

Vinicius Amaral

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EDUCATION

Princeton University

B.S.E. CIVIL AND ENVIRONMENTAL ENGINEERING, CERTIFICATE IN GEOLOGICAL ENGINEERING

*Princeton, NJ
June 2017*

- GPA: 4.00 (Departmental) | 3.56 (Overall)
- Selected Coursework: Oceans, Atmosphere, and Climate; Hydrology; Environmental Fluid Mechanics; Water Pollution Technology, Environmental Geochemistry; Environmental Engineering Lab

EXPERIENCE

DC Water

INNOVATION PROGRAM INTERN

*District of Columbia, USA
Summer 2016*

- Developed a Matlab program to efficiently organize, sort, and process raw wastewater flow and temperature data.
- Performed time series analysis to provide predictions of wastewater flow and temperature throughout the District that account for daily and seasonal cycles. Analysis will help assess the feasibility of utilizing wastewater as a heat source/sink in district heating and cooling systems for potential sites of new urban development.

Princeton EcoHydrology Lab, Mpala Research Center

RESEARCH ASSISTANT

*Laikipia County, Kenya
Summer 2015*

- Conducted fieldwork to examine carbon dioxide and water fluxes from soil fractures with varying fracturing mechanisms and physiochemical properties. Operated and collected data from an in-field gas analyzer.
- Piloted a UAV to survey vegetation cover and establish a protocol for monitoring climate-induced changes in vegetation with high spatial and temporal resolution via aerial imaging. Taught local field assistants how to conduct UAV surveys.

Duke University, Civil and Environmental Engineering

RESEARCH ASSISTANT, NSF REU FELLOWSHIP

*Durham, NC
Summer 2014*

- Developed probabilistic models using Bayesian inference to optimize methods of locating gas leaks in oil refineries and estimating the source strength of these leaks using sensor networks.
- Co-authoring publication “Fenceline Monitoring: A Bayesian Approach to Locating Fugitive Leaks” with advisor John Albertson (submitted).

International Panel on Social Progress

RESEARCH ASSISTANT

*Princeton, NJ
2014-Present*

- Reviewed literature pertaining to social progress in order to compile articles for a report. Solicited scholars globally to contribute to the report as authors.
- Helped organize and manage a conference for the first meeting of authors in Istanbul, Turkey. Facilitated logistics and communication for future workshops and conferences.
- Updated and maintained website (www.ipsp.org).

Office of Sustainability, Princeton University

ECOREPS CO-PRESIDENT

*Princeton, NJ
2014-2016*

- Hosted events to promote sustainable living practices on campus and educate Residential Advisors and their new students about campus-wide sustainability initiatives.
- Coordinated with the Office of Sustainability and Facilities department to establish recycling stations during annual alumni weekend events that accommodate over 25,000 guests. Recruited volunteers to help organize and monitor stations.
- Set up donation sites during move-out for students to donate unwanted goods.

UC San Diego, Chemistry

COSMOS STUDENT, BIODIESEL FROM RENEWABLE RESOURCES GROUP

*La Jolla, CA
Summer 2012*

- Studied the environmental implications of fuel synthesis from renewable resources.
- Synthesized biodiesel from algae and tested its quality by using analytical chemistry techniques such as gas chromatography/mass spectrometry.
- Disassembled engine to study the efficiency of diesel engines and presented findings with a formal presentation.

LEADERSHIP & AWARDS

American Society of Civil Engineers, Princeton Chapter | Social Chair

2014-Present

Princeton Men's Club Soccer | Captain, President

2013-Present

McGraw Center for Teaching and Learning | Learning Strategies Consultant

2016-Present

Hispanic Scholarship Federation | Scholar, Recipient

2016

Quin Morton '36 Freshman Research Conference | Nominee, Presenter

2014

SKILLS

Technical Matlab (proficient), Java (intermediate), R (intermediate)

Languages Portuguese (native), Spanish (proficient)

REFERENCES

Dr. Ian Bourg, Assistant Professor
Civil and Environmental Engineering
Princeton University
(609) 258-4541
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Dr. Satish Myneni, Associate Professor
Geosciences
Princeton University
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Dr. Peter Jaffe, Professor
Civil and Environmental Engineering
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