CAP6701 Reading List

See syllabus for presentation dates. Note that the last 3 papers are not listed in the syllabus and should be presented the week of February 7th.

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[Feller 1971] William Feller. “Chapter I: The Exponential and the Uniform Densities” and “Chapter III: Densities in Higher Dimensions; Normal Densities and Processes.” An Introduction to Probability Theory and Its Applications, Vol.II. 2nd Edition. John Wiley & Sons, Inc.: New York, 1971.

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[Walter et al. 2007] Bruce Walter, Stephen R. Marschner, Hongsong Li, and Kenneth E. Torrance. “Microfacet Models for Refraction through Rough Surfaces.” Eurographics Symposium on Rendering 2007.

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[Kim 2012] 3D Imaging Spectroscopy for Measuring Hyperspectral Patterns on Solid Objects Min H. Kim, Todd Alan Harvey, David S. Kittle, Holly Rushmeier, Julie Dorsey, Richard O. Prum, and David J. Brady Yale University and Duke University, ACM Transactions on Graphics *31:4, July 2012*

[Kim & Rushmeier 2011] Radiometric Characterization of Spectral Imaging for Textual Pigment Identification M. H. Kim, and H. Rushmeier, Conference Paper: The 12th International Conference on Virtual Reality, Archaeology and Cultural Heritage (VAST11): Eurographics Association (2011)

[Chen 2015] Chen, T. F., Naranoski, G. V. G., Kimmel, B. W., and Miranda, E. Hyperspectral Modeling of Skin Appearance. *ACM Trans. Graph., Vol. 34, No. 3* (May), 31:1–31:14. 2015.

[Smith 2017] Brandon M. Smith, Pratham Desai, Vishal Agarwal, Mohit Gupta. CoLux: Multi-Object 3D Micro-Motion Analysis Using Speckle Imaging. ACM Trans. Graph. (also Proc. SIGGRAPH) Volume 36, Issue 4, Article 34, July 2017.

[Maimone 2017] Maimone, Andrew & Georgiou, Andreas & S. Kollin, Joel. (2017). Holographic near-eye displays for virtual and augmented reality. ACM Transactions on Graphics. 36. 1-16. 10.1145/3072959.3073624.

[Pradhana 2017] Multi-species simulation of porous sand and water mixtures, Andre Pradhana Tampubolon, Theodore Gast, Gergely Klar, Chuyuan Fu, Joseph Teran, Chenfanfu Jiang, Ken Museth, ACM Trans. Graph. 36, 4, Article 105 (SIGGRAPH 2017)

[Belcour 2017] A Practical Extension to Microfacet Theory for the Modeling of Varying Iridescence, L Belcour, P Barla - ACM Transactions on Graphics, 2017

[Levoy 2000] The Digital Michelangelo Project: 3D scanning of large statues, Marc Levoy, Kari Pulli, Brian, Curless, Szymon Rusinkiewicz, David Koller, Lucas Pereira, Matt Ginzton, Sean Anderson, James Davis, Jeremy Ginsberg, Jonathan Shade, and Duane Fulk Proc. SIGGRAPH 2000

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[Peng 2016] Peng, Yifan & Fu, Qiang & Heide, Felix & Heidrich, Wolfgang. (2016). The diffractive achromat full spectrum computational imaging with diffractive optics. 1-2. 10.1145/2992138.2992145.

[Jakob 2014] Wenzel Jakob, Eugene d'Eon, and Steve Marschner, A Comprehensive Framework for Rendering Layered Materials *SIGGRAPH 2014*

[Jakob 2014] Discrete Stochastic Microfacet Models Wenzel Jakob, Miloš Hašan, Ling-Qi Yan, Jason Lawrence, Ravi Ramamoorthi, and Steve Marschner *SIGGRAPH 2014*

[Schumacher 2015] Christian Schumacher, Bernd Bickel, Steve Marschner, Jan Rys, Markus Gross, and Chiara Daraio, Microstructures to Control Elasticity in 3D Printing, *SIGGRAPH 2015*

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[Ando 2015] Ando R. Thuerey N. and Wojtan C. A Stream Function Solver for Liquid Simulations, *SIGGRAPH 2015*

[Toisoul 2017] Antoine Toisoul and Abhijeet Ghosh. 2017. Practical Acquisition and Rendering of Diffraction Effects in Surface Reflectance. *ACM Trans. Graph.* 36, 5, Article 166 (July 2017), 16 pages. DOI: https://doi.org/10.1145/3012001

[Pantaleoni 2017] Jacopo Pantaleoni. 2017. Charted metropolis light transport. *ACM Trans. Graph.* 36, 4, Article 75 (July 2017), 14 pages. DOI: https://doi.org/10.1145/3072959.3073677

[Bako 2017] Kernel-Predicting Convolutional Networks for Denoising Monte Carlo Renderings, Steve Bako*, Thijs Vogels*, Brian McWilliams, Mark Meyer, Jan Novák, Alex Harvill, Pradeep Sen, Tony DeRose, and Fabrice Rousselle ACM Transactions on Graphics (Proceedings of SIGGRAPH 2017), vol. 36, no. 4