# Kishore S. Shenoy

#### kichappa@gmail.com

in LinkedIn/in/kishoreshenoy

GitHub/kichappa

Website: kichappa.github.io/

Krishna, KPRA-35 Block A, 2nd Cross, Ambalam Road, Koonamthai, Edappally, Kochi, Kerala, India 682024

#### **EDUCATION**

### Indian Institute of Technology Madras, India

Bachelor of Technology in Civil Engineering

2017 - 2021

CGPA: 9.36/10

Relevant Courses Discrete Mathematics for Computer Science | Basic Graph Theory | Symbolic Logic

Human Factors in Design | Form and Aesthetics in Design

#### Shibaura Institute of Technology, Tokyo, Japan

Exchange Program in Planning, Architecture and Environmental Systems

**CGPA: 9.13**/10 2020

Relevant Courses Spatial Modeling and Analysis | Architectural Design Studio | Interaction Design

Architectural Planning and Design | Assistive Technology Design | Color Theory

#### RESEARCH EXPERIENCE

# Computational Origami Structures | SENIOR THESIS

Indian Institute of Technology Madras, India

2020 - 2021

- Created Miura-like structures of tunable Gaussian curvature 3D surfaces. Through multivariate optimization, these surfaces do not hinder the designer's artistic freedom.
- Presented at IASS International Conference on Spatial Structures 2020/21, Surrey, UK.

# Quantum Computation | RESEARCH INTERN

2018 - 2020

Indian Institute of Science Education and Research Kolkata, India

- Developed a novel algorithm to encode images into quantum bits with an exponential advantage over the classical computers on the number of [qu]bits required.
- Tuned and Implemented a Q-Reinforcement Learning Algorithm for cloning qubits on IBM Q Platform with a multifold advantage over Tomography in limited resource situations [see in publications].

#### **PUBLICATIONS**

Madabhushi, S. C., <u>Shenoy, K. S.</u>, Pratapa, P. P. <u>Generating developable and rigidly foldable origami surfaces with arbitrary Gaussian curvatures.</u> Proceedings of the International Conference on Spatial Structures 2020/21 (IASS2020/21-Surrey7), UK.

<u>Shenoy, K. S.</u>, Sheth, D. Y., Behera, B. K. And Panigrahi, P. K. <u>Demonstration of a measurement-based adaptation protocol with quantum reinforcement learning on the IBM Q experience platform. Quantum Information Processing, Springer.</u>

2020

#### MY OPEN SOURCE PROJECTS

# Generative Modelling | mobius.ramdon.team

 Design code scripts for parametric modelling, constraint satisfying, and procedural modelling using the generative design tool Möbius Modeller.

# Freeform Gradients | draggy.ramdon.team

• A GPU-accelerated design tool that uses Laurent polynomials and shaders to create smooth and efficient spatial (2D) gradients with rich, vibrant colors.

#### Delaunay Colours | triangles.ramdon.team

 Designed and developed a design tool in Python that that uses Delaunay triangulation and bivariate spline interpolation to create gradient effects with dominant and recessive color points.

#### **DESIGN PROJECTS**

#### AMP Relax! | ARCHITECTURAL DESIGN | kichappa.github.io/#/p#amp-relax

 Architectural design of a Student Activity Centre with considerations for spaces with various levels of social interaction. At its core is an amphitheatre that is visible from all floors.

# Glass Eye | PRODUCT DESIGN

- Design concept of a spectacle for the visually impaired/blind to allow them to function in a social setting without difficulties.
- Using image recognition, gyroscope, and electromagnetic braille gloves, it identifies people
  approaching the user, informs information through braille, helps align in the right direction while
  moving, and provides emergency alerts that could help them stay safe.

#### **ACHIEVEMENTS**

#### Kalidas Madhavpeddi Scholarship 2021

• Sole awardee for the academic year in IIT Madras for exemplary performance in leadership, teamwork, and academics.

# NIUS<sup>1</sup> Physics 15 2018

- Participated at the Physics Camp conducted by HBCSE, TIFR.
- Qualified for research in Quantum Computation.

## Raffles Institution Maths Challenge 2013 | Rank 7

**NSEP**<sup>2</sup>2017 Top 1% in state of Kerala, India.

#### PROFESSIONAL EXPERIENCE

#### Tata Projects Limited | PROJECT MANAGEMENT (CONSTRUCTION)

Sept 2021 - Aug 2022

- Worked in commercial, planning, and execution teams of a \$180M solar factor building EPC project and the costing, billing, and quantity survey team of a \$260M metro rail EPC project.
- Implemented a probabilistic inventory management system, deployed a mobile app for digital data collection, and optimized timeline per resource availability.

# Wellnexus Technologies Private Ltd. | DESIGN INTERN

June - Aug, 2020

Graphic and Interaction Design (UI & UX)

• Ideated and designed the user workflow, wireframes, theme, UX and aesthetics of the UI.

