July 2000. 6
 7 7
 8 [96] S. N. Pattanaik and H. Yee. “Adaptive Gain Control for High Dynamic 8
 9 Range Image Display,” in *Proceedings of Spring Conference in Computer Graphics* 9
 10 *(SCCG2002)*, pp. 24–27, Budmerice, Slovak Republic, 2002. 10
 11 11
 12 [97] A. Payne, W. DeGroot, R. Monteverde, and D. Amm. “Enabling High Data- 12
 13 rate Imaging Applications with Grating Light Valve Technology,” in *Pho-* 13
 14 *tonics West 2004 — Micromachining and Microfabrication Symposium*, San Jose, CA: 14
 15 SPIE, January 2004. 15
 16 16
 17 [98] E. Peli. “Contrast in Complex Images,” *Journal of the Optical Society of America* 17
 18 *A*, 7(10):2032–2040, October 1990. 18
 19 19
 20 [99] K. Perlin and E. M. Hoffert. “Hypertexture,” *Computer Graphics*, 23(3):253– 20
 21 262, July 1989. 21
 22 22
 23 [100] C. Poynton. *Digital Video and HDTV: Algorithms and Interfaces*. Boston: Else- 23
 24 vier/Morgan Kaufmann Publishers, 2003. 24
 25 25
 26 [101] W. H. Press, S. A. Teukolsky, W. T. Vetterling, and B. P. Flannery. *Numerical* 26
 27 *Recipes in C: The Art of Scientific Computing* (2nd ed.), New York: Cambridge 27
 28 University Press, 1992. 28
 29 29
 30 [102] Z. Rahman, D. J. Jobson, and G. A. Woodell. “A Multiscale Retinex for 30
 31 Color Rendition and Dynamic Range Compression,” in *SPIE Proceedings: Ap-* 31
 32 *plications of Digital Image Processing XIX*, Vol. 2847, Denver, CO: SPIE, 1996. 32
 33 33
 34 [103] Z. Rahman, G. A. Woodell, and D. J. Jobson. “A Comparison of the Mul- 34
 35 tiscale Retinex with Other Image Enhancement Techniques,” in *IS&T’s 50th* 35

1		Annual Conference: A Celebration of All Imaging, Vol. 50, pp. 426–431, Cambridge, MA: IS&T, 1997.	1
2			2
3			3
4	[104]	M. S. Rea and I. G. Jeffrey. “A New Luminance and Image Analysis System for Lighting and Vision: Equipment and Calibration,” <i>Journal of the Illuminating Engineering Society</i> , 9(1):64–72, 1990.	4
5			5
6			6
7			7
8	[105]	M. S. Rea (ed.). <i>The IESNA Lighting Handbook: Reference and Application</i> . New York: The Illuminating Engineering Society of North America, 2000.	8
9			9
10			10
11	[106]	E. Reinhard. “Parameter Estimation for Photographic Tone Reproduction,” <i>Journal of Graphics Tools</i> , 7(1):45–51, 2003.	11
12			12
13			13
14	[107]	E. Reinhard, M. Ashikhmin, B. Gooch, and P. Shirley. “Color Transfer Between Images,” <i>IEEE Computer Graphics and Applications</i> , 21:34–41, September/October 2001.	14
15			15
16			16
17			17
18	[108]	E. Reinhard and K. Devlin. “Dynamic Range Reduction Inspired by Photoreceptor Physiology,” <i>IEEE Transactions on Visualization and Computer Graphics</i> , 11(1):13–24, January/February 2005.	18
19			19
20			20
21			21
22	[109]	E. Reinhard, M. Stark, P. Shirley, and J. Ferwerda. “Photographic Tone Reproduction for Digital Images,” <i>ACM Transactions on Graphics</i> , 21(3):267–276, 2002.	22
23			23
24			24
25			25
26	[110]	D. L. Ruderman, T. W. Cronin, and C-C. Chiao. “Statistics of Cone Responses to Natural Images: Implications for Visual Coding,” <i>Journal of the Optical Society of America A</i> , 15(8):2036–2045, 1998.	26
27			27
28			28
29			29
30	[111]	W. A. H. Rushton and D. I. A. MacLeod. “The Equivalent Background of Bleaching,” <i>Perception</i> , 15:689–703, 1986.	30
31			31
32			32
33	[112]	A. Scheel, M. Stamminger, and H-P. Seidel. “Tone Reproduction for Interactive Walkthroughs.” <i>Computer Graphics Forum</i> , 19(3):301–312, August 2000.	33
34			34
35			35

