Subramanian Chidambaram

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EDUCATION

Purdue University, West Lafayette, IN Aug 2017 – Dec 2022
Doctor of Philosophy candidate in Mechanical Engineering
Area of Specialization: Human-Computer Interaction, AR/VR, 3D User Interface, Graphic Interface.

Purdue University, West Lafayette, IN Aug 2017
Master of Science in Aeronautical and Astronautical Engineering
Minor: Computational Science & Engineering

Vellore Institute of Technology, Vellore, India May 2015
Bachelor of Technology in Mechanical Engineering (honors.)

PUBLICATIONS

1. **Subramanian Chidambaram,** Hank Huang, Fengming He, Xun Qian, Ana M Villanueva, Thomas S Redick, Wolfgang Stuerzlinger, and Karthik Ramani. 2021. ProcessAR: An augmented reality-based tool to create in-situ procedural 2D/3D AR Instructions. In Designing Interactive Systems Conference 2021 (DIS '21), ACM.
2. **Chidambaram, S.,** Zhang, Y., Sundararajan, V., Elmqvist, N., & Ramani, K. (2019, April). Shape Structuralizer: **Design, Fabrication**, and User-driven Iterative Refinement of 3D Mesh Models. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (p. 663). ACM.
3. Villanueva, A., Liu, Z., Zhu, Z., **Chidambaram, S.,** Ramani, K., (2022). ColabAR: A Toolkit for Remote Collaboration in Tangible Augmented Reality Laboratories. In Proceedings of the ACM on Human-Computer Interaction, ACM. *[Accepted to be presented at CSCW 2022]*
4. Luis Paredes, Sai Swarup Reddy, **Subramanian Chidambaram**, Devashri Vagholkar, Yunbo Zhang, Bedrich Benes, and Karthik Ramani. 2021. FabHandWear: An End-to-End Pipeline from Design to Fabrication of Customized Functional Hand Wearables. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. (June 2021).
5. Adam, G., **Chidambaram, S.,** Reddy, S. S., Ramani, K., & Cappelleri, D. J. (June 2021). Towards a Comprehensive and Robust Micromanipulation System with Force-Sensing and VR Capabilities. *Micromachines*.
6. Ananya Ipsita, Hao Li, Runlin Duan, Yuanzhi Cao, **Subramanian Chidambaram,** Min Liu, and Karthik Ramani. 2021. VRFromX: From Scanned Reality to Interactive Virtual Experience with Human-in-the-Loop. In CHI Conference on Human Factors in Computing Systems Extended Abstracts (CHI '21 EA), ACM.
7. Yoon, S. H., Huo, K., Zhang, Y., Chen, G., Paredes, L., **Chidambaram, S.,** & Ramani, K. (2017, October). iSoft: a customizable soft sensor with real-time continuous contact and stretching sensing. In Proceedings of the 30th Annual ACM Symposium on User Interface Software and Technology (pp. 665-678). ACM.

PATENTS

- Designed a novel 'Laryngoscope' to perform advanced suction device with continuous oxygen supply for preforming Meconium suction on infants - Indian Design Patent No. 262490, Date of Patent: Sept 05, 2014
- System and method for generating asynchronous augmented reality instructions – US Patent No. 17/085,620, Date of Patent: May 06, 2021.

ACHIEVEMENT & AWARDS

Winner of 2017 Dassault Systèmes, Additive Manufacturing design hackathon May 2017

- Designed a personalized arm cast which is lightweight, manufacturable through AM technology

Magoon Excellence in Teaching Award April 2020
Graduate School Mentoring Award May 2020

TEACHING EXPERIENCE

Engineering projects in Community Service (EPICS), Purdue University Aug 2016 -May 2020
Graduate Teaching Assistant

- Mentored 35 undergraduate teams comprising of over 500 students, in developing community service driven projects

SKILLS: C++, C#, C, Python, OpenGL, Unity, Oculus SDK, Blender, Solid works, SolidCAM, CATIA, Abaqus, Autodesk Fusion 360, MATLAB, Mathematica, Arduino, LaTeX.