

## Research summary

**Aims**—to develop and evaluate tangible devices that help people self-regulate their use of smartphones and laptops.

## Research positions

2021 — 2022

### **Pre-Doctoral Researcher**

Dept. of Computer Science, University of Maryland, College Park

## Education

2022 — present

### **PhD in Computer Science**, University of Chicago

Supervisor: [Dr. Ken Nakagaki](#)

Thesis: in-progress

2019 — 2021

### **MSc in Human-Computer Interaction**, University of Maryland, College Park

Supervisor: [Dr. Huaishu Peng](#)

Thesis: Enabling On-body Computing Using a Track Based Wearable

2014 — 2018

### **BTech in Electronics & Communication Engineering**, PES University

Supervisor: Suresh Padmanabhan

Thesis: Realtime On-chip Wireless Waveform Monitoring

## Major grants and funding

2022

**Crerar Fellowship** (\$5000), Dept. of Computer Science, University of Chicago

2022

**Daniels Fellowship** (\$5000), Dept. of Computer Science, University of Chicago

2019 — 2021

**Full tuition remission** (~\$56k), University of Maryland, College Park

## Awards & honors

2024

**Special Recognition for Outstanding Reviews**, DIS 2023, CHI 2024

2023

**core77 Design Awards 2023**, [Tools Award for Fibercuit](#)

2020

**Nominated for Graduate Assistant of the Year (top 2%)**, University of Maryland, College Park

2016

**Zonal Winner, National Robotics Championship**, IIT Bombay, India

# Publications

## Conference publications (fully reviewed, archival)

In computer science, top-tier conferences (<30% acceptance rate) are as, or more impactful than journals, see <https://doi.org/fgjt2h>

- |      |    |  |
|------|----|--|
| 2024 | C6 | <b>SHAPE-IT: Exploring Text-to-Shape-Display for Generative Shape-Changing Behaviors with LLMs</b> <a href="#">[url]</a><br>W. Qian, C. Gao, A. Sathya, R. Suzuki, K. Nakagaki<br>The 37th Annual ACM Symposium on User Interface Software and Technology (UIST '24)   |
|      | C5 | <b>CARDinality: Interactive Card-shaped Robots with Locomotion and Haptics using Vibration</b> <a href="#">[url]</a><br>A. Retnanto*, E. Faracci*, A. Sathya*, Y. Hung, K. Nakagaki<br>The 37th Annual ACM Symposium on User Interface Software and Technology (UIST '24)<br>[*equal contribution]   |
|      | C4 | <b>Attention Receipts: Utilizing the Materiality of Receipts to Improve Screen-time Reflection on YouTube</b> <a href="#">[url]</a><br>A. Sathya, K. Nakagaki<br>Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '24)   |
| 2022 | C3 | <b>Fibercuit: Prototyping High-Resolution Flexible and Kirigami Circuits with a Fiber Laser Engraver</b> <a href="#">[url]</a><br>Z. Yan*, A. Sathya*, S. Yusuf, J. Lien, H. Peng<br>The 35th Annual ACM Symposium on User Interface Software and Technology (UIST '22)<br>[*equal contribution]<br>🏆 <b>core77 Design Awards 2023 - Tools Award</b> |
| 2018 | C2 | <b>Realtime On-chip Wireless Waveform Monitoring</b> <a href="#">[url]</a><br>A. Sathya, S. Balaji, A. Gupta, S. Padmanabhan<br>IEEE 2018 International Conference on Advances in Computing, Communications and Informatics (ICACCI '18)   |
| 2017 | C1 | <b>Visual Positioning System for Automated Indoor/Outdoor navigation</b> <a href="#">[url]</a><br>A. Sathya, A. Goel, S. Padmanabhan<br>IEEE 2017 Region 10 Conference (TENCON '17)  |

## Journal articles (fully reviewed, archival)

- |      |    |   |
|------|----|---|
| 2022 | J1 | <b>Calico: Track Based Interactive and Relocatable Wearables with Fast, Reliable, and Precise Locomotion</b> <a href="#">[url]</a><br>A. Sathya, J. Li, T. Rahman, G. Gao, H. Peng<br>Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (UbiComp '22) |
|------|----|---|