REFERENCES

479

- 1 [113] C. Schlick. “Quantization Techniques for the Visualization of High Dy- 1
2 namic Range Pictures,” in P. Shirley, G. Sakas, and S. Müller (eds.), *Photore-* 2
3 *alistic Rendering Techniques*, pp. 7–20. New York: Springer-Verlag, 1994. 3
4 4
- 5 [114] H. Seetzen, W. Heidrich, W. Stuerzlinger, G. Ward, L. Whitehead, 5
6 M. Trentacoste, A. Ghosh, and A. Vorozcovs. “High Dynamic Range Dis- 6
7 play Systems,” *ACM Transactions on Graphics*, 23(3), 2004. 7
8 8
- 9 [115] H. Seetzen, L. A. Whitehead, and G. Ward. “A High Dynamic Range Dis- 9
10 play Using Low and High Resolution Modulators,” in *The Society for Informa-* 10
11 *tion Display International Symposium*, Baltimore: SID, May 2003. 11
12 12
- 13 [116] P. Shirley. *Fundamentals of Computer Graphics*, Natick, MA: A. K. Peters, 2002. 13
14 14
- 15 [117] F. X. Sillion and C. Puech. *Radiosity and Global Illumination*. San Francisco: Mor- 15
16 gan Kaufmann, 1994. 16
17 17
- 18 [118] S. M. Smith and J. M. Brady. “SUSAN: A New Approach to Low Level Image 18
19 Processing,” *International Journal of Computer Vision*, 23(1):45–78, 1997. 19
20 20
- 21 [119] B. Smits and G. Meyer. “Simulating Interference Phenomena in Realis- 21
22 tic Image Synthesis,” in *Proceedings of the First Eurographic Workshop on Rendering*, 22
23 pp. 185–194, Rennes, France: Eurographics Association, 1990. 23
24 24
- 25 [120] L. Spillmann and J. S. Werner (eds.). *Visual Perception: The Neurological Founda-* 25
26 *tions*. San Diego: Academic Press, 1990. 26
27 27
- 28 [121] J. C. Stevens and S. S. Stevens. “Brightness Function: Effects of Adaptation,” 28
29 *Journal of the Optical Society of America*, 53(3), 1963. 29
30 30
- 31 [122] W. S. Stiles and J. M. Burch. “NPL Colour-matching Investigation: Final 31
32 Report,” *Acta Optica*, 6:1–26, 1959. 32
33 33
- 34 [123] T. Stockham. “Image Processing in the Context of a Visual Model,” *Proceed-* 34
35 *ings of the IEEE*, 60(7):828–842, 1972. 35

