

# Johan Benedict A. Cristobal

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## EDUCATION

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- 2025 Ph.D. in Mathematics, focus in Mathematics Education  
University of Nebraska-Lincoln  
Dissertation: *Culture and Context: How Frames of Teaching and Learning Mathematics Form and Change for Graduate Student Instructors*; Advised by Dr. Yvonne Lai
- 2021 M.S. in Mathematics  
University of Nebraska-Lincoln
- 2020 B.S. in Mathematics of Computation  
University of California, Los Angeles

## EMPLOYMENT

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- 08/2025 - **Visiting Assistant Professor**  
Dept. of Mathematics, Statistics and Data Science, Loyola Marymount University
- 05/2025 - 08/2025 Postdoctoral Researcher  
Center for Science, Mathematics and Computer Education
- 05/2021 - 05/2025 Graduate Research Assistant  
Center for Science, Mathematics and Computer Education
- 08/2020 - 05/2025 Graduate Teaching Assistant  
Dept. of Mathematics, University of Nebraska-Lincoln

## TEACHING

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### Courses Taught at Loyola Marymount

- Math 112 - Calculus for Business (3 sections) Spring 2026
- Math 120 - Precalculus Mathematics (1 section) Spring 2026
- Math 101 - Algebra (2 sections) Fall 2025
- Math 120 - Precalculus Mathematics (2 sections) Fall 2025

### at Nebraska-Lincoln | ♦ denotes courses I also worked on as Course Developer

- Math 221 - Differential Equations (Tutor) Summer 2022, 2025
- ♦ Math 103 - College Algebra and Trigonometry Fall 2024
- ♦ Math 97 - Assisting Learning for University Mathematics Fall 2024
- Math 302 - Math Modeling Spring 2023
- ♦ Math 101C - College Algebra Corequisite Fall 2022
- ♦ Math 101 - College Algebra Spring 2022
- ♦ Math 100A - Intermediate Algebra Fall 2021

**Walter Mientka Teaching Award** | Awarded 2021 by the UNL Math Department.

“The Walter Mientka Award is given to students who demonstrate exceptional promise as a teacher based on their work during their first one or two years as a graduate teaching assistant in our department.”

**Qualifying Exam Workshop Review and Preparation Sessions (UNL)** Summer 2022  
*Math 830/831 - Ordinary and Partial Differential Equations Workshop Leader*  
*Note: Also was a Grader for Math 830 (Fall 2023) and Math 831 (Spring 2025).*

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## ON-GOING (GRANT-FUNDED\*) WORK

- ▶ **Achieving Critical Transformations in Undergraduate Programs in Mathematics (ACT UP Math)**  
NSF ESS-2201486; PI Wendy Smith  
Spring 2025 to **Present** – Supporting research analysis, writing, and propagation efforts  
\* Illegally terminated by DOGE, but the work continues.

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## SERVICE

**Research in Graduate Mathematics Education (RGME)** Summer 2024 - **Present**  
*Website Manager, Member on the Organizing Committee* <https://rgme-group.com/>  
*Writer for the 2025 Working Group Proposal*

**Graduate Student Teaching Table** Fall 2022 - Spring 2025  
*Co-founder and organizer, seminar for and by graduate students to discuss education or teaching topics*

**UNL Math Department Recruitment** — Graduate Student Volunteer (various dates)  
Math Alliance Field of Dreams Conference (November 2022)  
Joint Mathematics Meeting (January 2024)  
2024 AMS Online Fall Graduate School Fair (October 2024)  
Nebraska Conference for Undergraduate Women in Mathematics (2024, 2025)

**UNL Math Department Orientations** Summer 2024  
*Presenter in the First Year and the Returning Graduate Student Orientation,*  
*Organizer of the Mathematics Learning Assistant Orientation*

**UNL Math Day Organizing Committee** Fall 2023 - Spring 2025  
*Organizer for Volunteer outreach and scheduling*

**Guest Peer-Reviewer for PRIMUS** Fall 2023  
*Problems, Resources, and Issues in Mathematics Undergraduate Studies – Volunteer*

