GAURAV CHAURASIA

DISNEY RESEARCH ZURICH, STAMPFENBACHSTRASSE 48, ZURICH, SWITZERLAND

RESEARCH INTERESTS

Image-based rendering, 3D reconstruction Computational photography using neural networks GPU accelerated image processing

EXPERIENCE

2015- DISNEY RESEARCH ZURICH

Zurich, Switzerland

Postdoctoral Associate (Computer vision group)

2014-2015 Massachusetts Institute of Technology

Cambridge MA, USA

Postdoctoral Associate (Advisor: Prof. Frédo Durand)

EDUCATION

2010-2014 INRIA

Sophia Antipolis, France

Ph.D in Computer Science (Advisor: Dr. George Drettakis)

DISSERTATION: Algorithms & perceptual analysis for interactive free viewpoint image-based

navigation

2009-2010 ENSIMAG

Grenoble, France

M.Sc in Computer Science

2005-2009 Indian Institute of Technology Delhi

New Delhi, India

B.Tech in Computer Science (Advisor: Prof. Subodh Kumar)

DISSERTATION: Real time traffic simulation

VISITING POSITIONS

Aug 2013 Massachusetts Institute of Technology

Cambridge MA, USA

Visiting student (Advisor: Prof. Frédo Durand) Parallel execution of non-parallel recursive filters.

Aug 2012 University of California Berkeley

Berkeley CA, USA

Visiting student (Advisor: Prof. Ravi Ramamoorthi)

Procedural noise functions for synthesizing non-Gaussian textures.

Feb-Jun 2010 INRIA

Sophia Antipolis, France

Research intern (Advisor: Dr. George Drettakis)

Image-based rendering for urban scenes.

Summer 2008 NVIDIA

Bangalore, India

Intern (Embedded graphics group)

OpenGL-ES extensions for GPU driver for embedded systems, OpenGL-ES 2.0 conformance

test suite bugs.

Summer 2007 Dublin City University

Dublin, Ireland

Research intern (Advisor: Dr. Derek Molloy)

Memory exercises as 3D games and user studies to test effect of 3D user interfaces on human recall.

PUBLICATIONS

- M. Gharbi, <u>G. Chaurasia</u>, S. Paris, F. Durand. Deep joint demosaicking and denoising, *ACM Trans. Graph. 35(6) (SIGGRAPH Asia).* [www] [DOI]
- ST Digumarti, G. Chaurasia, A. Taneja, A. Thomas, R. Siegwart, P. Beardsley. Underwater 3D capture using a low-cost commercial depth camera, *IEEE Winter Conference on Applications of Computer Vision (WACV)*. [www] [DOI]
- M. Gharbi, Y. Shih, <u>G. Chaurasia</u>, J. Ragan-Kelley, S. Paris, F. Durand. Transform recipes for efficient cloud photo enhancement, *ACM Trans. Graph.* 34(6) (SIGGRAPH Asia). [www]
- S. Duchêne, C. Riant, <u>G. Chaurasia</u>, J. Lopez-Moreno, PY Laffont, S. Popov, A. Bousseau, G. Drettakis. Multi view intrinsic decomposition & relighting, *ACM Trans. Graph. 34(5)*. [www]
- 2015 <u>G. Chaurasia</u>, J. Ragan-Kelley, S. Paris, G. Drettakis, F. Durand. Compiling high performance recursive filters, *High Performance Graphics*. [www] [DOI]
- M. Benoit, R. Guerchouche, PD Petit, E. Chapoulie, V. Manera, <u>G. Chaurasia</u>, G. Drettakis, P. Robert. Is it possible to use highly realistic virtual reality in the elderly? A feasibility study with image-based rendering, *Journal of Neuropsychiatric Disease and Treatment*. [www] [DOI]
- E. Chapoulie, R. Guerchouche, PD Petit, <u>G. Chaurasia</u>, P. Robert, G. Drettakis. Reminiscence therapy using image-based rendering in VR, *IEEE Virtual Reality*. [www] [DOI]
- G. Chaurasia, S. Duchene, O. Sorkine-Hornung, G. Drettakis. Depth synthesis and local warps for plausible image-based navigation, *ACM Trans. Graph.* 32(3). [www] [DOI]
- P. Vangorp, C. Richardt, E.A. Cooper, <u>G. Chaurasia</u>, M.S. Banks, G. Drettakis. Perception of perspective distortions in image-based rendering, *ACM Trans. Graph. 32(4) (SIGGRAPH)*. [www]
- 2011 <u>G. Chaurasia</u>, O. Sorkine, G. Drettakis. Silhouette-aware warping for image-based rendering, *Comput. Graph. Forum 30(4) (EGSR).* [www] [DOI]
- P. Vangorp, <u>G. Chaurasia</u>, PY Laffont, R. Fleming, G. Drettakis. Perception of visual artifacts in image-based rendering of façades, *Comput. Graph. Forum 30(4) (EGSR)*. [www] [DOI]
- M. Cabral, P. Vangorp, G. Chaurasia, E. Chapoulie, M. Hachet, G. Drettakis. A multimode immersive conceptual design system for architectural modeling & lighting, *IEEE Symposium on 3D User Interfaces (IEEE 3DUI)*. [www] [DOI]
- G. Chaurasia, B.R. Selvamani, N. Gupta, S. Kumar. Virtual chaotic traffic simulation, *Indian Conference on Computer Vision, Graphics & Image Processing (ICVGIP).* [www] [DOI]

	PROFESSIONAL ACTIVITIES
Journal reviews	ACM Transactions on Graphics
	SIGGRAPH 2012, 2016 SIGGRAPH Asia 2013, 2016 Eurographics 2012, 2016 High Performance Graphics 2016 Pacific Graphics 2014, 2015, 2016 Virtual Reality Science & Technology 2016
	SUPERVISION
Spring 2013	Andrin Jenal (master thesis)
	TEACHING
Spring 2016	Advanced Topics in Computer Graphics & Vision Seminar 252-5701-00L ETH Zurich Advanced Topics in Computer Graphics Seminar 252-5704-00L ETH Zurich TA: Digital & Computational Photography 6.815/6.865 MIT
	SCHOLARSHIPS & AWARDS
Aug 2009 May 2007	PhD fellowship (<i>Allocation de Recherche</i>) by the French ministry for PhD studies. Scholarship of Excellence (<i>Bourse d'Excellence</i>) by ENSIMAG for Master's studies. Scholarship for 12 week research internship 'ODCSSS-07' in Dublin by Science Foundation of Ireland. All India Rank 54 in IIT-JEE 2005 (entrance examination for Indian Institutes of Technology) amongst nearly 300,000 aspirants.
	TECHNICAL SKILLS
	C++, Matlab, OpenGL, GLSL, CUDA, OpenCV, Java, LaTeX, SVN, Git, Bash, Vim, Visual Studio
	REFERENCES
	Dr. George Drettakis *Director of Research, INRIA Sophia Antipolis, France † http://www-sop.inria.fr/members/George.Drettakis/ ■ george.drettakis@inria.fr

Prof. Frédo Durand

Professor, Massachusetts Institute of Technology, Cambridge MA, USA

★ http://people.csail.mit.edu/fredo/ fredo@mit.edu

Dr. Sylvain Paris

Senior Researcher, Adobe Research, Cambridge MA, USA

★ http://people.csail.mit.edu/sparis/ sparis@adobe.com