1	[124]	M. Stokes, M. Anderson, S. Chandrasekar, and R. Motta. "Standard Default Color Space for the Internet," 1996, www.w3.org/Graphics/Color/sRGB .	1
2			2
3			3
4	[125]	M. C. Stone. <i>A Field Guide to Digital Color</i> . Natick, MA: A. K. Peters, 2003.	4
5			5
6	[126]	S. Süsstrunk, J. Holm, and G. D. Finlayson. "Chromatic Adaptation Performance of Different RGB Sensors," in <i>Proceedings of IS&T/SPIE Electronic Imaging</i> , SPIE Vol. 4300, San Jose, January 2001.	6
7			7
8			8
9			9
10			10
11	[127]	P. Thevenaz, U. E. Ruttimann, and M. Unser. "A Pyramid Approach to Subpixel Registration Based on Intensity," <i>IEEE Transactions on Image Processing</i> , 7(1), January 1998.	11
12			12
13			13
14			14
15	[128]	C. Tomasi and R. Manduchi. "Bilateral Filtering for Gray and Color Images," in <i>Proceedings of the IEEE International Conference on Computer Vision</i> , pp. 836–846, 1998.	15
16			16
17			17
18			18
19			19
20	[129]	J. Tumblin, J. K. Hodgins, and B. K. Guenter. "Two Methods for Display of High Contrast Images," <i>ACM Transactions on Graphics</i> , 18(1):56–94, 1999.	20
21			21
22			22
23	[130]	J. Tumblin and H. Rushmeier. "Tone Reproduction for Realistic Computer Generated Images," Technical Report GIT-GVU-91-13, Graphics, Visualization, and Useability Center, Georgia Institute of Technology, 1991.	23
24			24
25			25
26			26
27	[131]	J. Tumblin and H. Rushmeier. "Tone Reproduction for Computer Generated Images," <i>IEEE Computer Graphics and Applications</i> , 13(6):42–48, November 1993.	27
28			28
29			29
30			30
31			31
32	[132]	J. Tumblin and G. Turk. "LCIS: A Boundary Hierarchy for Detail-preserving Contrast Reduction," in A. Rockwood (ed.), <i>Siggraph 1999, Computer Graphics Proceedings</i> , Annual Conference Series, pp. 83–90, Los Angeles: Addison-Wesley/Longman, 1999.	32
33			33
34			34
35			35

REFERENCES

481

- | | | | |
|----|-------|--|----|
| 1 | [133] | J. M. Valenton and D. van Norren. "Light Adaptation of Primate Cones: An Analysis Based on Extracellular Data," <i>Vision Research</i> , 23:1539–1547, 1983. | 1 |
| 2 | | | 2 |
| 3 | | | 3 |
| 4 | | | 4 |
| 5 | [134] | J. Walraven and J. M. Valeton. "Visual Adaptation and Response Saturation," in A. J. van Doorn, W. A. van de Grind, and J. J. Koenderink (eds.), <i>Limits of Perception</i> , Utrecht: VNU Press, 1984. | 5 |
| 6 | | | 6 |
| 7 | | | 7 |
| 8 | | | 8 |
| 9 | [135] | B. A. Wandell. <i>Foundations of Vision</i> . Sinauer Associates, 1995. | 9 |
| 10 | | | 10 |
| 11 | [136] | G. Ward and M. Simmons. "Subband Encoding of High Dynamic Range Imagery," in <i>First ACM Symposium on Applied Perception in Graphics and Visualization (APGV)</i> , pp. 83–90, New York: ACM, 2004. | 11 |
| 12 | | | 12 |
| 13 | | | 13 |
| 14 | | | 14 |
| 15 | [137] | G. Ward. "Measuring and Modeling Anisotropic Reflection," <i>ACM Computer Graphics</i> , 26(2):265–272, July 1992. | 15 |
| 16 | | | 16 |
| 17 | | | 17 |
| 18 | [138] | G. Ward. "Real Pixels," in J. Arvo (ed.), <i>Graphics Gems II</i> , pp. 80–83, San Diego: Academic Press, 1992. | 18 |
| 19 | | | 19 |
| 20 | | | 20 |
| 21 | [139] | G. Ward. "A Contrast-based Scale Factor for Luminance Display," in P. Heckbert (ed.), <i>Graphics Gems IV</i> , pp. 415–421, Boston: Academic Press, 1994. | 21 |
| 22 | | | 22 |
| 23 | | | 23 |
| 24 | | | 24 |
| 25 | | | 25 |
| 26 | [140] | G. Ward. "A Wide Field, High Dynamic Range, Stereographic Viewer," in <i>Proceedings of PICS 2002</i> , Portland: IS&T, April 2002. | 26 |
| 27 | | | 27 |
| 28 | | | 28 |
| 29 | [141] | G. Ward. "Fast, Robust Image Registration for Compositing High Dynamic Range Photographs from Hand-held Exposures," <i>Journal of Graphics Tools</i> , 8(2):17–30, 2003. | 29 |
| 30 | | | 30 |
| 31 | | | 31 |
| 32 | | | 32 |
| 33 | [142] | G. Ward, H. Rushmeier, and C. Piatko. "A Visibility Matching Tone Reproduction Operator for High Dynamic Range Scenes," <i>IEEE Transactions on Visualization and Computer Graphics</i> , 3(4), 1997. | 33 |
| 34 | | | 34 |
| 35 | | | 35 |

