Ananya Nandy

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Education

University of California, Berkeley — *Berkeley, CA*
M.S./Ph.D. in Mechanical Engineering (GPA: 3.9/4.0) — *August 2019 – Exp. 2024*

Massachusetts Institute of Technology (MIT) — *Cambridge, MA*
B.S. in Mechanical Engineering (GPA: 4.9/5.0) — *September 2015 – June 2019*

- Thesis: Fabrication Process and Electromechanical Characterization of a Sliding Connector System for Modular Stretchable Electronics, Tau Beta Pi Engineering Honor Society, Pi Tau Sigma Mechanical Engineering Honor Society

Research Experience

University of California, Berkeley — *Berkeley, CA*
Ph.D. Student — *August 2019 – Present*

- Research assistant in Co-Design Lab advised by Dr. Kosa Goucher-Lambert.
- First-year departmental fellowship (Graduate Division Block Grant Award)
- 2021 Graduate Division Outstanding Graduate Student Instructor Award

Busch Vacuum Pumps and Systems, R&D Dept. — *Maulburg, Baden-Württemburg, Germany*
Research Intern — *June 2019 – August 2019*

- Designed and executed experiment to characterize acoustics of claw compressor.
- Developed MATLAB tool to determine acoustic impedance.
- Incorporated acoustic impedance to improve performance of silencer acoustic simulation.

MIT Media Lab, Responsive Environments Group (Prof. Joseph Paradiso) — *Cambridge, MA*
Undergraduate Researcher — *September 2018 – May 2019*

- Manufactured novel electro-mechanically robust connector systems to connect modules.
- Conducted electrical and mechanical characterization tests on connectors for stretchable electronic sensor module (part of a modular wearable).

Mitsubishi Electric R&D Center, Solution Engineering Dept. — *Amagasaki, Hyogo, Japan*
Smart Systems Group Research Intern — *June 2017 – August 2017*

- Applied machine learning methods in Python to disaggregate appliance level energy consumption data from smart meter data.

Work Experience

Sistine Solar, Greentown Labs — *Somerville, MA*
Mechanical Engineering Intern — *June 2018 – August 2018*

- Headed product development process for device to efficiently apply thin SolarSkin films to solar panels to improve solar panel aesthetics.
- Executed design, rapid prototyping, material procurement, manufacturing, and testing for first prototype from concept to completion.
- Worked within a small, fast-paced team and delivered product with a plan for manufacturing at scale.

Publications and Presentations

Conference

Nandy, A. and Goucher-Lambert, K. (2021). “Aligning Human and Computational Evaluations of

Functional Design Similarity", *ASME International Design Engineering Technical Conferences - Design Theory and Methodology Conference*.

Nandy, A., Dong, A., and Goucher-Lamber, K. (2020). "A Comparison of Vector and Network-Based Measures for Assessing Design Similarity", *ASME International Design Engineering Technical Conferences - Design Theory and Methodology Conference*.

Poster

Nandy, A. (2018) "Effect of Figure Skating Jump Entry on Jump Quality", *MIT Sports Technology Summit*. Cambridge, MA.

Teaching

Graduate Student Instructor for Human-Centered Design Methods *June 2020 – December 2020*

- Developed resources for Jacobs Institute of Design Innovation to transition to remote design classes.
- Assisted 14 project teams through human-centered design process throughout class.

Lab Assistant for Design and Manufacturing II *February 2019 – May 2019*

- Assisted lab section of 10 students with CAD, CAM, and manufacturing for yo-yo project.

MIT Global Teaching Labs *January 2018*

- Developed hands-on Arduino workshops to introduce engineering to high school students.
- Taught physics and the Arduino workshops to over 200 students in Milan, Italy.

Leadership and Outreach

Berkeley Engineering Design Scholar Program Mentor *June 2020 – August 2020*

- Mentored an undergraduate student conducting research in engineering design.

MIT Maker Workshop Mentor *September 2018 – May 2019*

- Supervised and mentored users at student-run makerspace.
- Trained students on waterjet and maintained machine.

MIT Design for America Project Director *May 2017 – May 2018*

- Led 5 teams through yearlong user-centered design projects.
- Developed timelines/design process lessons and organized semester design reviews.

Captain of MIT Figure Skating Team *August 2016 – May 2018*

- Coordinated logistics for team of 5 – 10 for intercollegiate competitions.

Skills

SolidWorks, Autodesk Fusion 360, MATLAB, Python, R, CNC/Machining (Mill & Lathe), Waterjet, Laser Cutter, 3D Printing, Electronics/Arduino, Wet Lab Experimentation, Instron Tensile Testing, Microsoft Office

Coursework

Algorithmic Human-Robot Interaction, Principles and Techniques of Data Science, Deformation and Fracture of Engineering Materials, User Interface Design, Designing for Emerging Technologies, Introduction to Robotics, Neural Control of Movement, Machine Learning, Design for the Developing World, Principles and Practices of Assistive Technology, Electronics for Mechanical Systems