#### **SKILLS AND OTHER INTERESTING THINGS!**

#### CO-CURRICULAR ACTIVITIES AT IIT MADRAS

#### Mentor at Avanti Fellows 2017

 Mentored five high school students to appear in IITJEE Advanced Examination and helped them secure admissions into various prestigious institutions across India.

Graphic Designer at Team Abhiyaan 2017 & Team RSD 2017
Visual Effects Designer & Animator at Saarang 2018 & Shaastra 2018
Table Tennis Player at National Sports Organisation 2017

# HOBBIES

GeoGuessr, Architecture, Meditation, Gaming, Piloting Drones, Football.

**LANGUAGES** 

#### **SKILLS & SOFTWARES**

2D/3D Design: Photoshop, Illustrator, InDesign, After Effects, Adobe XD,

AutoCAD, Revit, Fusion 360, Figma.

**Programming:** Mathematica, MATLAB, NetLogo, Python, C, C++, Visual

Basic, Git.

Computation Design: Möbius Modeller.

**Web Design:** WebGL, HTML, CSS, JavaScript, ReactJS. **Electronics:** Arduino, Fritzing, CODESYS, Atmel AVR.

## Intermediate Tamil Beginner

English, Malayalam, Konkani, Hindi

**Proficient** 

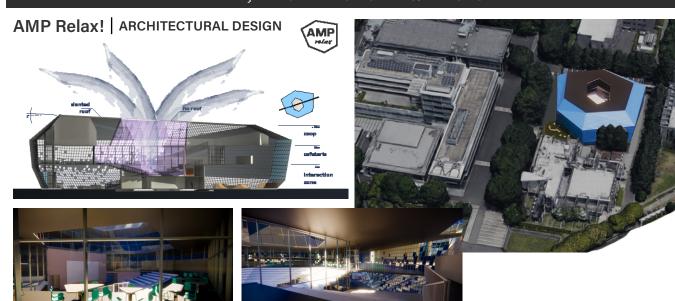
Japanese, Sanskrit

<sup>1 -</sup> National Initiative on Undergraduate Science

<sup>2 -</sup> National Standard Examination in Physics (Preliminary to Indian National Physics Olympiad)

# **Extended CV**

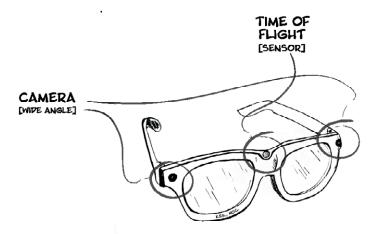
# ART, ARCHITECTURE & DESIGN

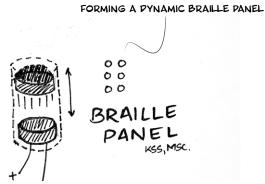


Please visit my design portfolio here https://kichappa.github.io/resume/design.htm

SIX ELECTROMAGNETS

Want to see more?







Master Copy of Rembrandt, 1660 TEXTURED CANVAS PAINTING



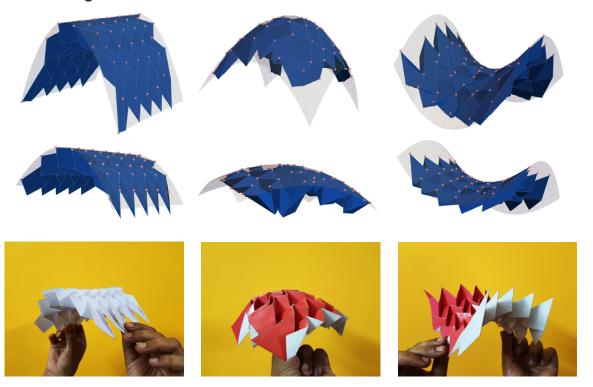




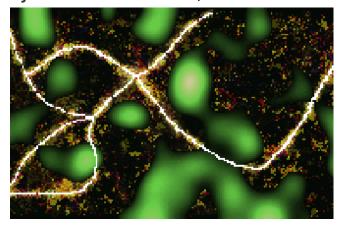
Master Copy of Circle of Paolo Uccello | TEXTURED CANVAS PAINTING

#### **ENGINEERING**

Computational Origami Structures | SENIOR THESIS | kichappa.github.io/#/p#computation-origami-IASS



City Sandbox Simulation | URBAN GROWTH MODELS | kichappa.github.io/#/p#urban-growth-models



- Simulated urban growth on a fixed infrastructure using the agent-based modelling software, Netlogo.
- The system is simulated for various tolerances of residential over industrial to analyze the dependency on land use on tolerance. The simulations are repeated at each boundary condition to eliminate stochasticity.

**Freeform Gradients** 