- | | | | |
|----|-------|--|----|
| 1 | [143] | G. J. Ward. "The RADIANCE Lighting Simulation and Rendering System," | 1 |
| 2 | | in A. Glassner (ed.), <i>Proceedings of SIGGRAPH '94</i> , pp. 459–472, July 1994. | 2 |
| 3 | | | 3 |
| 4 | [144] | G. Ward-Larson and R. A. Shakespeare. <i>Rendering with Radiance</i> . San Francisco: | 4 |
| 5 | | Morgan Kaufmann, 1998. | 5 |
| 6 | | | 6 |
| 7 | [145] | C. Ware. <i>Information Visualization: Perception for Design</i> . San Francisco: Morgan | 7 |
| 8 | | Kaufmann, 2000. | 8 |
| 9 | | | 9 |
| 10 | [146] | H. R. Wilson. "Psychophysical Models of Spatial Vision and Hyperacuity," | 10 |
| 11 | | in D. Regan (ed.), <i>Spatial Vision</i> , pp. 64–86, Boca Raton: CRC Press, 1991. | 11 |
| 12 | | | 12 |
| 13 | [147] | H. R. Wilson and J. Kim. "Dynamics of a Divisive Gain Control in Human | 13 |
| 14 | | Vision," <i>Vision Research</i> , 38:2735–2741, 1998. | 14 |
| 15 | | | 15 |
| 16 | [148] | A. P. Witkin. "Scale-space Filtering," in <i>Proceedings of the Eighth International Joint</i> | 16 |
| 17 | | <i>Conference on Artificial Intelligence</i> , 2, pp. 1019–1022, 1983. | 17 |
| 18 | | | 18 |
| 19 | [149] | G. Wyszecki and W. S. Stiles. <i>Color Science: Concepts and Methods, Quantitative Data</i> | 19 |
| 20 | | <i>and Formulae</i> (2nd ed.), New York: John Wiley and Sons, 2000. | 20 |
| 21 | | | 21 |
| 22 | [150] | H. Yee and S. N. Pattanaik. "Segmentation and Adaptive Assimilation for | 22 |
| 23 | | Detail-preserving Display of High-dynamic Range Images," <i>The Visual Com-</i> | 23 |
| 24 | | <i>puter</i> , 19(7–8), 2003. | 24 |
| 25 | | | 25 |
| 26 | [151] | X. Zhang and B. A. Wandell. "A Spatial Extension of CIELAB for Digital | 26 |
| 27 | | Color Image Reproduction," <i>Society of Information Display Symposium Technical</i> | 27 |
| 28 | | <i>Digest</i> , 27:731–734, 1996. | 28 |
| 29 | | | 29 |
| 30 | [152] | S. Agarwal, R. Ramamoorthi, S. Belongie, and H. W. Jensen. "Structured | 30 |
| 31 | | Importance Sampling of Environment Maps," <i>ACM Transactions on Graphics</i> , | 31 |
| 32 | | 22(3):605–612, July 2003. | 32 |
| 33 | | | 33 |
| 34 | [153] | M. Ashikhmin and P. Shirley. "An Anisotropic Phong BRDF Model," <i>Journal</i> | 34 |
| 35 | | <i>of Graphics Tools</i> , 5(2):25–32, 2000. | 35 |

