

Beatriz Dantas

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EDUCATION

West Virginia University

Ph.D. Student, Chemical Engineering;

Morgantown, WV, USA

Aug 2022 – May 2027 (Expected, flexible)

Federal University of Campina Grande

B.Sc., Chemical Engineering;

Campina Grande, Paraiba, Brazil

Apr 2017 – Apr 2022

RESEARCH EXPERIENCE

West Virginia University

Graduate Research Assistant (Ph.D.)

Morgantown, WV, USA

Aug 2022 – Currently

- Proton Exchange Membrane Water Electrolysis (PEMWE) system assessment via flexibility and operability analysis.
- Collaboration with Columbia University: Modeling and simulation of ex-situ carbon mineralization using coal fly ash.
- Collaboration with University of Maryland: Techno-economic analysis for depolymerization of plastics using electrified spatiotemporal heating

Federal University of Campina Grande

Undergraduate Research (B.Sc.)

Campina Grande, Paraiba, Brazil

Sept 2020 – Sept 2021

- B.Sc. final project: “Integrated platform developed in CSharp to evaluate the intensification of ethylbenzene production using the GREENSCOPE methodology.

WORK EXPERIENCE

Columbia University

Visiting Scholar (Ph.D.)

New York, NY, USA

Jul. 2023

- Understand the production of carbonates from industrial waste via carbon mineralization on a laboratory scale.
- Apply the knowledge of Process System Engineering to perform process scale-up.

Federal University of Campina Grande

Undergraduate Research

Campina Grande, Paraiba, Brazil

Sep 2019 – Apr 2022

- Research and development for PETROBRAS: Modeling and evaluation of explosive atmospheres due to the biphasic release of liquids and fluids.
- Evaluation of the effect of obstacles on the dispersion of gases for area classification.
- Application of CFD techniques in the risk area classification study for the technological development of industrial processes.

West Virginia University

Undergraduate Research

Virtual Appointment

May 2021 – Aug. 2021

- Multi-stage membrane configuration for direct air capture.

Accenture

MES MOM and Automation Associate (Full-Time)

Campina Grande, Paraiba, Brazil

Dec 2021 – Jun 2022

- Application of the PI System™ and Aspen InfoPlus.21® software to collect, store, view, analyze, and share operational data with users.
- Understand and refine processes, working with clients to simplify, standardize and automate work and business processes found in manufacturing.

Accenture

MES MOM and Automation New Associate (Part-Time)

Campina Grande, Paraiba, Brazil

Nov 2020 – Nov 2021

- Application of the PI System™ and Aspen InfoPlus.21® software to collect, store, view, analyze, and share operational data with users.
- Understand and refine processes, working with clients to simplify, standardize and automate work and business processes found in manufacturing.

SELECTED RESEARCH CONTRIBUTIONS- COMPLETE LIST ON MY [GOOGLE SCHOLAR](#).

Beatriz Dantas, Deniz Talan, and Fernando V Lima. “Process Operability Analysis of the Recovery of Rare Earth Elements from Coal Fly Ash”. In: *2023 AIChE Annual Meeting*. AIChE. 2023.

Vitor V Gama, San Dinh, Victor Alves, Beatriz NA Dantas, Brent A Bishop, and Fernando V Lima. “Modeling and Process Operability Analysis of a Direct Air Capture System”. In: *IFAC-PapersOnLine* 55.7 (2022), pp. 316–321.

SKILLS

Programming: Python, MATLAB, CSharp, Visual Basic for Applications(VBA), Markdown, LaTeX and exposure to R

Technologies/Platforms: AVEVA PI System, Git, GitHub, Simulink

Process simulation: Aspen Plus, AVEVA Process Simulation, Ansys CFX

Languages: English and Portuguese

RELEVANT COURSEWORK

Major coursework: Transport Phenomena, Advanced Chemical Engineering Thermodynamics, Chemical Reaction Engineering, Statistical Methods, Oil and Gas Refining

Minor coursework: Advanced Process Systems Engineering, Electrochemical Energy Technologies, Linear and Nonlinear Optimization