

MOHIT GUPTA

5000 Forbes Avenue
Robotics Institute, CMU
Pittsburgh, PA 15232

(412) 268 3506
mohitg@cs.cmu.edu
<http://www.cs.cmu.edu/~mohitg>

Research Interests

Physics-based Computer Graphics and Vision, Computational Imaging, Optics and Sensors

Education

- Carnegie Mellon University, Pittsburgh, PA** Fall 2005 - present
Ph.D. candidate at the Robotics Institute
Advisor: Dr. Srinivasa Narasimhan
- Stony Brook University, Stony Brook, NY** 2003 – 2005
MS in Computer Science
Advisor: Dr. Dimitris Samaras
- Indian Institute of Technology, New Delhi, India** 1999 – 2003
BTech in Computer Science and Engineering

Publications <http://www.cs.cmu.edu/~mohitg/Research/Research.htm>

(De) Focusing on Global Light Transport for Active Scene Recovery

Mohit Gupta, Yuandong Tian, SG Narasimhan, Li Zhang
IEEE Computer Vision and Pattern Recognition (CVPR 2009)

On Controlling Light Transport in Poor Visibility Environments

Mohit Gupta, SG Narasimhan, Yoav Y. Schechner
IEEE Computer Vision and Pattern Recognition (CVPR 2008)

Legendre Fluids: Reduced Space Modeling and Rendering of Participating Media

Mohit Gupta, SG Narasimhan
Eurographics/ ACM SIGGRAPH Symposium on Computer Animation (SCA 2007)

Acquiring Scattering Properties of Participating Media by Dilution

SG Narasimhan, Mohit Gupta, Craig Donner, Ravi Ramamoorthi, SK Nayar, Henrik Wann Jensen
ACM Transactions on Graphics (SIGGRAPH 2006)

High Resolution Tracking of Non-Rigid 3D Motion Using Harmonic Maps

Yang Wang, Mohit Gupta, Song Zhang, Sen Wang, Xianfeng Gu, Dimitris Samaras, Peisen Huang
IEEE International Conference on Computer Vision (ICCV 2005)

Multilevel Modeling and Rendering of Architectural Scenes

AM Kushal, G. Chanda, K. Srivastava, M. Gupta, S. Sanyal, TVN Sri Ram, P. Kalra, S. Banerjee
Eurographics 2003

Honors

Presidential Fellowship for Incoming Graduate Students, Stony Brook, (2003-2004)

Best Software B.Tech. Project, IIT Delhi for “Modeling and Rendering of Architectural Scenes” (built a walkthrough for Humayun’s Tomb, Delhi)

Secured an **All India Rank of 96** in the IIT-JEE Exam taken by about 120,000 students

Professional Service

Reviewer for SIGGRAPH’08, ICCV’07, CVPR’08, ’09, ECCV’08

Worked with Dr. Srinivasa Narasimhan to organize the **Symposium on Volumetric Scattering** in Vision and Graphics (in conjunction with CVPR 2007)

Graduate Course Work

Carnegie Mellon University

Computer Vision, Machine Learning, Statistical Machine Learning, {Learning[†], Physics[‡], Geometry}-based Methods in Computer Vision, Vision Sensors, Optimization

† Developed a freely downloadable MATLAB **image segmentation tool-box**

<http://www.cs.cmu.edu/~mohitg/Research/segmentation.htm>

‡ Won the photography competition conducted as part of the course

Stony Brook University

Computational Geometry, Advanced Computational Geometry, Geometric Modeling, Network Flows, Linear Programming, Cache-Oblivious Algorithms

Work Experience

Research Assistant (2005 – present)

Carnegie Mellon University
With Professor Srinivasa Narasimhan

Research Assistant (2004 – 2005)

Stony Brook University
With Professor Dimitris Samaras

Teaching Experience

Teaching Assistant, Carnegie Mellon University

Professor: Dr. Alexei Efros
Computational Photography, Fall 2006

Teaching Assistant, Stony Brook University

Professor: Dr. George Hart
Introduction to Computer Science, Fall 2003, Spring 2004