Blaec A. Bejarano — Curriculum Vitae — January 2022

Phone: (850) 207-6407 Email: BlaecBejarano@gmail.com Website: BlaecBejarano.com

Education

Oregon State University Corvallis, OR
Master of Science, Mathematics (Expository/Thesis Track) *Sept. 2018 – Mar. 2021*
Advisors: Dr. Ralph Showalter and Dr. Malgorzata Peszynska
Cumulative GPA: 3.40

- Scholarships*:* Full-tuition and graduate teaching assistant stipend through OSU.
- Affiliated Organizational Positions: Secretary for Society of Industrial and Applied Mathematics.
- Academic Interests: Mathematical/Geophysical Modeling, Numerical Analysis, Partial and Ordinary Differential Equations, Functional Analysis, Consolidation Processes, and Hysteresis.

University of West Florida Pensacola, FL
Bachelor of Science, Mathematics; Major GPA: 3.68 *Aug. 2013 – Dec. 2017*
Bachelor of Arts, History; Major GPA: 3.90
Advisor: Dr. Cody Lorton
Cumulative GPA: 3.48

- Honors: Dean's High Honors, President's Honor Roll, Phi Alpha Theta History Honors Society Sigma-Iota Chapter member.
- Scholarships*:* E. Crowell History Scholarship, Florida Medallion Scholarship.
- Affiliated Organizational Positions: Secretary for Society of Industrial and Applied Mathematics.

Pensacola State College Pensacola, FL
High School Dual Enrollment General Studies; GPA: 3.85 *Aug. 2011 – May 2013*

- Honors: Dean's High Honors, President's Honor Roll.

Employment

Oregon State University Corvallis, OR
Instructor of Record, Mathematics *Sept. 2019 – Mar. 2021*
Graduate Teaching Assistantship, Mathematics *Sept. 2018 – Mar. 2021*

Lighthouse Private Christian Academy Pensacola, FL
English Instructor, (8^{th} Grade) *Jan. 2018 – May 2018*
Mathematics Instructor, (6^{th}, 7^{th}, and 8^{th} Grade) *Oct. 2017 – May 2018*

Courses as Instructor of Record

Oregon State University Corvallis, OR

Math 252: Integral Calculus	*Jan. 2021 – Mar. 2021*
Math 111: College Algebra	*Sept. 2020 – Dec. 2020*
Math 112: Elementary Functions	*Mar. 2020 – June. 2020*
Math 251: Differential Calculus	*Sept. 2019 – Dec. 2019*

Graduate Teaching Assistant Courses

Oregon State University Corvallis, OR

Math 112: Elementary Functions	*Jan. 2020 – Mar. 2020*
Math 251: Differential Calculus	*Mar. 2020 – June. 2020*
Math 112: Elementary Functions	*Jan. 2019 – Mar. 2019*
Math 112: Elementary Functions	*Sept. 2018 – Dec. 2018*

Computational and Technical Skills

- Fluent in MATLAB and LaTeX with additional experience utilizing Python, SAS, Java, and FreeFEM++ programming languages.
- Completed full sequence of graduate level numerical analysis courses in linear algebra, ordinary differential equations, and partial differential equations.
- Graduate experience hardcoding Finite Element Method and Finite Volume Method in multiple dimensions in MATLAB, as well as the use of "black box" legacy codes and library packages.
- In-depth knowledge regarding a stress-porosity relationship-based consolidation model derived from conservation laws in conjunction with Darcy's Law.
- Familiar with applications of multivalued functions in physical modeling, where in our case permanent damage, inherent to the material mechanics of consolidation processes within fully saturated porous media, was achieved via constraint relation.
- Interest in pursuing hysteretic behaviors which occur throughout several of Earth's processes, with a special focus on consolidation of porous media, sedimentation, and ice physics.
- Significant experience with technical writing methodologies and research paper formatting.
- Skilled at giving enthusiastic/well-informed presentations to both large formal and semi-formal audiences, with an exceptional aptitude for interpersonal communication.

Professional Teaching Experiences

Oregon State University Corvallis, OR

Instructor of Record, Mathematics *Sept. 2019 – Mar. 2021*

Instructor of record for daily lectures of multiple sequences of undergraduate college algebra, pre-calculus, and differential/integral calculus courses. Participant in faculty meetings regarding the dissemination of course materials to students, principles of grading, and philosophical discussions regarding the future of select courses within the university. Approximately 20-40 pupils per term.

Graduate Teaching Assistantship, Mathematics *Sept. 2018 – Mar. 2021*

Taught several undergraduate pre-calculus and calculus courses to four separate groups per term of approximately 30 students. Excellent record of teaching evaluations citing ability to relate core concepts while exemplifying consistent dedication to students. Hosted additional study sessions available not only to students enrolled in my course, but the students of colleagues as well.

Lighthouse Private Christian Academy Pensacola, FL

English Instructor, (8^{th} Grade) *Jan. 2018 – May 2018*

General requirements consisted of developing curriculum to help better facilitate student learning, presenting information to students regarding the proper use of grammar and enhancing vocabulary, and developing the critical thinking skills essential to mastering the English language and basic communication.

