

Dr. Debmalya Sinha

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INTERESTS

Ray Tracing
Light Fields
Machine Learning
Physically Based Rendering

EDUCATION

Doctor of Philosophy

Engineering | Grad. 2018
Conc. on Computer Graphics.
Thesis: Temporal Incident Light Fields

UNIVERSITY OF WARWICK

Coventry, United Kingdom.

Master of Science

Computer Science | Grad. 2013
Conc. on HCI, Usability.
Thesis: Development of Sahaj Linux
for rural Indian users

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Kharagpur, India.

SKILLS

PROGRAMMING

Very Proficient (20K+ lines):

C++ • C • GTK+2

Fairly Proficient (8k+ lines):

DirectX • HLSL • C# • Matlab • Python •
OpenGL/GLSL • OpenCV • JavaScript

Good Familiarity:

Java • PHP • Perl • Shell • CUDA • SDL •
numPy • PyTorch

ART

Classical Vocalist
Documentary Photographer
Guitar and Piano player

LINKS

Github:// [ecntrk](#)
LinkedIn:// [ecntrk](#)
Quora:// [Debmalya-Sinha](#)
Slideshare:// [debmalyasinha](#)
DBLP:// [Sinha:Debmalya](#)

EXPERIENCE

Automaton Games | RENDERING ENGINEER

Oct 2018 - Present | Cambridge, UK.

Research and Development of novel rendering techniques for the upcoming AAA level MMORPG title "Maverics: Proving Grounds". **Exp:** RayTracing, DirectCompute, HLSL, DXR, CryEngine, Profiling, Image Based Techniques.

trueDR Ltd. | SENIOR ENGINEER

Nov 2017 - Sep 2018 | Leamington Spa, UK.

HDR image processing for Computer Vision in safety critical automotive applications. **Exp:** OpenCV, OpenGL, GPGPU (OpenCL), Tone mapping, Depth perception, stereo image processing, HDR display pipeline.

Felicitous Computing Group | RESEARCH SCIENTIST

Feb 2013 - Feb 2014 | Department of CS, NUS Singapore

Emotion detection from gesture and gait in a continuous 2D emotion space. Invited talks at universities (NTU, NUS, IIT) and at Microsoft Research Asia.

Exp: Affective computing, Kinect, OpenCV, and Machine Learning.

RESEARCH

Visualisation Group | GRADUATE STUDENT

April 2014 - Present | University of Warwick, U.K

Development of a Light Field based technique for capturing and rendering both spatially and temporally varying light from real-world scenes with photorealistic precision and scalability. Publication submitted.

Supervisors: **Dr. Kurt Debattista** and **Prof. Alan Chalmers**

Media Lab Asia | RESEARCH FELLOW

Jan 2010 - Jan 2013 | IIT Kharagpur

Development of a Linux desktop user interface in Bangla including a novel file browser for socio-economically backward people from rural India with no prior technical exposure. Supervisor: **Prof. Anupam Basu**

PUBLICATIONS

- Natural arrangement: A novel and intuitive perspective on filesystem re-organization. Sinha, D, Basu, A, IHCI 2012
- Gardener: A file browser assistant to help users maintaining semantic folder hierarchy. Sinha, D, Basu, A, IHCI 2012
- Design and Evaluation of a Cognition Aware File Browser for Users in Rural India. Sinha, D, Basu, A, PerMIn 2012

AWARDS

- 2014 Queen's Awards and Bursary Scholarship, U.K.
- 2012 Runner's up at Hack-test at NUS Singapore (Shengdong Zhao).
- 2009 Top 1% in Graduate Aptitude Test in Engineering, India