REFERENCES

483

- 1 [154] J. F. Blinn. "Texture and Reflection in Computer-Generated Images," *Communications of the ACM*, 19(10):542–547, October 1976. 1
- 2 2
- 3 3
- 4 [155] B. Cabral, N. Max, and R. Springmeyer. "Bidirectional Reflection Func- 4
- 5 tions from Surface Bump Maps," in *Computer Graphics (Proceedings of SIGGRAPH* 5
- 6 *87)*, Vol. 21, pp. 273–281, July 1987. 6
- 7 7
- 8 [156] E. Chen. "QuickTime VR: An Image-based Approach to Virtual Environ- 8
- 9 ment Navigation," in *SIGGRAPH 95: Proceedings of the 2nd Annual Conference on* 9
- 10 *Computer Graphics and Interactive Techniques*, pp. 29–38, ACM, 1995. 10
- 11 11
- 12 [157] J. M. Cohen. "Estimating Reflected Radiance Under Complex Distant Illu- 12
- 13 mination," Technical Report RH-TR-2003-1, Rhythm and Hues Studios, 13
- 14 2003. 14
- 15 15
- 16 [158] J. M. Cohen and P. Debevec. "The LightGen HDRShop Plug-in," 2001, 16
- 17 www.hdrshop.com/main-pages/plugins.html. 17
- 18 18
- 19 [159] F. C. Crow. "Summed-area Tables for Texture Mapping," in *Computer Graphics* 19
- 20 *(Proceedings of SIGGRAPH 84)*, Vol. 18, pp. 207–212, July 1984. 20
- 21 21
- 22 [160] P. Debevec. "Light Probe Image Gallery," 1999, [http://www.debevec.org/](http://www.debevec.org/Probes/) 22
- 23 *Probes/*. 23
- 24 24
- 25 [161] P. Debevec. "Rendering Synthetic Objects into Real Scenes: Bridging Tradi- 25
- 26 tional and Image-based Graphics with Global Illumination and High Dy- 26
- 27 namic Range Photography," in *Proceedings of SIGGRAPH 98, Computer Graph-* 27
- 28 *ics Proceedings, Annual Conference Series*, pp. 189–198, July 1998. 28
- 29 29
- 30 [162] P. Debevec, T. Hawkins, C. Tchou, H.-P. Duiker, W. Sarokin, and M. Sagar. 30
- 31 "Acquiring the Reflectance Field of a Human Face," *Proceedings of SIGGRAPH* 31
- 32 *2000*, pp. 145–156, July 2000. 32
- 33 33
- 34 [163] P. Debevec, C. Tchou, A. Gardner, T. Hawkins, A. Wenger, J. Stumpfel, 34
- 35 A. Jones, C. Poullis, N. Yun, P. Einarsson, T. Lundgren, P. Martinez, and 35

