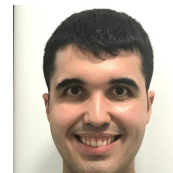


# Diogo Jorqueira

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30 years old



## Postdoctoral Research Associate

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### Education/Training

- 03/2018–07/2022 **Doctorate Degree on Chemical Engineering**, School of Chemical Engineering (FEQ), Unicamp, Conclusion at 06/2022.  
Theme: Production of furfuryl alcohol using heterogenous catalysts, Advisor: Prof. Raphael Suppino, Co-Advisor: Dr. Léa Vilcocq
- 03/2016–02/2018 **Master Degree on Chemical Engineering**, School of Chemical Engineering (FEQ), Unicamp.  
Theme: Modeling of ammonia synthesis reactors, Advisor: Prof. Maria Teresa Moreira Rodrigues
- 02/2011–02/2015 **Bachelor Degree on Chemical Engineering**, School of Chemical Engineering (FEQ), Unicamp.

### Professional History

- 11/2022–Today **Postdoctoral Fellow**, CPE–Lyon CP2M–Catalyse, Polymérisation, Procédés et Matériaux–UMR 5158.  
Theme: valorization of biodiesel from waste cooking oil - process simulation and reaction modelling. Supervisors: MCF. Clémence Nikitine and Prof. Pascal Fongarland
- 09/2021–02/2022 **Substitute Professor**, Federal University of Lavras (UFLA).  
Disciplines: Laboratory of Chemical Engineering (GNE339), Process Simulation (GNE344) and Excel in Chemical Engineering (GNE456)
- 08/2021–12/2021 **Under Graduation Teacher Assistant (TA) in Unicamp**, Discipline: Analysis and Simulation of Chemical Process.
- 09/2020–02/2021 **Under Graduation Teacher Assistant (TA) in Unicamp**, Discipline: Analysis and Simulation of Chemical Process.
- 08/2018–12/2018 **Under Graduation Teacher Assistant (TA) in Unicamp**, Discipline: Mass Transfer.
- 02/2017–08/2017 **Under Graduation Teacher Assistant (TA) in Unicamp**, Discipline: Chemical Reactors.
- 02/2013–06/2015 **Junior Teacher Assistant (JTA) in Unicamp**, Disciplines: Thermodynamics I (4 semesters), Thermodynamics II (1 semester), Kinetics for Chemical Engineering (1 semester).

### Projects

- 03/2019-06/2022 **Design of continuous system to synthesis, separation and purification of furfural and its derivatives using niobium (Nb) based catalysts**, CNPq Universal Call Process no. 431272/2018-2.
- 08/2021-08/2022 **Simulation and Investigation of the Operational Conditions for the Partial Hydrogenation of Benzene**, Advisor: Prof. Raphael Suppino, Supervisor: MSc. Diogo Silva Sanches Jorqueira, Scientific Initiation Project.
- 08/2019-09/2020 **Investigation of Methodology for Production of Niobium Oxide Pellets Aiming Continuous Operation of Furfural Production**, Advisor: Prof. Raphael Suppino, Supervisor: MSc. Diogo Silva Sanches Jorqueira, Scientific Initiation Project.

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## Scientific Results - Peer Reviewed Articles on Scientific Journals

- 2021 **Reaction Kinetics, Mechanisms and Catalysis**, *Use of amorphous Nb<sub>2</sub>O<sub>5</sub> and Nb<sub>2</sub>O<sub>5</sub>/Al<sub>2</sub>O<sub>3</sub> as acid catalysts for the dehydration of xylose to furfural*, De Lima, L.F.; Lima, J.M.; **Jorqueira, D.S.S.**; Landers, R; Moya, S.F; Suppino, R.S., 132, p. 73–92, 2021. doi: <https://doi.org/10.1007/s11144-021-01931-y>.
- 2018 **Advances in Chemical Engineering and Science**, *Modeling and Numerical Simulation of Ammonia Synthesis Reactors Using Compositional Approach*, **Jorqueira, D.S.S.**; Barbosa Neto, A.M.; Rodrigues, M.T.M, 8, p. 124-143, 2018. doi: 10.4236/aces.2018.83009.

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## Scientific Results - Software Registration/Patent

- 2019 **MARS - Models for Ammonia Synthesis Reactors**, *Inventors: Barbosa Neto, A.M.; Jorqueira, D.S.S.; Rodrigues, M.T.M*, Process and Registration Number: BR 512019001800-1.

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## Relevant Technical Skills

- Chem. Reactor Modeling using ODEs; Mass and Heat Transfer; Prediction of Properties using  
Engineering EoS (for hydrocarbons); Use of Process Simulators: Aspen, Hysys, DWSIM and COCO.  
Programming Languages: Wolfram Mathematica; Octave and  $\LaTeX$ .  
Laboratory Skills Catalyst Production: Incipient Impregnation; Pellets Production; Use of HPLC; Operation of Parr Reactors.

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## Deficient Technical Skills - should be learned or improved

- Chem. Finite Differences and Finite Volume; BVP Solution; Optimization; Machine Learning;  
Engineering Monte Carlo and DFT.  
Programming Object Oriented Programming; C++.  
Laboratory Skills Exchange of Columns on HPLC; Operation of GC and SEC; Gas-Phase Reactors; Other Methods for Catalyst Synthesis.