

PARITOSH SHARMA

GRAD STUDENT

Université Grenoble Alpes - ENSIMAG

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Research

Laboratoire d'Informatique de Grenoble - TEAM GETALP

Grenoble, France

ADVISOR: DR. DIDIER SCHWAB

Feb. 2020 - Sept. 2020

- Thesis: "Interaction methods for eye tracking in games for cognitively disabled people"

Projects

Personal

Grenoble, France

DIFFERENTIABLE RENDERER

Sept. 2020

- Draws 3D shapes differentially using Tensorflow
- Support for computing derivatives through geometry, lighting, and other parameters

KDE

Grenoble, France

QT3D BACKEND FOR KSTARS

May 2020 - Jul. 2020

- 3D backend for planetarium software KStars
- Support for Astronomical projections

Personal

Gurgaon, India

SIMULATOR FOR MASS SPRING SYSTEMS

Dec. 2018

- Uses popular algorithms like Implicit/Explicit Euler, Verlet Integration, etc.

Education

Université Grenoble Alpes - ENSIMAG

Grenoble, France

MS INFORMATICS

2019 - 2021

- Specialization in Graphics, Vision and Robotics
- M1 Thesis in interaction methods for eye tracking

SRM University

Chennai, India

B.TECH. CSE

2015 - 2019

- Thesis in Finger Tracking
- Advisor: Mrs. Priyanka Sharma

Professional Experience

Nov. 2018 - Apr. 2019 **Intern**, Gesture Research

May 2018 - Aug. 2018 **Student Developer**, Godot - Google Summer of Code

Dec. 2017 - Jan. 2018 **Intern**, Cusmat Technologies

Skills

COMPUTER GRAPHICS

Path tracing, importance sampling, BRDF and microfacet theory, mesh simplification algorithms, normal mapping, voxelization, differentiable rendering and noise functions(worley, perlin).

MATHEMATICS

Linear algebra, optimization (gradient descent and backpropagation), sampling and Monte Carlo estimators.

COMPUTER SCIENCE

C++, OpenGL, GLSL, Unity3D, multi-threading, CUDA, Python, tensorflow, Java, HTML, CSS, JS (jQuery and Phaser.js), Git, Linux, Qt, CMake, automatic differentiation, scalable algorithms, Inkscape, GIMP and OpenShot.

LANGUAGE

English and Hindi (native), French (Beginner)

Additional Information

INVITED TALKS

Summer 2020. *Qt3D backend for KStars*. Invited talk: KDE Academy 2020

HONORS

2020 **Campus France**, Charpak BCS Master's Scholarship

2011 **17th UCMAS Abacus and Mental Arithmetic International Competition**, 1st Runner Up

2014 **Technothon**, IIT Guwahati, All India Rank 44

Malaysia

India

OTHER INTERESTS

Chess, Hiking, Climbing, Soccer, History of digital and board games