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## SKILLS

**Mathematics**  $\LaTeX$ , curriculum development  
**Statistical Methods** RStudio  
**Programming** C, C++, Python, Matlab, LISP, SQL, and HTML/CSS (Web-design)  
**Languages** English (fluent), Filipino/Tagalog (native fluent), Spanish (intermediate)  
**Microsoft Suite** Word, Excel, Powerpoint  
**Adobe Creative Suite** Acrobat, Photoshop, Illustrator, Premiere Pro, InDesign, Lightroom  
**Video/Content Creation** <https://www.youtube.com/@johango>, textbook videos, and conference or presentation videos

## PREVIOUS GRANT-FUNDED WORK

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- ▶ Educating Undergraduate Students for STEM Career Opportunities in Nebraska: Networks, Experiential-learning, & Computational Thinking (STEM CONNECT) NSF/S-STEM DUE-1930211; PI Jim Lewis  
Spring 2024 to Fall 2025 – Supporting research writing and propagation efforts
- ▶ [First Generation First Year Research Experience for Undergraduates \(REU\)](#) NSF/DMS-2236983; PI Eloísa Grifo  
Summer 2024 – Working with another graduate student (Michael Pieper), I co-organized and co-led this REU for a group of four incoming first-generation freshman from an Upward Bound program. Building on recent work by Mikil Foss and Michael Pieper (2025, in progress) which showed a classically ill-posed problem in calculus of variations is well-posed if interpreted using nonlocal operators, the REU project tackled the questions: *Can this result be used in practice in the context of signal processing? Under what kinds of conditions would it yield a computational result?* At the forefront of the REU, we provided orientation-like experiences to students with touring the UNL campus and hosting panels.
- ▶ *Understanding the experiences of underrepresented students in 300-level mathematics courses* College of Arts & Sciences Strategies Priorities (UNL Grant); PI Amy Bennett
- ▶ Mathematics of Doing, Understanding, Learning and Educating for Secondary Schools (MODULE(S<sup>2</sup>)) – NSF DUE-1726744; PI Yvonne Lai
- ▶ Investigating the Role of Collaboration on the Development of Student Ideas using a Learning Progression for the Function Concept – NSF DRL-2101393; PI Edith Graf
- ▶ CSForAll: Adapt, Implement and Research at Nebraska – NSF DRL-1837476; PI Leen-Kiat Soh

## PAPERS

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### *Peer-reviewed Journal Articles*

- [1] **Cristobal, J. B.** (under review). “I actually don’t know if that was the right decision”: Aspects of Culture Enacted by Mathematics Graduate Students in their First Instructor Role.
- [2] **Cristobal, J. B.**, Lai, Y., Young, C., Bonnesen, C., Strayer, J. F., Anhalt, C., Casey, S., Kohler, B., Lischka, A. E., & Ross, A. (under review). Instructional Activities in Tertiary Mathematics Courses: What (and From Which Component) Do Prospective Secondary Teachers Report as Beneficial.
- [3] Funk, R., Pai, L., **Cristobal, J. B.**, & Xie, N. (under review). “I’ve Had to Show a Lot of Tenacity”: Stories of Power and Empowerment in the Experiences and Identities of S-STEM Women Scholars.

### *Peer-reviewed Conference Proceedings*

- [4] **Cristobal, J. B.** (2024). Complicating the Relationship of Frames and Responses in Teacher Noticing. In Cook S., Katz B., Moore-Russo, D. (Eds.), *Proceedings of the 26th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 268-276). Omaha, Nebraska.
- [5] Funk, R., Pai, L., & **Cristobal, J. B.** (2024). “Persistence in a S-STEM grant: Understanding the Intersectional Experiences of Women Pursuing STEM.” Conference Paper for the 2024 *American Society for Engineering Education Annual Conference & Exposition*.
- [6] **Cristobal, J. B.** (2025). From “Struggle” to “Acceptance”: Andy’s Narrative of First-Time Teaching and Her Frames. In S. Cook, B. P. Katz & K. Melhuish (Eds.), *Proceedings of the 27th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 149-156). Alexandria, VA.
- [7] **Cristobal, J. B.** (2025). Aspects of Culture and Context which Shape Frames of Teaching and Learning. In S. Cook, B. P. Katz & K. Melhuish (Eds.), *Proceedings of the 27th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 157-164). Alexandria, VA.

