

OLUWATIMILEYIN OLUWAYOMI OGUNSQLA

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Research Interests

Process Control, Optimization, Applied Machine Learning, Systems Modeling

Education

Bachelor of Science in Chemical Engineering

2018–2024

Obafemi Awolowo University, Ile-Ife, Nigeria

Peer Reviewed Conference Proceedings

[1] Bamimore, A.; Igoche, D.; **Ogunsola, O.O.**; Ojifinni, O.S.; Osunleke, A.S. pH Neutralization Process Modeling and Control Using Long Short-Term Memory Network Based Nonlinear Model Predictive Control. *In the proceedings of OAU Faculty of Technology Conference 2024*. DOI: [10.5281/zenodo.14020911](https://doi.org/10.5281/zenodo.14020911)

[2] **Ogunsola, O.O.**; Bamimore, A. Comparison of Transformer and Long Short-Term Memory Based Nonlinear Model Predictive Control for Automatic Managed Pressure Drilling. *In the proceedings of Society of Petroleum Engineers Nigeria Annual International Conference and Exhibition (2025)*. DOI: [10.2118/228746-MS](https://doi.org/10.2118/228746-MS)

Research Experience

Graduate Research Assistant

January 2026–Present

Oklahoma State University Stillwater, OK

Advisor: Dr. Zheyu Jiang

Research Assistant

July 2024–October 2025

Process Systems Engineering Research Laboratory Obafemi Awolowo University, Ile-Ife, Nigeria

Advisor: Dr. Ayorinde Bamimore

Teaching Experience

Teaching Assistant

Harmattan Semester 2023/2024

Chemical Engineering Department Obafemi Awolowo University, Ile-Ife, Nigeria

Courses: Process Dynamics (CHE509) and Unit Operations Laboratory (CHE503)

Advisor: Dr. Ayorinde Bamimore

Technical Experience

Graduate Intern

August 2025–December 2025

Ajivin Group of Companies, Lagos, Nigeria

Process Engineering Intern

February 2023–July 2023

Egbin Thermal Power Plant, Lagos, Nigeria

Technical Skills

Programming: Python, MATLAB

Libraries: TensorFlow/Keras, Jupyter, Scikit-learn, Control, PyTorch, RDKit

Optimization: Pyomo, Fmincon (MATLAB)

Process Simulation: Aspen Plus, Aspen HYSYS

Conference Presentations

Comparison of Transformer and Long Short-Term Memory Based Nonlinear Model Predictive Control for Automatic Managed Pressure Drilling at the Society of Petroleum Engineers Nigeria Annual International Conference and Exhibition (August 2025)

Volunteering Experience

Representative of South-West Geopolitical Zone

November 2023–August 2024

National Technical and Innovation Committee Student Chapter of Nigerian Society of Chemical Engineers

Student Representative Council Member (SRC)

April 2019–January 2020

Nigerian Society of Chemical Engineers Obafemi Awolowo University Chapter