Miles Smith

https://www.milesmsmith.com/ milessmi@mit.edu

Education

2023 - Present	Massachusetts Institute of Technology *Ph.D., Mechanical Engineering*	Cambridge, MA
2020 - 2022	Stanford University *MS, Civil and Environmental Engineering (Atmosphere/Energy)*	Stanford, CA
2016 - 2020	University of Maryland, Baltimore County (UMBC) *BS, Mechanical Engineering*	Baltimore, MD

Experience

2023 - Present — Graduate Research Assistant
Massachusetts Institute of Technology, Department of Mechanical Engineering
Principal Investigator: Yang Shao-Horn

Research in electrochemical interfaces for next-generation battery materials.

2022 - 2023 — Mechanical Engineer (Fellowship)
Otherlab / Channing Street Copper

Developed embedded system firmware and integrated control logic for pre-seed stage start-up company building battery-powered induction stoves.

2021 - 2022 — Energy Systems Group Summer Research Program
Lincoln Laboratory, Massachusetts Institute of Technology
Supervisors: Erik Limpaecher, Theodore Bloomstein, Ph.D.

Developed a control system using Arduino to characterize the battery state-of-health as a function of the battery's internal resistance.

Journal Publications

1. Jacobson, M.Z.; von Krauland, A.-K.; Coughlin, S.J.; Palmer, F; **Smith, M.**. *Zero Air Pollution and Zero Carbon From All Energy at Low Cost and Without Blackouts in Variable Weather Throughout the U.S. With 100% Wind-Water-Solar and Storage. Renewable Energy 2022.*
2. Jacobson, M.Z.; von Krauland, A.-K.; Burton, Z.F.; Coughlin, S.J.; Jaeggli, C.; Nelli, D.; Nelson, A.J.H.; Shu, Y.; **Smith, M.**; Tan, C.; Wood, C.D.; Wood, K.D. *Transitioning All Energy in 74 Metropolitan Areas, Including 30 Megacities, to 100% Clean and Renewable Wind, Water, and Sunlight (WWS). Energies 2020, 13, 4934.*

Patents

1. Induction Heating Adapter System and Method (Provisional)
2. Energy Storage Equipped Water Heater Architecture (Provisional)
3. Systems and Methods for Battery Enhanced Appliances (Provisional)

Conference Proceedings

1. Jung, HJ.; Chervin, S.; **Smith, M.**; Lee, S. *Design of an impact-driven piezoelectric energy harvester with gravity-induced rotator for wind turbine blade monitoring system (Conference Presentation).* Proc. SPIE 10595, Active and Passive Smart Structures and Integrated Systems XII, 105951Y (3 April 2018).

Honors and Awards

2024	Wunsch Foundation Silent Hoist and Crane Award (MIT)
2021	GEM Full Fellowship (Stanford)
2021	USTFCCCA NCAA Division I Men's Track & Field All-Academic Award (Stanford)
2020	MDCAAA Postgraduate Scholarship Award Winner (UMBC)
2020	Arthur Ashe Jr. Sports Scholar Award (UMBC)
2020	Earnestine Bailey Baker Scholarship (UMBC)
2018 - 2019	Undergraduate Research Award (UMBC) Project: *Piezoelectric Energy Harvesting Research For Self-Sustainable Wind Turbine Monitoring Systems*
2016 - 2020	Meyerhoff Premier Scholarship Award (UMBC)

Affiliations

2022 - Present	Peninsula Distance Club
2020 - 2021	Stanford Track and Field Team
2016 - 2020	UMBC Meyerhoff Scholar
2016 - 2020	UMBC Cross Country and Track & Field Team (Captain)
2019-2020	Tau Beta Pi Engineering Honor Society
2018 - 2020	Chi Alpha Sigma Student-Athlete Honor Society
2018	Louis Stokes Alliance for Minority Participation