Rajaditya Mukherjee

Personal & Contact Information

The Ohio State University
Dept. of Computer Science & Engineering
Dreese Laboratories
2015 Neil Avenue
Columbus, OHIO 43210 USA

(614)-271-4439
rajaditya.mukherjee@gmail.com
www.rajaditya.com
Citizenship : Indian Citizen
Visa Status : F1 (Student Visa)

Research Interests

Physics based Animation, Data Driven Animation, Geometric and Object Modelling, Graphical Simulation and Visualization

Education

The Ohio State University

Ph.D. Candidate, Computer Science and Engineering (expected May 2018)

- Focus : Computer Graphics (Major), Theory and Algorithms (Minor) , Artificial Intelligence (Minor)
- Advisor: Dr. Huamin Wang
- CGPA : 3.96/4.0

Jadavpur University , India

Bachelor in Computer Science and Engineering, July 2011

- CGPA : 8.77/10 (Absolute Grading) Marks : 81.77% overall
- Final year project in Computational Geometry

Professional Experience

May 2014 – July 2014 **Tukatech Inc.**
Cloth Simulation Intern

Relevant Achievements :

- ❑ Fixed several multithreaded bug in the CUDA-based Cloth Solver.
- ❑ Implemented edge-edge collision algorithm with my own collision resolution scheme for fast but realistic looking clothing.
- ❑ Implemented a version of Modified Conjugate Gradient that speeded up the solve as well made it more stable.

Technologies : C++, CUDA

May 2011 – July 2012 **Synopsys India Pvt. Ltd.**
R&D Engineer I in Verification Group

Salient Projects :

- ❑ *Unified Messaging Architecture for VCS-NLP* - Part of a two member team responsible for creating a completely novel informative runtime as well as compile time messaging infrastructure for VCS-NLP
- ❑ *CPF (Common Power Format) Implementation for VCS-NLP* - Part of a two member team responsible for the conception, implementation as well as initial testing of CPF support for VCS-NLP. CPF is a parallel power specification format to the IEEE 1801-2009 UPF standard.

Technologies : C++, Verilog, IEEE 1801-2009 UPF

Scientific Research Experience

2013-now	Physically Accurate Cloth Simulation for Realtime Applications Advisor: Dr.H. Wang, Dept. of Computer Science and Engineering, The Ohio State University.
2010-2011	A Research Testbed in Computational Geometry Algorithms. Advisor: C. Mazumdar, Dept. of Computer Science and Engineering, Jadavpur University.
2010	Measurement Experiments in Future Internet Testbeds. Advisor: G. Carle, Chair for Network Architecture and Services, Technische Universität München.

Honors and Awards

2012–2013	Graduate School Fellowship The Ohio State University
2011	UGC Undergraduate Research Scholarship Jadavpur University
2010	WISE(Working Internships in Science and Engineering) Scholarship German Academic Exchange Service (DAAD)

Teaching Experience

Autumn 2014	Lab Instructor, Modeling and Problem Solving with Spreadsheets and Databases [U]
Spring 2014	Grader, Foundations of Programming Languages [G]
Autumn 2013	Grader, Foundations of Programming Languages [G], Formal Languages and Automata Theory [U]

Graduate Coursework

- ❑ Advanced Operating Systems [*Graduate Core*]
- ❑ Algorithms [*Graduate Core*]
- ❑ Foundations of Programming Language [*Graduate Core*]
- ❑ Geometric Modelling [*Graphics Major*]
- ❑ Realtime Rendering with OpenGL [*Graphics Major*]
- ❑ Advanced Computer Graphics [*Graphics Major*]
- ❑ Computability and Complexity [*Theory Minor*]
- ❑ Algorithm Design Under a Geometric Lens [*Theory Minor*]
- ❑ Computer Vision [*AI Minor*]

Relevant Skills

Languages:	English, Hindi, Bengali , Spanish
Programming Proficiency :	C,C++,Java,Python,PHP,Javascipt
Graphics API :	OpenGL { Core and GLSL 4.0 }
Parallel Programming API :	CUDA (Introductory skills)

References

Dr. Huamin Wang, Phd Advisor , `whmin@cse.ohio-state.edu`