Maya M. Lassiter

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I make electronics differently. Most recently, the world's first autonomous microscopic robot. My background is in experimental nanofabrication, scalable semiconductor process development, and iterative design for custom manufacture. My career has built novel electronics and solved field-based engineering challenges.

Experience

Autonomous Microscopic Robots
- Principal Investigator for the fabrication and testing of the world's first autonomous microscopic robots
- Lead experiementalist, responsible for testing, acquiring data, and performing analysis
- Established foundry-compatible processing at 55- and 28-nm technology nodes for scalable production
- Created open source kit for general use and operation of robots
- Added to the Museum of Science and Industry and Computer History Museum permanent collections

Nanofabrication Process Engineer
- Responsible for process development accross deposition, etching, lithography, packaging, and metrology
- Upkeep and maintenence of lab for day to day operations
- Maintained process documentation and training of new lab users
- Included in capital equipment move and install during cleanroom relocation

Flexible Neural Probes
- Developed packaging process for untethered neural probes and optigenetic brain stimulation
- Created a low-cost solution with off the shelf components for optogenetic
- Miniturized from large benchtop laser to <1cm3 mobile package for chronic implantation

Carnegie Mellon Solar Racing
- Fabricated custom carbon ifber solar powered boat for international competition
- Field engineer for race day operations
- Pilot for part of multi-day racing through The Netherlands and exhibit in Monaco

Accessible Robotics: Braille Tutors
- Field engineer for deploying classroom aid Stand-Alone Braille Tutors in rural India classrooms at the Mathru School for the Blind
- Led hardware build and troubleshooting in classrooms with both Blind teachers and students
- Added new modes for Braille tutors including Kannada language support
- Coordinated hardware documentation process acrosss three languages (English, Hindi, Kannada)

Skills

Nanofabrication process development
Chip-based handling and packaging
Mask layout
Device testing and analysis
Python/C

Extracurricular

University of Pennsylvania Presidential Fellow
MIT Lincoln Lab GEM PhD Fellow
Carnegie Mellon University Outstanding Woman in Engineering
William J. Happel Fellow, GEM MS University Fellow
Carnegie Mellon University Leadership Search Committee Member
Member of: Fontaine Society, IEEE-HKN, SfN, OSA, APS

Education

PhD Electrical and Systems Engineering, University of Pennsylvania
MS Electrical and Computer Engineering, Carnegie Mellon University
BS Electrical and Computer Engineering, Minor in Global Engineering, Carnegie Mellon University