

LUKE A. GRAY

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EDUCATION

Massachusetts Institute of Technology Cambridge, MA
(SM) Master of Science in Mechanical Engineering January 2020
(SB) Bachelor of Science in Mechanical Engineering June 2018
• Cumulative GPA: 4.6/5.0

Phillips Exeter Academy Exeter, NH
• Cumulative GPA: 10.05/11.0, Cum Laude Society Inductee Graduated June 2014

EXPERIENCE

SOS Carbon, Inc. Dominican Republic
Co-Founder / Chief Technology Officer (CTO) January 2020 - Present
• Responsible for designing, building, and operating proprietary sargassum collection/disposal systems.

Precision Engineering Research Group (MIT) Cambridge, MA
Undergraduate Researcher September 2015 - January 2020
• Designed and built an open-ocean system to prevent sargassum seaweed from inundating Caribbean beaches and tested this "sargassum ocean sequestration of carbon" SOS Carbon pilot vessel with the Dom. Rep. Navy.
• Won the Carl G. Sontheimer Prize for Creativity and Innovation in Design for design of SOS Carbon vessel.
• Developed methods for in-situ manufacturing and installing underground HVDC cable from a moving train.
• Won the Wunsch Silent Hoist and Crane Award for Excellence in Graduate Research for designing and validating a mechanism to increase the residence time of high-voltage cable during the degassing process.
• Publication: **L. Gray**, D. Qi, A. Slocum, Cable Train: In-situ Manufacturing of HVDC Cable for Trackside Transmission, CIGRE U.S. National Committee: Grid of the Future Symposium (Reston, VA: October 2018)

Indigo Technologies, Inc. Cambridge, MA
Mechanical Engineer May 2018/19 - September 2018/19
• Designed and fabricated a large test platform. NDA prevents further disclosure (Summer 2019).
• Synthesized the strategic approach to a critical module of the product (Summer 2019).
• Designed and fabricated several critical mechanical devices. NDA prevents further disclosure (Summer 2018).

Wafer Technologies, LLC. Cambridge, MA
Manufacturing Engineer January 2017 - September 2017
• Created several mock-ups of a telecommunications device for investor presentations. Projects involved sheet metal design and fabrication, PCB design, and vapor deposition service sourcing.
• Accompanied chairman of the company on trips to vendors domestically and overseas and met with OEM technical executives to help streamline the product for manufacturing.

MIT Nuclear Research Laboratories (NRL) Cambridge, MA
Undergraduate Researcher September 2015 - September 2017
• Characterized the optical properties of candidate salts for implementation in a prototype Concentrated Solar Power on Demand (CSPonD) device that uses a molten salt receiver.
• Publication: M. Tetreault-Friend, **L. Gray**, S. Berdibek, T. McKrell, A. Slocum, Optical Properties of High Temperature Molten Salts Mixtures for Volumetrically Absorbing Solar Thermal Receiver Applications, Solar Energy (2017)

Chulabhorn Research Institute (CRI) Bangkok, Thailand
Summer Undergraduate Researcher June 2015 to August 2015
• Worked in Professor Dr. Her Royal Highness Princess Chulabhorn Mahidol's Laboratory of Natural Products.
• Developed a flow cytometry method for observing insulin resistance/sensitivity and used this method to investigate the efficacy of an extract from Gynostemma pentaphyllum on insulin signaling in human HepG2 cells.

AWARDS & LEADERSHIP

Academics

- Twice awarded the Language Prize in Mandarin from the Phillips Exeter Academy Language Department.
- Awarded the Fung Scholarship from MIT for intensive study of Mandarin in Tianjin, China (Summer 2016).

SKILLS

- Programs: C, Python, Basic, MATLAB, Mastercam, Solidworks, and Arduino.
- Woodworking, PCB design, welding, metal casting/forging, FDM, SLA, SLS, soldering, CNC equipment, milling, lathes, waterjet cutting, composite lay-up and other electromechanical fabrication methods.