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EDUCATION **University of Texas at Austin**
Ph.D., Mechanical Engineering, May 2016
Dissertation: Dynamic modeling and analysis of proton exchange membrane fuel cells for control design

University of Texas at Austin
M.S., Mechanical Engineering, May 2013
Master's Thesis: Dynamic subdivided relative humidity model of a polymer electrolyte membrane fuel cell

University of Kentucky
B.S., Mechanical Engineering, 2008

PROFESSIONAL **University of Memphis,**
EXPERIENCE Department of Mechanical Engineering
Assistant Professor, August 2020 - current

Sandia National Laboratories,
Diagnostic Science and Engineering Department
Postdoctoral Appointee, September 2016 – September 2018
Energy Storage Technology and Systems Department
Postdoctoral Appointee, September 2018 – July 2020

Environmental Science Institute (ESI) GK-12
University of Texas / Manor New Tech HS
Scientist in Residence, August 2014 – June 2015

Lexmark International Inc.
Advanced Inkjet Technology Division
Hardware Engineer Band II, June 2008 - January 2011

REFEREED
JOURNAL
PUBLICATIONS

Headley, A., Randolph, G., Virji, M. and Ewan, M., 2020. Valuation and cost reduction of behind-the-meter hydrogen production in Hawaii. *MRS Energy & Sustainability*, 7.

Trevizan, R. D., **Headley, A. J.**, Geer, R., Atcitty, S., & Gyuk, I. (2021). Integration of energy storage with diesel generation in remote communities. *MRS Energy & Sustainability*, 1-18.

Headley, A.J. and Copp, D.A., 2020. Energy storage sizing for grid compatibility of intermittent renewable resources: A California case study. *Energy*, 198, p.117310.

Headley, A. J., Gross, M., & Chen, D. (2017). "Membrane Electrolyte Assembly Health Estimation Method for Proton Exchange Membrane Fuel Cells." *Journal of Electrochemical Energy Conversion and Storage*, 14(4), 041008.

Headley, A. J., Chen, D., & Li, W. (2017). "Non-uniform control volume sizing methodology for relative humidity control of proton exchange membrane fuel cells." *International Journal of Hydrogen Energy*, 42(36), 23170-23179.

Headley, A. J., & Chen, D. (2015). Critical control volume sizing for improved transient thermal modeling of PEM fuel cells. *International Journal of Hydrogen Energy*, 40(24), 7762-7768.

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Headley, A.J., Schenkman, B.L. and Rosewater, D.M., 2020, August. Discrete Logic vs Optimized Dispatch for Energy Storage in a Microgrid. In 2020 IEEE Power & Energy Society General Meeting (PESGM) (pp. 1-5). IEEE.

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Copp, D.A. and **Headley, A.J.**, 2021, July. Test Anxiety and Its Impact on Diverse Undergraduate Engineering Students During Remote Learning. In 2021 ASEE Virtual Annual Conference Content Access.