

Fabrice Rousselle

Curriculum Vitae

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Research Interests

Computer graphics: photo-realistic rendering.

Education *Ph.D., Computer Science*, November 2009 - February 2014
University of Bern
Bern, BE, Switzerland
 Thesis : *Image Space Adaptive Rendering*
 Adviser : Prof. Matthias Zwicker
 Distinction : *summa cum laude*
 Awards: JAACS 2014 PhD Award and Eurographics 2016 PhD Award

M.S., Sciences Informatiques, January 2005 - October 2007
University of Montreal
Montreal, QC, Canada
 Thesis : *Hierarchical Product Sampling*
 Advisor : Prof. Victor Ostromoukhov
 GPA : 4.3/4.3

B.S., Computer Engineering, September 1996 - May 2000
Ecole Polytechnique de Montréal
Montreal, QC, Canada
 GPA : 3.3/4.0

Employment

3/2014– Postdoctoral Researcher
Disney Research Zurich
Zurich, ZH, Switzerland

9/2007–9/2009 Research Assistant
Peripheral Systems Laboratory, Ecole Polytechnique Fédérale de Lausanne
Lausanne, VD, Switzerland

6/2000–12/2004 Software engineer (C++) in the video group.
Matrox Electronic Systems Ltd.
Dorval, QC, Canada

Languages English, French, German (B1 level)

Publications

- Steve Bako, Thijs Vogels, Brian McWilliams, Mark Meyer, Jan Novák, Alex Harvill, Pradeep Sen, Tony Deroose, and Fabrice Rousselle. Kernel-predicting convolutional networks for denoising monte carlo renderings. *ACM Trans. Graph.*, 36(4):97:1–97:14, July 2017.
- Fabrice Rousselle, Wojciech Jarosz, and Jan Novák. Image-space control variates for rendering. *ACM Trans. Graph.*, 35(6):169:1–169:12, November 2016.
- Benedikt Bitterli, Fabrice Rousselle, Bochang Moon, José A. Iglesias-Guitián, David Adler, Kenny Mitchell, Wojciech Jarosz, and Jan Novák. Nonlinearly weighted first-order regression for denoising monte carlo renderings. *Computer Graphics Forum*, 35(4):107–117, 2016.
- Henning Zimmer, Fabrice Rousselle, Wenzel Jakob, Oliver Wang, David Adler, Wojciech Jarosz, Olga Sorkine-Hornung, and Alexander Sorkine-Hornung. Path-space motion estimation and decomposition for robust animation filtering. *Computer Graphics Forum*, 34(4):131–142, 2015.
- Oliver Klehm, Fabrice Rousselle, Marios Papas, Derek Bradley, Christophe Hery, Bernd Bickel, Wojciech Jarosz, and Thabo Beeler. Recent advances in facial appearance capture. *Computer Graphics Forum*, 34(2):709–733, 2015.
- M. Zwicker, W. Jarosz, J. Lehtinen, B. Moon, R. Ramamoorthi, F. Rousselle, P. Sen, C. Soler, and S.-E. Yoon. Recent advances in adaptive sampling and reconstruction for monte carlo rendering. *Computer Graphics Forum*, 34(2):667–681, 2015.
- Pradeep Sen, Matthias Zwicker, Fabrice Rousselle, Sung-Eui Yoon, and Nima Khademi Kalantari. Denoising your monte carlo renders: Recent advances in image-space adaptive sampling and reconstruction. In *ACM SIGGRAPH 2015 Courses*, SIGGRAPH '15, pages 11:1–11:255, New York, NY, USA, 2015. ACM.
- Marco Manzi, Fabrice Rousselle, Markus Kettunen, Jaakko Lehtinen, and Matthias Zwicker. Improved sampling for gradient-domain metropolis light transport. *ACM Trans. Graph.*, 33(6):178:1–178:12, November 2014.
- Fabrice Rousselle, Marco Manzi, and Matthias Zwicker. Robust denoising using feature and color information. *Computer Graphics Forum*, 32(7):121–130, 2013.
- Fabrice Rousselle, Claude Knaus, and Matthias Zwicker. Adaptive rendering with non-local means filtering. *ACM Trans. Graph.*, 31(6):195:1–195:11, November 2012.
- Fabrice Rousselle, Claude Knaus, and Matthias Zwicker. Adaptive sampling and reconstruction using greedy error minimization. *ACM Trans. Graph.*, 30(6):159:1–159:12, December 2011.
- Fabrice Rousselle, Mathieu Hébert, and Roger Hersch. Predicting the reflectance of paper dyed with ink mixtures by describing light scattering as a function of ink absorbance. *Journal of Imaging Science and Technology*, 54(5):50501–1–50501–8, 2010.
- Fabrice Rousselle, Thomas Bugnon, and Roger D Hersch. Spectral prediction model for variable dot-size printers. In *Color and Imaging Conference*, volume 2008, pages 73–78. Society for Imaging Science and Technology, 2008.
- Fabrice Rousselle, Petrik Clarberg, Luc Leblanc, Victor Ostromoukhov, and Pierre Poulin. Efficient product sampling using hierarchical thresholding. *The Visual Computer*, 24(7):465–474, Jul 2008.