

JOCELYN N. RIOS

Curriculum Vitae

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EDUCATION

University of Arizona

2017 – 2022

Ph.D. in Mathematics

Specialization in Mathematics Education

Dissertation: Critically Examining the Multilingual Undergraduate Mathematics

Classroom: A Mixed Methods Study (Directors: Aditya Adiredja and Marta Civil)

University of New Mexico

2014 – 2017

M.S. in Mathematics

Distinguished Thesis

Thesis: The Effects of Different Teaching Methods on Student Attitude and

Achievement in Calculus Recitations (Director: Michael Nakamaye)

Colorado State University-Pueblo

2009 – 2013

B.A. in Mathematics

Minor in Spanish

PROFESSIONAL EXPERIENCE

2022 – Postdoctoral Research Fellow

Department of Mathematics

Colorado State University

2021 – 2022 Research Assistant

Project FAMILIA, a Title V grant to develop culturally relevant curriculum for dual-enrollment precalculus courses

University of Arizona

2017 – 2020 Teaching Assistant

Department of Mathematics

University of Arizona

2014 – 2015 Research Assistant

Mentoring through Critical Transition Points, an NSF grant to develop curriculum for graduate teaching assistant professional development

University of New Mexico

2014 – 2017 Teaching Assistant

Department of Mathematics

University of New Mexico

2013 – 2014 Title I Math Teacher

César Chávez Middle School

Pueblo, Colorado

HONORS AND AWARDS

2022	Best Teacher Award Nominee, <i>Alumni Association, Colorado State University.</i>
2021	Excellence in Teaching, <i>College of Science, University of Arizona.</i>
2020	Outstanding Teaching Award, <i>Department of Mathematics, University of Arizona.</i>
2019	Galileo Circle Scholar, <i>College of Science, University of Arizona.</i>
2019	Office for Diversity and Inclusive Excellence Travel Grant, <i>University of Arizona.</i>
2017	Outstanding Graduate Student, <i>Department of Mathematics, University of New Mexico.</i>
2016	Susan-Deese Roberts Outstanding Teaching Assistant Award, <i>Center for Teaching Excellence, University of New Mexico.</i>
2015	Underrepresented Graduate Student Fellowship, <i>University of New Mexico.</i>

PROFESSIONAL SERVICE

Service to Department, College, and Research Community

2024	<u>External Reviewer</u> , Academic Program Review, Department of Mathematics, <i>University of Arizona.</i>
2023	<u>Faculty sponsor</u> , Association of Women in Mathematics Student Chapter, <i>Colorado State University.</i>
2023	<u>Committee member</u> , Diversity, Equity, Inclusion, and Justice Standing Committee, Department of Mathematics, <i>Colorado State University.</i>
2023	<u>Mentor</u> , the PODER (Promoting Opportunities in Diversity and Equity Research) Math Education Lab, <i>Colorado State University.</i>
2023	<u>Reviewer</u> , Journal for Research in Mathematics Education.
2023	<u>Organizing Committee Member</u> , The Colorado Conference for Underrepresented Students in Mathematics, <i>Colorado State University.</i>
2023	<u>Invited Panelist</u> , Panel Discussion on Improving Conditions for Under-Served Students, <i>Joint Mathematics Meeting: Boston, MA.</i>
2022	<u>Reviewer</u> , Conference for Research in Undergraduate Mathematics Education.
2021	<u>Panelist</u> , Tucson Initiative for Minoritized Students Engagement in Science, <i>University of Arizona.</i>
2021	<u>Vice President</u> , Association of Women in Mathematics Student Chapter, <i>University of Arizona.</i>
2021	<u>Mentor</u> , the Graduate Mentoring Program, Department of Mathematics, <i>University of Arizona.</i>
2020	<u>President</u> , Association of Women in Mathematics Student Chapter, <i>University of Arizona.</i>
2020	<u>Committee Member</u> , College of Science Student Success Initiative, <i>University of Arizona.</i>
2019	<u>Organizing Committee Member</u> , Promoting Equity Through Active Learning in Undergraduate Mathematics (PETALUM) Workshop, <i>University of Arizona.</i>
2019	<u>Consultant</u> , implemented culturally responsive college algebra tasks in the summer New Start Program, <i>University of Arizona.</i>

Community Outreach

- 2022 Co-organizer, Cafecito con Matemática Bilingual Family Math Nights, *Fort Collins, Colorado*.
- 2021 Co-facilitator, Project FAMILIA In-Service Teacher Professional Development, *University of Arizona*.
- 2021 Volunteer and Presenter, Parent Cafecitos, Ochoa Community School, *Tucson, Arizona*.
- 2021 Presenter, Adelante Parent and Youth Leadership Conference, *Tucson, Arizona*.
- 2021 Organizer, SK Day, redesigned to be a culturally-responsive community outreach event for middle and high school girls, *Tucson, Arizona*.
- 2019 Presenter, College Academy for Parents, Early Academic Outreach, *University of Arizona*.
- 2019 Presenter, Hablemos de Matemáticas: Padres y Maestros Workshop, *Tucson, Arizona*.
- 2019 Outreach Scholar, worked in local eight grade math classroom, Apollo Middle School, *Tucson, Arizona*.
- 2016 Coordinator, Title I Parent and Family Nights, César Chávez Middle School, *Pueblo, Colorado*.
- 2016 Faculty Co-sponsor, Padres Comprometidos, César Chávez Middle School, *Pueblo, Colorado*.