## Other Contributions (lightly reviewed, archival)

- 2024      A3      **Game Jam with CARDinality: A Case Study of Exploring Play-based Interactive Applications** [\[url\]](#)  
E. Faracci, A. Retnanto, A. Sathya, A. Sparrow, K. Nakagaki  
The 37th Annual ACM Symposium on User Interface Software and Technology (UIST Adjunct '24)  
[\*equal contribution]
- 2022      A2      **Demonstration of Fibercuit: Techniques to Prototype High-Resolution Flexible and Kirigami Circuits with a Fiber Laser Engraver** [\[url\]](#)  
Z. Yan\*, A. Sathya\*, S. Yusuf, J. Lien, H. Peng  
The 35th Annual ACM Symposium on User Interface Software and Technology (UIST '22)  
[\*equal contribution]  
🏆 **Best Demo (People's Choice)**
- 2021      A1      **Towards On-the-wall Tangible Interaction: Using Walls as Interactive, Dynamic, and Responsive User Interface** [\[url\]](#)  
Z. Yan, A. Sathya, P. Carvalho, Y. Hu, A. Li, H. Peng  
Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21)

## Research dissemination

### Press

- 2024      [inews UK](#), No books, TV or internet: why I'm all in on a hardcore self-help bible  
[404 Media](#), Would You Waste Less of Your Life Online If You Got Daily 'Attention Receipts'?
- 2023      [Adafruit Blog](#), Calico: A Wearable Robotic Assistant #WearableWednesday  
[Indian Express](#), This is Calico, a tiny robot that can be your dance instructor, workout tracker, and more  
[Communications of the ACM](#), A Wearable Robotic Assistant That's All Over You  
[IEEE Spectrum](#), A Wearable Robotic Assistant That's All Over You  
[The Verge](#), Wearable robot, why not?
- 2022      [all3dp](#), Fibercuit Makes Custom Flexible Circuits With a Fiber Laser Engraver  
[Hackster.io](#), Fibercuit Laser-Cuts Prototype PCBs and Forms 3D Kirigami Objects  
[Hackaday](#), Fiber Laser Your Way to Flexible PCB Success  
[Hackaday](#), The Calico Wearable Rides the Rails  
[itmedia.co.jp](#), 服に敷いた線路をシュッシュポッポ 体中を移動する小型ロボット 健康状態をモニタリング  
[Hackster.io](#), How to "Train" Your Sensor

## Podcasts & Interviews

- 2024 [CBC Radio](#), Interviewed on CBC Radio's 'As It Happens' - a Canada-wide evening news show - about Attention Receipts
- [Put on Your Best...Robot](#), Interviewed on Over Coffee about Calico
- 2022 [Huaishu Peng, Anup Sathya, Zeyu Yan // Hackster Café](#), Interviewed on Hackster Café about Calico

## Teaching experience

- 2024 **Teaching Assistant, A Practice in Art & Technology (Spring 2024)**, University of Chicago, Department of Computer Science  
Instructor: Ken Nakagaki
- 2023 **Teaching Assistant, Intro to Human-Computer Interaction (Fall 2023)**, University of Chicago, Department of Computer Science  
Instructor: Ken Nakagaki
- 2022 **Teaching Assistant, Actuated User Interfaces and Technologies (Winter 2022)**, University of Chicago, Department of Computer Science  
Instructor: Ken Nakagaki

## Personal skills & volunteering

- 2015 — 2017 **President and Board Member**, Youth Development Programme, Bangalore  
Led a team of 7 to manage over 35 members. Engaged with ~200 volunteers and participants over the course of 2 years to successfully execute ~30 events. Chosen to represent India at D-SEE Manila, Philippines – a project funded by the EU.

## Service

- 2022 — present **Reviewer** DIS 2023, CHI 2023, DIS 2024, CHI 2024