Stanford

Justin T. H. Luke

Ph.D. Student in Civil and Environmental Engineering, admitted Spring 2019

Bio

BIO

Justin's mission is to secure a sustainable and livable planet for all through tech innovation, entrepreneurship, and informing policy. He seeks to design green cities and achieve deep carbon cuts by pursuing research in renewable energy systems, smart grids, and autonomous electrified transportation.

At Stanford University, Justin is a Ph.D. student in Civil and Environmental Engineering (Energy Systems). Previously, Justin obtained a M.S. in Electrical Engineering at Stanford and a B.S. in Energy Engineering at the University of California, Berkeley.

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HONORS AND AWARDS

- School of Engineering Graduate Fellowship, Stanford University (April 2018)

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Graduate Student Researcher, Bits & Watts (2018 - present)

EDUCATION AND CERTIFICATIONS

- M.S., Stanford University , Electrical Engineering (2020)
- B.S., University of California, Berkeley , Energy Engineering (2018)

Publications

PUBLICATIONS

- **Towards a 24/7 Carbon-Free Electric Fleet: A Digital Twin Framework** *15th International Conference on Applied Energy (ICAE2023)*
  de Castro Ribeiro, M., Luke, J., Martin, S., Balogun, E., Cezar, G. V., Pavone, M., Rajagopal, R.
  2024
- **Real-Time Control of Electric Autonomous Mobility-on-Demand Systems via Graph Reinforcement Learning** *2024 European Control Conference (ECC)*
  Singhal, A., Gammelli, D., Luke, J., Gopalakrishnan, K., Helmreich, D., Pavone, M.
  2024
- **On the Interaction between Autonomous Mobility on Demand Systems and Power Distribution Networks --- An Optimal Power Flow Approach** *IEEE Transactions on Control of Network Systems*
  Estandia, A., Schiffer, M., Rossi, F., Luke, J., Kara, E. C., Rajagopal, R., Pavone, M.
  2021

- **Joint Optimization of Autonomous Electric Vehicle Fleet Operations and Charging Station Siting** *2021 IEEE International Intelligent Transportation Systems Conference (ITSC)*
  Luke, J., Salazar, M., Rajagopal, R., Pavone, M.
  2021: 3340-3347

- **Using CPE Function to Size Capacitor Storage for Electric Vehicles and Quantifying Battery Degradation during Different Driving Cycles** *ENERGIES*
  Zhang, C., Min, H., Yu, Y., Wang, D., Luke, J., Opila, D., Saxena, S.
  2016; 9 (11)