


# Miles Smith

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## Education

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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

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2023 - Present	Graduate Research Assistant <i>Massachusetts Institute of Technology, Department of Mechanical Engineering</i> <i>Principal Investigator: Yang Shao-Horn</i>
	Research in electrochemical interfaces for next-generation battery materials.
2022 - 2023	Mechanical Engineer (Fellowship) <i>Otherlab / Channing Street Copper</i>
	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 <i>Lincoln Laboratory, Massachusetts Institute of Technology</i> <i>Supervisors: Erik Limpaecher, Theodore Bloomstein, Ph.D.</i>
	Developed a control system using Arduino to characterize the battery state-of-health as a function of the battery's internal resistance.

## Journal Publications

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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

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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

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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).

## Honors and Awards

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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: <i>Piezoelectric Energy Harvesting Research For Self-Sustainable Wind Turbine Monitoring Systems</i>
2016 - 2020	Meyerhoff Premier Scholarship Award (UMBC)

## Affiliations

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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