GAURAV CHAURASIA

DISNEY RESEARCH ZURICH, STAMPFENBACHSTRASSE 48, ZURICH, 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 & 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 & 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 & 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 & 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 & Graphics . . . 2015, 2017
- IEEE Signal Processing Letters . . . 2015
- Journal of Signal Image & 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 & 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