Mathematics Instructor, (6^{th}, 7^{th}, and 8^{th} Grade) *Oct. 2017 – May 2018*

Obligations included providing the mathematical foundation/support necessary for various levels of middle school students to succeed on their respective standardized tests; preparing students with the tools required to continue with science and engineering-based courses, instilling an appreciation and enthusiasm for science/mathematics in children, and working with youth certified for Exceptional Student Education in the state of Florida.

Research, Internships, and Leadership Experiences

Oregon State University Corvallis, OR

Graduate Expository Research Paper, Mathematics *(Presented) Feb. 2021*

Expository research paper titled, "Consolidation with Hysteresis in Sedimentary Basins" with advisor Dr. Ralph Showalter included a formal presentation exhibiting abilities to both verbally communicate and visually represent advanced mathematical concepts and analysis to a panel of graduate advisors in their respective fields of considerable relation.

Finite Element Circus, 2021 Virtual Conference Attendee *Nov. 5th – 6th, 2021*

Attendee for the 51st annual Finite Element Circus conference, held in hybrid form at Penn State University. The event focuses on the theory and applications of FEM relevant to the areas of numerical analysis and partial differential equations.

Society of Industrial and Applied Mathematics, Student Chapter Secretary *Sept. 2019 – Mar. 2021*

Fiscal document manager providing formal reports for student meetings as well as annual reports. Attendee for several outreach events such as 2nd Biennial SIAM Pacific Northwest Section 2019 and various expert guided online seminars given in collaboration with both universities and national research institutions/laboratories.

Society of Industrial and Applied Mathematics, 2019 Conference Attendee *Oct. 18th – 20th, 2019*

Attendee as the Oregon State SIAM Student Chapter Secretary for the 2nd Biennial SIAM Pacific Northwest Section 2019 in Seattle, Washington.

University of West Florida Pensacola, FL

Undergraduate Proseminar, Mathematics *Jan. 2017 – May 2017*

Proseminar research paper titled, "Introduction to Modeling Convection-Diffusion Utilizing the Finite Element Method and Partial Differential Equation Solving Software FreeFEM++", included a formal presentation exhibiting abilities to both verbally communicate and visually represent mathematical concepts to an informed audience.

Participant, Spring Symposium for Undergraduate/Graduate Research *Mar. 2017 – Apr. 2017*

Event incorporated creating visually appealing representations of proseminar research with effectively communicating mathematical concepts to a general audience in a formal setting.

Research Assistant, Medieval Studies *Aug. 2016 – Jan. 2017*

Work assignments entailed efficiently organizing historical research pertaining to the medieval period using the document management software Scrivener.

Intern, John C. Pace Research Library Special Collections *Mar. 2016 – Apr. 2016*

Duties included documenting and cataloging historical items relevant to the history of Pensacola, FL, researching and retrieving primary source material via digital and physical archives including the use of microfilm, micro phish, cataloging and special collections.

Intern, Gulf Breeze High School Teaching Assistant *Feb. 2016 – Mar. 2016*

Obligations comprised primarily of the preparation of daily lesson plans, lecturing Advance Placement American History students.

Intern, Downtown Pensacola Historic District *May 2015 – June 2016*

Position directly affiliated with University of West Florida Historic Trust's education, collections, and living history departments as part of an Advanced Museology summer internship program.

Graduate Mathematics Courses

- Real Analysis
- Abstract Linear Algebra
- Differential and Integral Equations of Mathematical Physics
- Real Analysis II
- Partial Differential Equations
- Numerical Analysis of Ordinary Differential Equations
- Combinatorics and Graph Theory
- Numerical Analysis of Partial Differential Equations
- Complex Analysis
- Functional Analysis
- Numerical Analysis of Dynamics and Data Assimilation
- Finite Element Methods for Partial Differential Equations
- Differential Geometry of Manifolds
- Special Topics in Functional Analysis
- Numerical Analysis of Finite Volume and Discontinuous Galerkin Methods
- Advanced Partial Differential Equations

Graduate Seminars

- Diversity and Inclusion in Mathematics
- Professionalism and Ethics in Mathematics
- Applied Mathematics and Computation Seminar
- Research (Expository) Seminar

Referees

Ralph Showalter,
Emeritus Professor, Oregon State University.
https://math.oregonstate.edu/people/view/show
show@math.oregonstate.edu

Malgorzata Peszynska,
Professor, Oregon State University.
http://sites.science.oregonstate.edu/~mpesz/index.html
mpesz@math.oregonstate.edu

Scott Peterson,
Senior Instructor II, Oregon State University.
https://math.oregonstate.edu/people/view/speter
speter@math.oregonstate.edu

Johnner Barrett,
Instructor, Oregon State University.
https://math.oregonstate.edu/node/16109
barrettj@oregonstate.edu

Cody Lorton,
Research Analyst 1, Dynetics Inc.
clorton@uwf.edu

Josaphat Uvah,
Professor, University of West Florida.
https://uwf.edu/hmcse/departments/mathematics-and-statistics/faculty/dr-josaphat-uvah.html
juvah@uwf.edu