

Miles Smith

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Education

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

Experience

2023 - Present	Graduate Research Assistant <i>Massachusetts Institute of Technology, Department of Mechanical Engineering</i> <i>Advisor: Yang Shao-Horn</i>	
	<hr/> <p>Research in electrochemical interfaces for next-generation battery materials.</p>	
2022 - 2023	Mechanical Engineer (Fellowship) <i>Otherlab / Channing Street Copper</i>	
	<hr/> <p>Developed embedded system firmware and integrated control logic for pre-seed stage start-up company building battery-powered induction stoves.</p>	
2021 - 2022	Energy Systems Group Summer Research Program <i>Lincoln Laboratory, Massachusetts Institute of Technology</i> <i>Supervisors: Erik Limpaecher, Theodore Bloomstein, Ph.D.</i>	
	<hr/> <p>Developed a control system using Arduino to characterize the battery state-of-health as a function of the battery's internal resistance.</p>	

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 Scholar (UMBC)
2018 - 2019	Undergraduate Research Award (UMBC) <i>Project: Piezoelectric Energy Harvesting Research For Self-Sustainable Wind Turbine Monitoring Systems</i>

2016 - 2020 Meyerhoff Premier Scholarship Award (UMBC)

2016 - 2020 Track and Field Athletic Scholarship (UMBC)

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, H.J.; 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).*

Affiliations

2022 - Present Semi-Professional Athlete at 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 (LSAMP) Scholar