Stanford

Mateus Gheorghe De Castro Ribeiro

- Ph.D. Student in Civil and Environmental Engineering, admitted Autumn 2022
- Ph.D. Minor, Computer Science
- Curriculum Vitae available Online

Bio

BIO

Mateus Gheorghe de Castro Ribeiro is a PhD candidate in the Stanford Sustainable Systems Lab. He has worked on various topics at the intersection of engineering applications and artificial intelligence (AI). His main area of research focuses on AI applied to sustainable energy systems, specifically using data-driven methods to accelerate the electrification of bus fleets, ensure reliable operations with minimal costs, and achieve 24/7 carbon-free operations. Mateus obtained his bachelor's and master's degrees in mechanical engineering from the Federal University of Juiz de Fora and the Pontifical Catholic University of Rio de Janeiro, respectively. In 2022, he was awarded the CAPES/Fulbright Scholarship to pursue his PhD in the Department of Civil and Environmental Engineering at Stanford University.

LINKS

- Personal Website: https://mateusgheorghe.github.io/

Research & Scholarship

LAB AFFILIATIONS

- Ram Rajagopal, Stanford Sustainable Systems Lab (S3L) (9/26/2022)

Publications

PUBLICATIONS

- **Optimal coordination of electric buses and battery storage for achieving a 24/7 carbon-free electrified fleet** *Applied Energy*
  Luke, J., Ribeiro, M., Martin, S., Balogun, E., Cezar, G. V., Pavone, M., Rajagopal, R.
  2025; 377

- **Machine learning-based evaluation of eccentricity and acoustic impedance in oil well using VDL data** *GEOENERGY SCIENCE AND ENGINEERING*
  Ribeiro, M., Ferreira, G., Parente, L., Batista, J., Kubrusly, A., Ayala, H., Braga, A.
  2023; 231

- **Machine Learning-Based Corrosion-Like Defect Estimation With Shear-Horizontal Guided Waves Improved by Mode Separation** *IEEE ACCESS*
  de Castro Ribeiro, M., Kubrusly, A., Ayala, H., Dixon, S.
  2021; 9: 40836-40849

- **Supervised Machine Learning Models for Mechanical Properties Prediction in Additively Manufactured Composites** *APPLIED SCIENCES-BASEL*
  Prada Parra, D., Ferreira, G., Diaz, J. G., Ribeiro, M., Braga, A.

2024; 14 (16)

- **Modeling and predicting the backstroke to breaststroke turns performance in age-group swimmers.** *Sports biomechanics*
  Chainok, P., de Jesus, K., Coelho, L., Ayala, H. V., de Castro Ribeiro, M. G., Fernandes, R. J., Vilas-Boas, J. P.
  2023; 22 (12): 1700-1721
- **Machine learning-based cement integrity evaluation with a through-tubing logging experimental setup** *GEOENERGY SCIENCE AND ENGINEERING*
  de Souza, L., Ferreira, G., Camerini, I., Correia, T., Ribeiro, M., Hidalgo, J., Joao, B., Llerena, R., Kubrusly, A., Ayala, H., Braga, A., Batista, J.
  2023; 227
- **Improved feature extraction of guided wave signals for defect detection in welded thermoplastic composite joints** *MEASUREMENT*
  Ferreira, G., Ribeiro, M., Kubrusly, A., Ayala, H.
  2022; 198
- **Type-1 and singleton fuzzy logic system binary classifier trained by BFGS optimization method** *FUZZY OPTIMIZATION AND DECISION MAKING*
  Calderano, P. H. S., Mateus Gheorghe, d., Teixeira, R. S., Finotti Amaral, R. P., Menezes, I. F. M.
  2023; 22 (1): 149-168
- **Damage Detection in Composite Plates with Ultrasonic Guided-waves and Nonlinear System Identification**
  de Castro Ribeiro, M., Kubrusly, A., Hultmann Ayala, H., IEEE
  IEEE.2020: 2039-2046
- **An enhanced aircraft engine gas path diagnostic method based on upper and lower singleton type-2 fuzzy logic system** *JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING*
  Calderano, P. H. S., Ribeiro, M. G. C., Amaral, R. P. F., Vellasco, M. R., Tanscheit, R., de Aguiar, E. P.
  2019; 41 (2)