

# Renan L. Valença, EIT

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## EDUCATION

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### University of California, Los Angeles (UCLA)

*Ph.D.* in Environmental Engineering Expected Spring 2022  
*M.Sc.* in Water Resources and Environmental Engineering 2018

- 2021 National Science Foundation Research Traineeship – Food, Energy and Water Systems; 2021 UCLA Dissertation Year Fellowship; 2021 Los Angeles Urban Center Fellowship; 2020 Martin Rubin Scholarship

### Universidade Federal de Alfenas, Brazil (UNIFAL-MG)

*B.Sc.* in Chemical Engineering 2016  
*B.Sc.* in Science & Technology 2014

- 2016 Minas Gerais State Agency for Research and Development Sponsorship, 2013 Science Without Borders Undergraduate Scholarship, Università di Bologna - Italy

## PROFESSIONAL EXPERIENCE

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### UCLA Subsurface Engineering & Analysis Laboratory (SEALab) 2017 – Present

#### *Senior Engineer/Researcher & Laboratory Manager*

- Led the development of climate-resistant stormwater treatment systems (STS) by creating strategic plans, mentoring researchers, performing field and laboratory work, and monitoring effluent water quality from STS
- Created a decision-making process for selecting the finest sustainable soil amendment (e.g., iron filings, biochar, fly ash) to treat stormwater and meet local TMDLs, making STS more reliable and cost-efficient
- Co-managed a \$1 MM project from Caltrans to turn highways into STS utilizing compacted biofilters
- Served as a private consultant to the CEO and Director of Chartres Lodging Group, created a report on how to clean their spa's mud therapy material and advised how to treat and utilize groundwater for irrigation
- Built statistical models to predict pathogen removal from stormwater (sponsored by Wenck Associates)
- Worked with multiple water contaminants including PFAS, organic solvents, nutrients, heavy metals, pathogen
- Published 13 scientific articles (3x the average Ph.D. publication rate) in high-impact peer-reviewed journals and presented project findings to stakeholders, engineers, and in international conferences
- Mentored 29 researchers during the development of stormwater-based projects through data evaluation

#### *Teaching Assistant* 2017 – Present

- Instructed over 500 students in three engineering courses teaching concepts of surface water and soil hydrology
- Supervised the development of green infrastructure (BMP design) projects to evolve grey infrastructures

### Porto Ferreira Ceramic Industry – Porto Ferreira, Brazil

#### *Chemical Engineering Intern* 2015

- Analyzed the benefits of new ceramic materials that could reduce the price and increase the strength of tiles
- Created a ceramic tile recipe with waste materials that increased the company's monthly profit by 10,000 BRL

#### *Research and Development Laboratory Analyst Intern* 2012

- Partook in the industry's QA/QC process by analyzing and processing the data related to tile properties
- Built relationships with material providers and participated in field visits to clay extraction sites
- Identified opportunities to reuse waste materials, increase safety practices in the industry, and raise profit

## CONSULTING, LEADERSHIP, AND VOLUNTEER EXPERIENCE

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Scientific Reviewer | Water Research, Science of the Total Environment, Blue Green Systems Present

Environmental Consultant | PDS Health Inc., Tequesta, FL Present

Environmental Consultant | Wenck Associates Inc. (now part of Stantec) 2020

Environmental Consultant | Dr. Wilkinson's Hot Springs Resort – Chartres Lodging Group 2019

Engineer Volunteer | UCLA Engineering Transfer Center 2019

Co-founder & Team Leader | Chemical Engineering Academic Student Center at UNIFAL-MG 2015

## CERTIFICATIONS, SKILLS, AND INTEREST

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**Certifications:** Engineer-in-Training (EIT), Licensed Chemical Engineer (Brazil), Leader in Sustainability (in progress)

**Skills:** Trilingual (Portuguese, Italian and English), R (Shiny, RMarkdown), ArcGIS, MATLAB, Microsoft Office

**Interests:** Surfing, basketball, cycling, gaming, cooking (Italian and Brazilian cuisine), and international travel