- | | | | |
|----|-------|---|----|
| 1 | | M. Fajardo. “Estimating Surface Reflectance Properties of a Complex Scene Under Captured Natural Illumination,” <i>conditionally accepted to ACM Transactions on Graphics</i> , 2005. | 1 |
| 2 | | | 2 |
| 3 | | | 3 |
| 4 | | | 4 |
| 5 | [164] | P. E. Debevec and J. Malik. “Recovering High Dynamic Range Radiance Maps from Photographs,” in <i>Proceedings of SIGGRAPH 97</i> , Computer Graphics Proceedings, Annual Conference Series, pp. 369–378, August 1997. | 5 |
| 6 | | | 6 |
| 7 | | | 7 |
| 8 | | | 8 |
| 9 | | | 9 |
| 10 | [165] | P. E. Debevec, C. J. Taylor, and J. Malik. “Modeling and Rendering Architecture from Photographs: A Hybrid Geometry- and Image-based Approach,” in <i>Proceedings of SIGGRAPH 96</i> , Computer Graphics Proceedings, Annual Conference Series, pp. 11–20, August 1996. | 10 |
| 11 | | | 11 |
| 12 | | | 12 |
| 13 | | | 13 |
| 14 | | | 14 |
| 15 | [166] | G. Downing. “Stitched HDRI,” 2001, www.gregdowning.com/HDRI/stitched/ . | 15 |
| 16 | | | 16 |
| 17 | [167] | M. Fajardo. “Monte Carlo Ray Tracing in Action,” in <i>State of the Art in Monte Carlo Ray Tracing for Realistic Image Synthesis</i> , SIGGRAPH 2001 Course 29, August, 2001. | 17 |
| 18 | | | 18 |
| 19 | | | 19 |
| 20 | | | 20 |
| 21 | [168] | G. R. Fowles. <i>Introduction to Modern Optics</i> (2nd ed.), New York: Dover Publications, 1975. | 21 |
| 22 | | | 22 |
| 23 | | | 23 |
| 24 | [169] | A. Gardner, C. Tchou, T. Hawkins, and P. Debevec. “Linear Light Source Reflectometry,” in <i>Proceedings of SIGGRAPH 2003</i> , Computer Graphics Proceedings, Annual Conference Series, pp. 335–342, 2003. | 24 |
| 25 | | | 25 |
| 26 | | | 26 |
| 27 | | | 27 |
| 28 | | | 28 |
| 29 | [170] | C. M. Goral, K. E. Torrance, D. P. Greenberg, and B. Battaile. “Modeling the Interaction of Light Between Diffuse Surfaces,” in <i>SIGGRAPH 84</i> , pp. 213–222, 1984. | 29 |
| 30 | | | 30 |
| 31 | | | 31 |
| 32 | | | 32 |
| 33 | [171] | N. Greene. “Environment Mapping and Other Application of World Projections,” <i>IEEE Computer Graphics and Applications</i> , 6(11):21–29, November 1986. | 33 |
| 34 | | | 34 |
| 35 | | | 35 |

REFERENCES

485

- 1 [172] P. Haeberli. “Synthetic Lighting for Photography,” January 1992, www.sgi.com/grafica/synth/index.html. 1
- 2 2
- 3 3
- 4 [173] P. Heckbert. “Color Image Quantization for Frame Buffer Display,” in 4
5 SIGGRAPH’84: *Proceedings of the 9th Annual Conference on Computer Graphics and In-*
6 *teractive Techniques*, pp. 297–307, ACM Press, July 1982. 5
- 7 6
- 8 [174] W. Heidrich and H.-P. Seidel. “Realistic, Hardware-accelerated Shading 8
9 and Lighting,” in *Proceedings of SIGGRAPH 99*, pp. 171–178, August 1999. 9
- 10 10
- 11 [175] J. T. Kajiya. “The Rendering Equation,” in *Computer Graphics (Proceedings of* 11
12 *SIGGRAPH 86)*, Vol. 20, pp. 143–150, 1986. 12
- 13 13
- 14 [176] M. Kawase. “Real-time High Dynamic Range Image-based Lighting,” 14
15 2003, www.daionet.gr.jp/~masa/rthdribl/. 15
- 16 16
- 17 [177] T. Kollig and A. Keller. “Efficient Illumination by High Dynamic Range 17
18 Images,” in *Eurographics Symposium on Rendering: 14th Eurographics Workshop on Ren-*
19 *dering*, pp. 45–51, 2003. 18
- 20 19
- 21 [178] E. P. F. Lafortune, S.-C. Foo, K. E. Torrance, and D. P. Greenberg. “Non- 21
22 linear Approximation of Reflectance Functions,” in *Proceedings of SIGGRAPH*
23 *97*, pp. 117–126, 1997. 22
- 24 23
- 25 [179] H. Landis. “Production-ready Global Illumination,” Course notes for SIG- 25
26 GRAPH 2002 Course 16, “RenderMan in Production,” 2002. 26
- 27 27
- 28 [180] G. W. Larson, H. Rushmeier, and C. Piatko. “A Visibility Matching Tone Re- 28
29 production Operator for High Dynamic Range Scenes,” *IEEE Transactions on*
30 *Visualization and Computer Graphics*, 3(4):291–306, October–December 1997. 29
- 31 30
- 32 ISSN 1077-2626. 31
- 33 [181] J. Lawrence, S. Rusinkiewicz, and R. Ramamoorthi. “Efficient BRDF Im- 33
34 portance Sampling Using a Factored Representation,” in *ACM Transactions on*
35 *Graphics (SIGGRAPH 2004)*, August 2004. 34
- 35 35

