GAURAV CHAURASIA

DISNEY RESEARCH ZURICH, STAMPFENBACHSTRASSE 48, ZURICH 8006, SWITZERLAND
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RESEARCH INTERESTS

Image-based rendering, 3D reconstruction
GPU accelerated image synthesis
Neural networks for computational photography
Neural networks for modelling organic shapes (most recent, exploratory)

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 and 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

2016 M. Gharbi, G. Chaurasia, S. Paris, F. Durand
Deep joint demosaicking and denoising
ACM Trans. Graph. 35(6) (SIGGRAPH Asia) [www] [doi]

2016 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]

2015 M. Gharbi, Y. Shih, G. Chaurasia, J. Ragan-Kelley, S. Paris, F. Durand
Transform recipes for efficient cloud photo enhancement
ACM Trans. Graph. 34(6) (SIGGRAPH Asia) [www] [doi]

2015 S. Duchêne, C. Riant, G. Chaurasia, J. Lopez-Moreno, PY Laffont, S. Popov, A. Bousseau, G. Drettakis
Multi view intrinsic decomposition and relighting
ACM Trans. Graph. 34(5) [www] [doi]

2015 G. Chaurasia, J. Ragan-Kelley, S. Paris, G. Drettakis, F. Durand
Compiling high performance recursive filters
High Performance Graphics [www] [doi]

2015 M. Benoit, R. Guerchouche, PD Petit, E. Chapoulie, V. Manera, G. Chaurasia, 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]

2014 E. Chapoulie, R. Guerchouche, PD Petit, G. Chaurasia, P. Robert, G. Drettakis
Reminiscence therapy using image-based rendering in VR
IEEE Virtual Reality [www] [doi]

2013 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]

2013 P. Vangorp, C. Richardt, E.A. Cooper, G. Chaurasia, M.S. Banks, G. Drettakis
Perception of perspective distortions in image-based rendering
ACM Trans. Graph. 32(4) (SIGGRAPH) [www] [doi]

2011 G. Chaurasia, O. Sorkine, G. Drettakis
Silhouette-aware warping for image-based rendering
Comput. Graph. Forum 30(4) (EGSR) [www] [doi]

2011 P. Vangorp, G. Chaurasia, PY Laffont, R. Fleming, G. Drettakis
Perception of visual artifacts in image-based rendering of façades
Comput. Graph. Forum 30(4) (EGSR) [www] [doi]

2011 M. Cabral, P. Vangorp, G. Chaurasia, E. Chapoulie, M. Hachet, G. Drettakis
A multimode immersive conceptual design system for architectural modeling and lighting
IEEE Symposium on 3D User Interfaces (IEEE 3DUI) [www] [doi]

2010 G. Chaurasia, B.R. Selvamani, N. Gupta, S. Kumar
Virtual chaotic traffic simulation
Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP) [www] [doi]

PROFESSIONAL ACTIVITIES

Journal reviews
ACM Transactions on Graphics 2016
ACM Transactions on Applied Perception 2014
Computer Graphics Forum 2015
IEEE Transactions on Visualization and Computer Graphics 2015, 2016
The Visual Computer 2016, 2017
Computers and Graphics 2015, 2017
IEEE Signal Processing Letters 2015
Journal of Signal Image and Video Processing 2013

Conference reviews
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

Autumn 2016 Andrin Jenal (master thesis) ..... ETH Zurich
Spring 2013 Kritarth Anand (undergraduate thesis) ..... INRIA Sophia Antipolis/IIT Delhi
Spring 2013 Arunim Samat (undergraduate thesis) ..... INRIA Sophia Antipolis/IIT Delhi

TEACHING

Autumn 2016 Advanced Topics in Computer Graphics & Vision Seminar 252-5701-00L ... ETH Zurich
Spring 2016 Advanced Topics in Computer Graphics Seminar 252-5704-00L ..... ETH Zurich
Spring 2015 TA: Digital & Computational Photography 6.815/6.865 ..... MIT

SCHOLARSHIPS AND AWARDS

Aug 2010 PhD fellowship (*Allocation de Recherche*) by the French ministry for PhD studies.
Aug 2009 Scholarship of Excellence (*Bourse d'Excellence*) by ENSIMAG for Master's studies.
May 2007 Scholarship for 12 week research internship 'ODCSSS-07' in Dublin by Science Foundation of Ireland.
Jun 2005 All India Rank 54 in IIT-JEE 2005 (entrance examination for Indian Institutes of Technology) amongst nearly 300,000 aspirants.

TECHNICAL SKILLS

C++, MATLAB, Python, 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