

# Sai Ganesh Subramanian

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J. Mike Walker '66 Department of Mechanical Engineering | Office: Doherty 309C, 242 Spence Street

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## EDUCATION

### Master of Science - Mechanical Engineering

Expected May 2020

Texas A&M University, College Station

GPA: 3.75/4

Research Group: **Mixed-Initiative Design Laboratory**

Advisor: **Dr. Vinayak R. Krishnamurthy**

Coursework: *Computational Geometry, Advanced Product Design, AI, Linear Algebra, FEA, Physically-Based Modeling*

### Bachelor of Technology in Mechanical Engineering (Honors)

JUNE 2014 -MAY 2018

National Institute of Technology Tiruchirappalli, India

GPA: 9.08/10

Advanced Courses: *Computational Fluid Mechanics, Advanced Heat Transfer, Mechatronics, Mechanics of Machines.*

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## PUBLICATIONS

- Sai Ganesh Subramanian, Mathew Eng, Vinayak R. Krishnamurthy, Ergun Akleman, "Delaunay Lofts: A biologically inspired approach for modeling space filling modular structures" Computers & Graphics, Volume 82, 2019, Pages 73-83, ISSN 0097-8493, 10.1016/j.cag.2019.05.021.
  - Ting-Ju Chen, Sai Ganesh Subramanian, and Vinayak R. Krishnamurthy *Mini-Map: Mixed-Initiative Mind-Mapping via Contextual Query Expansion*, AIAA SciTech Forum, (AIAA 2019-2347)
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## POSTERS

- "Delaunay lofts: a new class of space-filling shapes", In ACM SIGGRAPH 2019 Posters (SIGGRAPH '19). Sai Ganesh Subramanian, Mathew Eng, Vinayak Krishnamurthy, and Ergun Akleman This poster also won the **1<sup>st</sup> place** in the ACM Student Research Competition Graduate Category
  - "Mini-Map: Mixed-Initiative Mind-Mapping with AI Collaborator", Technical Presentation at IDETC 2019 Ting-Ju Chen, Sai Ganesh Subramanian, Vinayak R. Krishnamurthy
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## AWARDS

- Best Graduate Researcher** - ACM Student Research Competition, SIGGRAPH 2019, Los Angeles **AUG 2019**
  - Dr. A. Ramanujam Award** for outstanding achievement in *Mathematics*, Tamil Nadu (India) **MAY 2014**
  - Merit certificate** - top 0.1% of candidates of CBSE Class XII **MAY 2014**
  - State rank 2** - International Olympiad of Mathematics; **State rank 4** - International Olympiad of Science
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## WORK EXPERIENCE

- Graduate Teaching Assistant, Texas A&M University **Fall 2019**
    - Geometric Modeling** (MEEN 210) and **Materials in Design** (MEEN 475)
  - Graduate Research Assistant, Texas A&M University **Spring 2019**
    - Developed a generalized algorithm for creating 3D space-filling Geometry, called Delaunay Lofts.
    - Investigating applications of Voronoi diagrams in metamaterial and structural design and fluid flow.
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## TECHNICAL EXPERIENCE

*India-Connect Research Intern, Nanyang Technological University, Singapore* **MAY 2017 - JULY 2017**

- Worked on Conceptual and development design of **prosthetic venous valve**. Designed novel bi-leaflet model and Carried out the Finite Element Analysis in Abaqus/CAE and subsequently modelled a mold used for manufacturing the bi-leaflet design from an animal tissue. Also worked on Ergonomic design and development for housing Clinical tongue imaging system.

*Project Head, Designers Consortium, Product Designing Club, NIT Trichy* **NOV 2016 - MAY 2018**

- Devised a novel mechanism for a "**Standing Wheelchair**" which enables the user to come standing position by cranking the hand rest. A working prototype was designed (using PTC Creo), analyzed (using ANSYS Structural) and fabricated from scratch.
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## LEADERSHIP EXPERIENCE

*President, Mechanical Engineering Association* **AUG 2017 - MAY 2018**

- Initiated the **Mechanical Innovation Center** (MIC), organized in-plant training and internship briefings for mechanical engineering undergraduate students

*Chairman, Synergy - National Technical Symposium* **AUG 2017 - MAY 2018**

- Coordinated with 12 core members and lead a team of 200 students to organize the **Annual Mechanical Symposium**, NIT Trichy. We organized a plethora of events, workshops, paper presentations and guest lectures.