

SHANTANU VYAS

College Station, Texas
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EDUCATION

- Texas A&M University**, College Station, TX *Expected Graduation: May 2025*
Doctor of Philosophy, Human-Computer Interaction **GPA: 4.0/4.0**
Advisor: Dr. Vinayak R. Krishnamurthy
- Texas A&M University**, College Station, TX *May 2019*
Master of Engineering, Mechanical Engineering **GPA: 3.7/4.0**
- SRM University**, Kattankulathur, India *May 2017*
Bachelor of Technology, Mechanical Engineering **GPA: 3.5/4.0**

EXPERIENCE

- Texas A&M University | Neuroergonomics Lab | Mixed-Initiative Design Lab** *Jan 2022 - Present*
Graduate Research Assistant *College Station, TX*
- **Project:** LEARNER: Learning Environments with Advanced Robotics for Next-generation Emergency Responders
 - **PI:** Dr. Ranjana Mehta, Dr. Vinayak R. Krishnamurthy
 - **Funding Source:** NSF – Convergence Accelerator
 - Development of machine learning models for adaptive training of emergency responders in immersive technologies (Augmented & Virtual Reality systems).
- Texas A&M University | Mixed-Initiative Design Lab** *May 2021 - Dec 2021*
Graduate Research Assistant *College Station, TX*
- **Project:** DARES: Distributed Autonomous Robotic Experiments and Simulations
 - **PI:** Dr. Vinayak R. Krishnamurthy
 - **Funding Source:** DOD - Army Research Laboratory
 - Development of multi-level of detail geometric modeling framework using LiDAR point clouds and segmented images to recreate natural scenes observed by autonomous vehicles.
- Texas A&M University | Mixed-Initiative Design Lab** *Jan 2021 - May 2021*
Graduate Research Assistant *College Station, TX*
- **Project:** Fracture Fixation Training using a Hybrid Simulator with Data Visualization
 - **PIs:** Dr. Vinayak R. Krishnamurthy, Dr. Bruce Tai
 - **Funding Source:** The Orthopaedic Research and Education Foundation (OREF)
 - Developed models for assessing orthopedic bone-drilling data through Laplacian-based trajectory noise characterization.
- Texas A&M University** *Aug 2020 - Dec 2020*
Graduate Teaching Assistant *College Station, TX*
- **Course:** MEEN 210 Geometric Modeling
 - Assist students with 3D modeling tasks using SolidWorks.
 - Assist students in the design process for developing course projects.

REFEREED JOURNAL PUBLICATIONS

[J6] **Shantanu Vyas**, Ting-Ju Chen, Jay Woodward, Vinayak R. Krishnamurthy. **Reflect-Express-Transform: Investigating Speech-based Iterative Digital Design for Young Designers.** (*Invited*) ASME Journal of Computing and Information Science in Engineering. (*Submitted: July 31, 2022*)

[J5] **Shantanu Vyas**, Ting-Ju Chen, Ronak R. Mohanty, Vinayak R. Krishnamurthy. **Making-A-Scene: A Preliminary Case Study on Speech-based 3D Shape Exploration through Scene Modeling.** ASME Journal of Computing and Information Science in Engineering, 2022.

[J4] **Shantanu Vyas**, Ting-Ju Chen, Ronak R. Mohanty, Peng Jiang, Vinayak R. Krishnamurthy. **Latent Embedded Graphs for Image and Shape Interpolation.** Computer-Aided Design, Volume 140, 2021.

[J3] Marta Revilla-León, Miguel Gómez-Polo, **Shantanu Vyas**, Basir A. Barmak, German O. Gallucci, Wael Att, Mutlu Özcan, Vinayak R. Krishnamurthy. **Artificial intelligence models for tooth-supported fixed and removable prosthodontics: A systematic review.** The Journal of Prosthetic Dentistry, 2021.

[J2] Marta Revilla-León, Miguel Gómez-Polo, **Shantanu Vyas**, Basir A. Barmak, German O. Galluci, Wael Att, Vinayak R. Krishnamurthy. **Artificial intelligence applications in implant dentistry: A systematic review.** The Journal of Prosthetic Dentistry, 2021.

[J1] Marta Revilla-León, Miguel Gómez-Polo, **Shantanu Vyas**, Basir A. Barmak, Mutlu Özcan, Wael Att, Vinayak R. Krishnamurthy. **Artificial intelligence applications in restorative dentistry: A systematic review.** The Journal of Prosthetic Dentistry, 2021.

PEER-REVIEWED CONFERENCE PUBLICATIONS

[C4] **Shantanu Vyas**, Ting-Ju Chen, Jay Woodward and Vinayak R. Krishnamurthy. **ShapOrator: Enabling Design Iteration for Young Designers Through Shape Verbalization** Proceedings of the ASME 2022 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. St. Louis, Missouri. August 14-17, 2022.

[C3] Abhijeet Singh Raina, **Shantanu Vyas**, Matthew Ebert, and Vinayak R. Krishnamurthy. **Quickprobe: Quick Physical Prototyping-in-Context Using Physical Scaffolds in Digital Environments.** Proceedings of the ASME 2022 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. St. Louis, Missouri. August 14-17, 2022.

[C2] Ronak R. Mohanty, **Shantanu Vyas**, Aman Nigam, Bruce L. Tai and Vinayak R. Krishnamurthy. **Orthopedic Bone-Drilling Assessment Through Laplacian-based Trajectory Noise Characterization.** Proceedings of the ASME 2021 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Virtual, Online. August 17-20, 2021.

[C1] Ting-Ju Chen, **Shantanu Vyas**, and Vinayak R. Krishnamurthy. **Investigating Mind-Mapping as a Tool for Problem Exploration in Early Design.** Proceedings of the ASME 2021 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Virtual, Online. August 17-20, 2021.

EXTENDED ABSTRACTS AND POSTERS

[EA1] Shivangi Dwivedi, **Shantanu Vyas**, John Hayes, Isabella Pedron, Vinayak R. Krishnamurthy, Ranjana K. Mehta. **Neurophysiological and Perceptual Evaluation of Adaptive Augmented Reality-Based Training.** 2022 Neuroergonomics and NYC Neuromodulation Conferences.

HONORS & AWARDS

Best Paper Award

ASME IDETC/CIE 2022 - Computer-Aided Product and Process Development (CAPPD) Technical Committee Best Paper Award

Fall 2022

OUTREACH ACTIVITIES

Youth Adventure Program (YAP)

Student Assistant

July 2021

College Station, TX

- Assisted in conducting a two-day summer camp for high-school students at Texas A&M University.
- Co-taught rapid prototyping and 3D modeling sessions.

ACM SIGCHI TAMU Chapter

Communications Officer

Jan. 2021 - Dec. 2021

College Station, TX

- In-charge of communicating with university as well as industrial point-of-contacts to organize HCI related events at Texas A&M University.