1	[182]	X. Liu, P.-P. Sloan, H.-Y. Shum, and J. Snyder. “All-frequency Precomputed Radiance Transfer for Glossy Objects,” in <i>Rendering Techniques 2004: 15th Eurographics Workshop on Rendering</i> , pp. 337–344, June 2004.	1
2			2
3			3
4			4
5	[183]	D. K. McAllister. “A Generalized Surface Appearance Representation for Computer Graphics,” Ph.D. thesis, University of North Carolina at Chapel Hill, 2002.	5
6			6
7			7
8			8
9			9
10	[184]	J. B. MacQueen. “Some Methods for Classification and Analysis of Multivariate Observations,” in <i>Proceedings of 5th Berkeley Symposium on Mathematical Statistics and Probability</i> , Vol. 1, pp. 281–297, Berkeley: University of California Press, 1997.	10
11			11
12			12
13			13
14			14
15	[185]	N. Metropolis, A. W. Rosenbluth, M. N. Rosenbluth, A. H. Teller, and E. Teller. “Equations of State Calculations by Fast Computing Machines,” <i>Journal of Chemical Physics</i> , 21:1087–1091, 1953.	15
16			16
17			17
18			18
19			19
20	[186]	G. S. Miller and C. R. Hoffman. “Illumination and Reflection Maps: Simulated Objects in Simulated and Real Environments,” in <i>SIGGRAPH 84 Course Notes for Advanced Computer Graphics Animation</i> , July 1984.	20
21			21
22			22
23			23
24	[187]	J. Mitchell, J. Isidoro, and A. Vlachos. “ATI Radeon 9700 Real-time Demo of Rendering with Natural Light,” 2002, www.ati.com/developer/demos/R9700.html .	24
25			25
26			26
27			27
28	[188]	S. K. Nayar. “Catadioptric Omnidirectional Camera,” in <i>Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition</i> , pp. 482–488, Puerto Rico, June 1997.	28
29			29
30			30
31			31
32			32
33	[189]	R. Ng, R. Ramamoorthi, and P. Hanrahan. “All-frequency Shadows Using Non-linear Wavelet Lighting Approximation,” <i>ACM Transactions on Graphics</i> , 22(3):376–381, July 2003.	33
34			34
35			35