- [8] Bennett, A. B., **Cristobal, J. B.**, Lai, Y., & Young, C. (2025). Real Analysis Professors’ Noticing of Equity Gaps and Minoritized Students’ Perspectives. In S. Cook, B. P. Katz & K. Melhuish (Eds.), *Proceedings of the 27th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 624-633). Alexandria, VA.
- [9] **Cristobal, J. B.**, Tremaine, R., Black, K., Hagman, J. E., Kress, N., McNeill, R. T., & Pai, L. (2026). When we say “rigor” in undergraduate mathematics, what do we mean?. In Adiredja, A. P., Katz, B. P., Melhuish, K., & Gallagher, L. (Eds.), *Proceedings of the 28th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 1018-1023). Alexandria, VA.
- [10] Black, K., **Cristobal, J. B.**, Hagman, J. E., Fantin-Hardesty, K., Smith, W. M., & Tremaine, R. (2026). Tugging on threads: a loving self-critique of our (white) comforts. In Adiredja, A. P., Katz, B. P., Melhuish, K., & Gallagher, L. (Eds.), *Proceedings of the 28th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 54-62). Alexandria, VA.
- [11] Hagman, J. E., McNeill, R. T., Tremaine, R., Pai, L., Kress, N., Black, K., & **Cristobal, J. B.** (2026). Power implicit in discourses of mathematical rigor within an equity-oriented improvement community. In Adiredja, A. P., Katz, B. P., Melhuish, K., & Gallagher, L. (Eds.), *Proceedings of the 28th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 144-152). Alexandria, VA.

## GRANTS & AWARDS

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- [1] Simons Laufer Mathematical Sciences Institute’s Travel Grant for Critical Issues in Mathematics Education 2024
- [2] American Mathematical Society’s 2025 Joint Mathematics Meetings Graduate Student Travel Grant
- [3] University of Nebraska-Lincoln’s Graduate Student Travel Award for Spring 2025
- [4] Loyola Marymount University’s Spring 2026 NTTF Professional Development (Delphi) Award

## SELECT PRESENTATIONS

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- [1] *One graduate students’ experience teaching for the first time Students Teaching*  
Joint Mathematics Meeting 2025 in the AMS Contributed Papers, Mathematics education.  
<https://youtu.be/gFIJFILrZkE>
- [2] *Success, Struggle, Surprise, and Short-term Goals: Reflections from Mathematics Graduate Students Teaching – A dissertation reflection*  
Joint Mathematics Meeting 2025 in the AMS Special Session: Research Presentations by Math Alliance Scholar Doctorates. [https://youtu.be/ht0\\_geTrGRc](https://youtu.be/ht0_geTrGRc)
- [3] *Successes, Struggles, Surprises and Short-term Goals of Mathematics Graduate Student Instructors Teaching for the First Time*  
Mathematical Association of America’s MathFest 2024 in the Research in Undergraduate Mathematics Education session. <https://youtu.be/1TYHb2xk5Hg>
- [4] *Understanding the Intersectional Experiences and Identities of Women Who Persist in STEM*  
2024 Nebraska Mathematical Association of Two Year Colleges, with Dr. Rachel Funk.
- [5] *Coloring the Relationship of Frames and Responses in Teacher Noticing*  
26th Annual Conference on Research in Undergraduate Mathematics Education (Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education, SIGMAA on RUME). <https://youtu.be/HE6XIPJRokY>

