

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>Advisor: 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

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 |