Johan Benedict Arroyo Cristobal

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EDUCATION

M.S. in Mathematics

expected May 2022

University of Nebraska-Lincoln

B.S. in Mathematics of Computation

received June 2020

University of California, Los Angeles

RESEARCH INTEREST

Computational Partial Differential Equations, solving PDEs related to simulating and animation of environmental phenomena. Dynamical systems and its application to world-building.

PAPERS WRITTEN

[1] Title of Paper

Co-Authored/Advised by:

Status: Published? Submitted?

In which Journal? Publication? DOI?

[2] Title of Paper

Co-Authored/Advised by:

Status: Published? Submitted?

In which Journal? Publication? DOI?

NOTABLE TALKS GIVEN

Home Base for Space Camp

September 8, 2020, first ever talk!

Students Partially in Differential Equations Reading Seminar (SPiDERS) "We'll start with introducing what makes a space... a space. Then work our way through adding structures and rules to end the talk on Continuous Function spaces."

TEACHING EXPERIENCE

- 1. Spring 2021, Recitation Leader Math 107 Calculus II
- 2. Spring 2021, Grader Math 104 Applied Calculus
- 3. Fall 2020, Recitation Leader Math 106 Calculus I (two sections)
- 4. Winter and Spring 2020, Peer Learning Facilitator Physics 1A Physics for Scientists and Engineers: Mechanics (UCLA)
- 5. Fall 2019, Peer Learning Facilitator Physics 1A Physics for Scientists and Engineers: Mechanics (UCLA)

WORK EXPERIENCE

$\bf Peer\ Learning\ Facilitator$ for Academic Advancement Program

September 2019 - June 2020

UCLA AAP Peer Learning Unit

- As a Peer Learning Facilitator, ran multiple study sessions per week to further solidify knowledge in a specific course.
- Implemented Critical Race Theory into the pedagogy to highlight and combat societal power dynamics in a way that allows students to thrive as both scholars and holistically.
- Met with instructor and attended lectures to craft weekly worksheets specific to the students' needs.

Digital Archivist (Work-study) for Rock Art Archive

October 2017 - September 2019

UCLA Cotsen Institute of Archaeology

- As a Digital Archivist, scanned documents in the Rock Art Archive for data management and file upkeep
- Examined written data and photographic evidence for accuracy and hypothesis-testing while aiding in the creation of an electronic record

AFFILIATIONS

Pacific Math Alliance Undergraduate Member/Mentee

June 2019 - Present

- Participated in the Facilitated Graduate Applications Process, under the guidance of William Ott, University of Houston
- In attendance for conferences tackling diversity in STEM:
 - + 2019 PMA Conference at CSU East Bay, CA (Oct 2019)
 - + 2019 Field of Dreams Conference at St. Louis, MO (Nov 2019)

SKILLS

- Programming: C, C++, Python, Matlab, LISP, SQL and HTML/CSS
- Archaeological Studies: ArcGIS, text processing, georeferencing
- Language(s):
 - + English (fluent)
 - + Filipino/Tagalog (fluent)
 - + Spanish (beginner)
- Content Creation:
 - + Videos: https://www.youtube.com/user/johanmode
 - + Graphics: https://johanmcs.github.io/johanc/design.html
 - + Web Design: https://johanmcs.github.io/johanc

NON-MATH RESEARCH EXPERIENCE

Independent Contractor

for the Easter Island Statue Project October 2017 - September 2019 Easter Island Statue Preservation

- Advisor: Dr. Jo Anne Van Tilburg.
- Research assistant for research of the Easter Island and its various archaeological and geographical aspects.
- Under guidance, wrote a research article arguing about the sustainability of a long held archaeological categorization (set for publication within Dr. Van Tilburg's next publication).
- Transcribed and normalized data from previous researchers for easeof-access and usability in data management and analysis.
- Quickly synthesized tutorials and instructions in ArcGIS to perform tasks within the geographical information systems realm.

Collaborative Research Project

for Downtown Women's Action Coalition October 2019 - December 2019 Service Learning component of Chicano/Chicana Studies 10B

- Participated in researching the "culturally sensitive services" pertaining to the unhoused/homeless women at "Skid Row" in Los Angeles, California.
- Produced a research report for the Downtown Women's Action Coalition and found a deficit in the number of research and studies done on gender-specific issues related to the question

AWARDS

- Dean's Honor List (UCLA, 2018)
- Valedictorian (Stockton Early College Academy, 2016)