PUBLICATIONS

Journal Publications

- [1] **Rios, J.** (2024). Positioned as a Burden: Analyzing the Participation of Multilingual Students in Undergraduate Mathematics Courses that use Groupwork. *Journal of Mathematical Behavior*, 74.
- [2] **Rios, J.** (2023). Language, Comfort Speaking, and Collaboration: A QuantCrit Analysis of Multilingual Students' Experiences in Introductory College Mathematics Courses. *International Journal for Research in Undergraduate Mathematics Education*, 1-31.
- [3] **Rios, J.** (in revision). Exploring the Teaching Methods Used in GTA-led Calculus Recitations. Submitted to *International Journal of Mathematical Education in Science and Technology*.
- [4] **Rios, J.**, Hagman, J., & Tremaine, R. (in preparation). Stay silent situations: Using multilingual students' own words through poetic transcription to tell their stories of introductory college mathematics education.
- [5] **Rios, J.** (in preparation). Bond or Barrier: Exploring the Role of Language in the Undergraduate Mathematics Classroom.
- [6] **Rios, J.** & Lozano, G. (in preparation). Equity feels as equity does: Perspectives on teaching and learning active learning precalculus at an HSI.

Peer-reviewed Conference Proceedings

- [6] Fantin-Hardesty, K., Tremaine, R., **Rios, J.**, Soto, H. (2023). Embodiment as Evidence for Student Engagement in an Inquiry-Oriented Mathematics Classroom. In Lamberg T., & Moss, D. (Eds.), *Proceedings of the forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol 1). (pp. 829 - 838). University of Nevada, Reno.
- [7] **Rios, J.** (2023). The Role of Language-as-resource and Language-as-political in College Mathematics Courses. In Ayalon, M., Koichu, B., Leikin, R., Rubel, L., & Tabach, M. (Eds.), *Proceeding of the 46th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 4). (pp. 91-98). University of Haifa, Israel.

- [8] **Rios, J.** (2023). Resources for Participation: Examining Multilingual Students' Perspectives on What it Means to Participate in Active Learning. In Cook, S., Katz, B., & Moore-Russo, D., (Eds.), *Proceedings of the 25th Annual Conference on Research in Undergraduate Mathematics Education*. (pp. 502-510). Omaha, NE.
- [9] **Rios, J.** (2022). Analyzing Multilingual Students' Experiences in Introductory College Mathematics Courses. In Trigueros, M., Barquero, B., Hochmuth, R., & Peters, J. (Eds.). *Proceedings of the Fourth Conference of the International Network for Didactic Research in University Mathematics*. (p. 652-661). Hannover, Germany.
- [10] **Rios, J.** (2022). Active Learning in the Language Diverse Undergraduate Mathematics Classroom. In Karunakaran, S., & Higgins, A. (Eds.), *Proceedings of the 24th Annual Conference on Research in Undergraduate Mathematics Education*. (pp. 454-460). Boston, MA.