REFERENCES

487

- 1 [190] F. E. Nicodemus, J. C. Richmond, J. J. Hsia, I. W. Ginsberg, and T. Limperis. 1
2 "Geometric Considerations and Nomenclature for Reflectance," *National* 2
3 *Bureau of Standards Monograph 160*, October 1977. 3
4 4
- 5 [191] V. Ostromoukhov, C. Donohue, and P.-M. Jodoin. "Fast Hierarchical Im- 5
6 portance Sampling with Blue Noise Properties," *ACM Transactions on Graphics*, 6
7 23(3):488–495, August 2004. 7
8 8
- 9 [192] M. Pharr and G. Humphreys. "Improved Infinite Area Light Source Sam- 9
10 pling," 2004, <http://pbrt.org/plugins.php>. 10
11 11
- 12 [193] M. Pharr and G. Humphreys. *Physically Based Rendering: From Theory to Implemen-* 12
13 *tation*. San Francisco: Morgan Kaufmann, 2004. 13
14 14
- 15 [194] B. Phong. "Illumination for Computer Generated Pictures," *Communications* 15
16 *of the ACM*, 18(6), September 1975. 16
17 17
- 18 [195] R. Ramamoorthi and P. Hanrahan. "Frequency Space Environment Map 18
19 Rendering," *ACM Transactions on Graphics*, 21(3):517–526, July 2002. 19
20 20
- 21 [196] P.-P. Sloan, J. Kautz, and J. Snyder. "Precomputed Radiance Transfer 21
22 for Real-time Rendering in Dynamic, Low-frequency Lighting Environ- 22
23 ments," *ACM Transactions on Graphics*, 21(3):527–536, July 2002. 23
24 24
- 25 [197] B. Smith and L. Rowe. "Compressed Domain Processing of JPEG-encoded 25
26 Images," *Real-Time Imaging*, 2(2):3–17, 1996. 26
27 27
- 28 [198] G. Spencer, P. S. Shirley, K. Zimmerman, and D. P. Greenberg. "Physically- 28
29 based Glare Effects for Digital Images," in *Proceedings of SIGGRAPH 95, Com-* 29
30 *puter Graphics Proceedings, Annual Conference Series*, pp. 325–334, 30
31 1995. 31
32 32
- 33 [199] J. Stumpfel. "HDR Lighting Capture of the Sky and Sun," Master's thesis, 33
34 California Institute of Technology, Pasadena, California, 2004. 34
35 35

- 1 [200] J. Stumpfel, A. Jones, A. Wenger, and P. Debevec. “Direct HDR Capture of 1
2 the Sun and Sky,” in *Proceedings of the 3rd International Conference on Virtual Reality,* 2
3 *Computer Graphics, Visualization and Interaction in Africa (AFRIGRAPH 2004)*, 2004. 3
4 4
- 5 [201] R. Szeliski and H.-Y. Shum. “Creating Full View Panoramic Mosaics and 5
6 Environment Maps,” in *Proceedings of SIGGRAPH 97, Computer Graphics Pro-* 6
7 *ceedings, Annual Conference Series*, pp. 251–258, August 1997. 7
8 8
- 9 [202] C. Tchou and P. Debevec. “HDR Shop,” 2001, www.debevec.org/HDRShop. 9
10 10
- 11 [203] C. Tchou, D. Maas, T. Hawkins, and P. Debevec. “Facial Reflectance 11
12 Field Demo,” SIGGRAPH 2000 Creative Applications Laboratory, 2000, 12
13 www.debevec.org/FaceDemo/. 13
14 14
- 15 [204] E. Veach and L. J. Guibas. “Metropolis Light Transport,” in *Proceedings of* 15
16 *SIGGRAPH 97, Computer Graphics Proceedings, Annual Conference Series,* 16
17 pp. 65–76, 1997. 17
18 18
- 19 [205] G. J. Ward. “The RADIANCE Lighting Simulation and Rendering System,” 19
20 in *SIGGRAPH 94*, pp. 459–472, 1994. 20
21 21
- 22 [206] T. Whitted. “An Improved Illumination Model for Shaded Display,” *Com-* 22
23 *munications of the ACM*, 23(6):343–349, June 1980. 23
24 24
- 25 [207] L. Williams. “Pyramidal Parametrics,” *Computer Graphics (Proceedings of SIG-* 25
26 *GRAPH 83)*, 17(3):1–11, Detroit, MI, July, 1983. 26
27 27
- 28 [208] G. Ward and E. Eydelberg-Vileshin. “Picture Perfect RGB Rendering Using 28
29 Spectral Prefiltering and Sharp Color Primaries,” in P. Debevec and S. Gib- 29
30 son (eds.), *Thirteenth Eurographics Workshop on Rendering (2002)*, June 2002. 30
31 31
32 32
33 33
34 34
35 35