

# 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

Gurgaon, India

#### SIMULATOR FOR MASS SPRING SYSTEMS

Dec. 2018

- WebGL demonstration for Mass Spring Systems using popular algorithms like Implicit/Explicit Euler, Verlet Integration, etc.

### KDE

Grenoble, France

#### QT3D BACKEND FOR KSTARS

May 2020 - Jul. 2020

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

## 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

Ghaziabad, India

#### B.TECH. CSE

2015 - 2019

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

## Professional Experience

Nov. 2018 -

**Intern**, Gesture Research

Apr. 2019

May 2018 -

**Student Developer**, Godot - Google Summer of Code

Aug. 2018

Dec. 2017 -

**Intern**, Cusmat Technologies

Jan. 2018

## Skills

### COMPUTER GRAPHICS

Physics based simulation(Inverse Kinematics, Verlet Integration), Chaikin Subdivision, Path tracing, importance sampling, BRDF and microfacet theory, differentiable rendering and noise functions(worley, perlin).

### MATHEMATICS

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

## COMPUTER SCIENCE

C++, OpenGL, GLSL, Unity3D, multi-threading, CUDA, Python, Matlab/Octave, 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

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### 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 Competiton**, 1st Runner Up

*Malaysia*

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

*India*

### OTHER WORK

2018 **Robinhood Army**, Volunteering and teaching at local slums

*India*

2020 **Association de la fondation étudiante pour la ville**, Volunteer

*France*

2020 **INTEGRE**, Organizer for Integration Events

*France*

### OTHER INTERESTS

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