PRESENTATIONS

Conference Presentations and Posters

- [1] **(invited) Hagman, J., & Rios, J.** (2024, February). Centering Students in "Student-Centered Instruction". Keynote address at Tercer Encuentro Internacional de Matemática Universitaria y su Didáctica (III EIMUD): Virtual.
- [2] **Rios, J.** (2023, August). Examining Student Positioning During Groupwork in Linguistically Diverse Undergraduate Mathematics Classrooms. Paper presented at the Mathematical Association of America MathFest 2023 Conference: Tampa, FL.
- [3] Arnold, L., & **Rios, J.** (2023, August). Cafecito con Matemática. Poster presented at the Mathematical Association of America MathFest 2023 Conference: Tampa, FL.
- [4] **Rios, J.** (2023, July). The Role of Language-as-resource and Language-as-political in College Mathematics Courses. Paper presented at the 46th Conference of the International Group for the Psychology of Mathematics Education: Haifa, Israel.
- [5] **Rios J.** (2023, February). Examining Multilingual Students' Perspectives on What it Means to Participate in Groupwork. Paper presented the 25th Annual Conference on Research in Undergraduate Mathematics Education: Omaha, NE.
- [6] **(invited) Rios, J.** (2023). Examining the Experiences of Multilingual Students in Active Learning Undergraduate Mathematics Courses. Paper presented at the American Mathematical Society Joint Mathematics Meeting 2023: Boston, MA.
- [7] **(invited) Rios, J. & Lozano, G.** (2023). Active-learning and Servingness: Possibilities, Realities, and Insights from an NSF-funded Precalculus Initiative. Paper presented at the American Mathematical Society Joint Mathematics Meeting 2023: Boston, MA.
- [8] **(invited) Rios, J.** (2023). Bond or Barrier: Exploring the Role of Language in the Undergraduate Mathematics Classroom. Paper presented at the American Mathematical Society Joint Mathematics Meeting 2023: Boston, MA.
- [9] **(invited) Lozano, G., & Rios, J.** (2022). A Culturally Affirming Precalculus Curriculum for Tucson Schools. Tucson Unified School District's Inaugural Equity, Diversity, and Inclusiveness (EDI) Professional Conference: Tucson, AZ.
- [10] **Rios, J.** (2022). Active learning in the language diverse undergraduate math classroom. Paper presented at the 24th Annual Conference on Research in Undergraduate Mathematics Education: Boston, MA.
- [11] **Rios, J.** (2021, July). The teaching methods of calculus recitation leaders. Poster presented at the 14th International Congress on Mathematical Education. Virtual.

- [12] **Rios, J.** (2021, June). Examining the role of language in post-secondary math classrooms using a language-as-resource and language-as- political framework. Paper presented at the Conference for Academic Research in Education. Virtual.
- [13] Adiredja, A. P. & **Rios, J.** (2021, April). Culturally Affirming Engagement in Undergraduate Mathematics. Paper presented at the American Educational Research Association Annual Meeting. Virtual.
- [14] **Rios, J.** & Salazar, F. (2021, January). Group-worthy tasks that promote equity in introductory college math courses. Math Education Appreciation Day Conference. Virtual.
- [15] Adiredja, A. P. & **Rios, J.** (2019, April). Synthesizing cultural capital wealth with STEM communities of practice for students of color. Paper presented at the American Educational Research Association Annual Meeting. Toronto, Canada.

(Select) Colloquium and Seminar Presentations

- [15] **(invited) Rios, J.** (2024, February). Developing Mathematical Tasks Related to Equity and Community. Utah State Mathematics Education Seminar.
- [16] **(invited) Rios, J.** (2023, October). Examining Multilingual Students' Experiences with Groupwork. Texas State University Mathematics Education Seminar.
- [17] **(invited) Rios., J.** (2023, August). The Role of Language in College Mathematics Education. Curry College Seminar on Diverse Perspective in Mathematics.
- [18] (local) **Rios, J.** (2023, March). My Journey Developing Mathematical Tasks Related to Equity. Colorado State University Postdoc Seminar.
- [19] **(invited) Rios, J.** (2022, February). Centering the Experiences of Multilingual Students in the Undergraduate Math Classroom. Colorado State University Math Education Seminar.
- [20] (local) **Rios, J.** (2019, April). Culturally relevant tasks for College Algebra. The University of Arizona Mathematics Instructor Colloquium.

TEACHING EXPERIENCE

Colorado State University

Fall 2023	MATH 369 - Linear Algebra
Spring 2023, Fall 2023	MATH 261 - Vector Calculus

University of Arizona

Spring 2020, Fall 2020	MATH 122A - Functions of Calculus
Fall 2020	MATH 196M - Calculus Supplemental Instruction Seminar
Fall 2019	MATH 122B - Calculus I
Fall 2018	MATH 196L - Precalculus Supplemental Instruction Seminar
Fall 2017, Spring 2018, Fall 2018	MATH 112 - College Algebra

University of New Mexico

Spring 2016, Summer 2016	MATH 123 - Trigonometry
Fall 2015	MATH 605 - Graduate Student Teacher Training Seminar

Summer 2014

MATH 144 - Applied Calculus II

Fall 2014

MATH 253 - Calculus II recitation

AWARDED GRANTS

- 2023 College of Natural Science Faculty Success Grant: Funding for Cafecito con Matemática, Bilingual Family Math Nights at local schools in Poudre School District, *Colorado State University*, Amount: \$5,000.
- 2021 Graduate and Professional Student Council Project and Research Grant: Funding of dissertation research, *University of Arizona*, Amount: \$1,000.

Advisory Board on External Grants

- 2023 Advisory Board Member, Title: “Discourse to Improve Student Conceptual Understanding of Statistics in Inclusive Settings (DISCUS-IS)”, PIs: Laura Callis (Curry College) Jennifer McNally (Curry College), Source: National Science Foundation.

REFERENCES

Aditya Adiredja

Associate Professor
Department of Mathematics
University of Arizona
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Marta Civil

Distinguished Professor
Department of Mathematics
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