Subhajit Sanyal

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India	,	
Phone:- +91 98181	$05093. +91\ 9811684652$	
Research Interests	Computer Vision and Computer Graphics with focus on Image Based Modeling and Ren- dering, Walkthroughs, Geometric Vision, Active Vision, Image Processing	
Education	Indian Institute of Technology Delhi, New Delhi, India. Ph.D. (Near Completion)	
	Discontation Areas Image Decad Modeling of	nd Dandaring
	Advisore, Subhashia Daparias and Dram Kalra	
	Aavisors: Subhashis Daherjee and Frem Kaira	
	Indian Institute of Technology Version Version India	
	Indian Institute of Technology Kanpur, Kanpur, India.	
	M.Sc. Physics, May 2000	
	Souttish Church College University of Color	tta Vallata India
	P Se Dhysics May 1008	itta, Koikata, Ilidia.
	D.Sc. Fliysics, May 1998	
Academic	Secured 98.32 percentile, in GATE 2000	
Achievements	Qualified for the UGC-CSIR National Eligib	ility Test (NET) for Junior Research Fellow-
	ship (JRF) 2000	
	Selected for National Scholarship for B.Sc. F	tesults.
5 1 11 11		
Publications	On Learning Shapes from Shades	
	Subhajit Sanyal, Mayank Bansal, Subhashis Banerjee, and Prem K Kalra. Indian Con-	
	ference on Computer Vision, Graphics and I	mage Processing, 2004.
	Modeling of Free-Form Surfaces and Shape f	from Shading.
	Subhajit Sanyal, Mayank Bansal, Subhashis	Banerjee, and Prem K Kalra. 2nd Interna-
	tional Symposium on 3D Data Processing, V	visualization, and Transmission 3DPVT'04
	Multilevel modelling and rendering of archite	ectural scenes.
	Akash M Kushal,Gaurav Chanda,Kanishka	Srivastava, Mohit Gupta, Subhajit Sanyal, T.
	V. N. Sriram, Prem Kalra, Subhashis Banerje	e. EUROGRAPHICS 2003.
Current	urrent Planning high quality automated tours of image-based virtual worlds.	
Research	To be communicated shortly.	
Activity		
Work	Currently employed as a Project Associate	in the project "Design and Development of
Experience Image Based Rendering System", in the Department of Compu		partment of Computer Science and Engineer-
	ing, Indian Institute of Technology Delhi.	

Projects

A selected list of projects with which I was associated.

Virtual Advertisements:

The project was to artificially render dynamic advertisements on some static billboards in a real scene as it is being captured in a video-footage. The issues involved were real-time segmentation of occluders and simple geometric etchniques to enable the transfer of the required texture on the billboard. For a detailed report and some demos visit http://www.cse.iitd.ernet.in/vglab/research/research_group1/4/advertisement/index.shtml

Augmented Reality:

The project involved developing a novel technique for simple and fast augmentation of a static scene with artificial moving objects or objects extracted from a motion clip. The technique essentially deals with the recovery of camera parameters of the static image followed by a sparse modeling of the potential occluders. A detailed report and some demos can be accessed at http://www.cse.iitd.ernet.in/vglab/research/research_group1/4/augmentation/index.shtml

Robot Navigation:

The project involved developing a robot navigation system, in which a robot, with mounted cameras, can detect obstructions, and traverse a path avoiding them, from its starting position to the designated destination. Some reports can be accessed at

 $http://www.cse.iitd.ernet.in/vglab/research/research_group2/3/robonav/index.shtml and the second s$

Image based Rendering of Walkthroughs:

Recently, the problem of image based rendering has attracted considerable attention wherein the environmental map for rendering of novel views are maintained in terms of a set of images instead of explicit geometric and photommetric models of a scene. The project addressed the problem of generation of a sequence of novel views of a scene from a set of reference views. To access a detailed report and some demos visit

http://www.cse.iitd.ernet.in/vglab/research/research_group1/3/ibrwalkthru/index.shtml

Volume Rendering on GPU:

Volume Rendering has long been used for medical imaging, fluid dynamics and other such applications where information from 3D data is to be extracted. Due to large data sizes and intensive computations it has long been a classical problem in graphics. The recent emergence of hardware accelerated algorithms have furthered these applications and allows real time rendering. The project was to implement and analyse different techniques for rendering volumetric data and utilisation of GPU for achieving real-time interactive visualization.

Computer Skills Platforms: Linux, Windows

> Languages: C, C++,Java, x86 Assembly

Computer Vision and Graphics specific skills: Cameras, frame-grabbers, OpenGL

References Available on request.