

Anna F. DeJarnette

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Academic Appointments

Assistant Professor, University of Cincinnati August 2014-Present
College of Education, Criminal Justice, and Human Services
Graduate Faculty Status

Education

Ph.D. Curriculum and Instruction, Mathematics Education 2014
University of Illinois, Champaign, IL

M.Ed. Curriculum and Instruction with Teaching Certification 2012
University of Illinois, Champaign, IL

M.S. Mathematics 2010
University of Illinois, Champaign, IL

B.A. Mathematics 2008
Saint Mary's College, Notre Dame, IN

Awards and Distinctions

National Center for Faculty Development and Diversity Faculty Success Program, sponsored by the University of Cincinnati Office of the Provost, Summer 2017

Fellow, Mathematics Education "Service, Teaching, and Research" (STaR) Program, supported by the Association of Mathematics Teacher Educators, 2015-2016

University of Illinois College of Education Hardie Dissertation Grant, 2013

University of Illinois College of Education Max Beberman Award for Outstanding Graduate Student in Mathematics Education, 2012-2013

Peer-Reviewed Publications

DeJarnette, A. F. (2017, accepted with revisions). Students' conceptions of sine and cosine functions when representing periodic motion in a visual programming environment. Accepted by *Journal for Research in Mathematics Education* in July 2017.

DeJarnette, A. F., & González, G. (2017). Geometry students' arguments about a 1-point perspective drawing. *REDIMAT*, 6(1), 7–32.

DeJarnette, A. F. (2016). Students' discourse when working in pairs at the computer in an eighth grade mathematics class. *Language and Education*, 30(6), 485–499.

- DeJarnette, A.F., González, G., Deal, J. T., Rosado Lausell, S. L. (2016). Students' conceptions of reflective symmetry: Opportunities for making connections with perpendicular bisector. *Journal of Mathematical Behavior*, 43, 35–52.
- DeJarnette, A. F., & González, G. (2016). Thematic analysis of students' talk while solving a real-world problem in geometry. *Linguistics and Education*, 35, 37–49.
- DeJarnette, A. F., & González, G. (2015). Positioning during group work on a novel task in Algebra II. *Journal for Research in Mathematics Education*, 46(4), 378–422.
- DeJarnette, A. F., Rosado Lausell, S. L., & González, G. (2015). Shadow puppets: Exploring a context for similarity and dilations. *The Mathematics Teacher*, 109(1), 20–27.
- González, G., & DeJarnette, A. F. (2015). Teachers' and students' negotiation moves when teachers scaffold group work during a problem-based lesson. *Cognition and Instruction*, 33(1), 1–45.
- DeJarnette, A. F., Walczak, M., & González, G. (2014). Students' concepts- and theorems-in-action on a novel task about similarity. *School Science and Mathematics*, 114(8), 405–414.
- DeJarnette, A. F., Dao, J., & González, G. (2014). Promoting productive small-group discussions. *Mathematics Teaching in Middle School*, 19(7), 414–419.
- DeJarnette, A. F., & González, G. (2013). Building students' reasoning skills by promoting student-led discussions in an Algebra II class. *The Mathematics Educator*, 23(1), 3–23.
- González, G., & DeJarnette, A. F. (2013). Leading classroom discussions. *Mathematics Teaching in Middle School*, 18(9), 544–551.
- González, G., & DeJarnette, A. F. (2013). Geometric reasoning about a circle problem. *The Mathematics Teacher*, 106(8), 586–591.
- González, G., & DeJarnette, A. F. (2012). Agency in a geometry review lesson: A linguistic view on teacher and student division of labor. *Linguistics and Education*, 23(2), 182–199.

Invited Publications

- González, G., DeJarnette, A. F., & Deal, J. T. (2014). Assessing and using students' prior knowledge in problem-based instruction. *New England Mathematics Journal*, 46(1), 38–49.

Invited Presentations

- DeJarnette, A. F. (2015, October). *Using a dynamic geometry environment to make connections between map projections and geometric transformations*. Invited presentation at the monthly meeting of the Miami University Council of Teachers of Mathematics.

Peer-Reviewed Conference Proceedings and Presentations¹

DeJarnette, A. F. (2017, October). (accepted). One teacher's implementation of professional development around the use of technology. Paper to be presented at the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PMENA), Indianapolis, IN.

DeJarnette, A. F. (2016). *Students' use of a computer programming environment to represent distance as a function of time*. In M. B. Wood, E. E. Turner, M. Civil, & J. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1537–1540). Tucson, AZ: The University of Arizona.

DeJarnette, A. F., Hord, C., & Marita, S. (2016). *Using linguistics to examine a tutoring session about linear functions*. In M. B. Wood, E. E. Turner, M. Civil, & J. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1025–1032). Tucson, AZ: The University of Arizona.

Lockwood, E., Asay, A., DeJarnette, A. F., & Thomas, M. (2016). *Algorithmic thinking: An initial characterization of computational thinking in mathematics*. In M. B. Wood, E. E. Turner, M. Civil, & J. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1588–1595). Tucson, AZ: The University of Arizona.

DeJarnette, A. F., & González, G. (2016, April). *Geometry students' arguments about a 1-point perspective drawing*. Paper presented at the annual meeting of the American Educational Research Association (AERA), Washington, DC.

Hord, C., DeJarnette, A. F., & Marita, S. (2015). Justification in the context of linear functions: Gesturing as support for students with learning disabilities. In T. G. Bartell, K. N. Bieda, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 587). East Lansing, MI: Michigan State University.

DeJarnette, A. F., & Gregson, S. (2015, October). *Projections of the globe: Using GeoGebra to study world maps*. Session presented at the Ohio Council of Teachers of Mathematics 65th Annual Conference, Cincinnati, OH.

DeJarnette, A. F. (2015, September). *Students' use of a computer-programming environment as a realistic context for learning algebra*. Paper presented at the Fifth Annual International Realistic Mathematics Education Conference, Boulder, CO.

DeJarnette, A. F., & González, G. (2015, April). *Multiple meanings of an inscription during group work on a geometry problem*. Paper presented at the annual meeting of the American Educational Research Association (AERA), Chicago, IL.

¹ Presentations prior to 2012 were given under the name Anna Fricano.

- DeJarnette, A. F. (2014, April). *Students' instrumented activity using Etoys to construct trigonometric functions*. Paper presented at the National Council of Teachers of Mathematics Research Conference, New Orleans, LA.
- DeJarnette, A. F. (2014, April). *Students' conceptions of sine and cosine functions: Using multiple representations in a computer programming environment*. Paper presented at the annual meeting of the American Educational Research Association (AERA), Philadelphia, PA.
- DeJarnette, A. F. (2014, April). *Positioning practices across pairs of students working on computers in high school mathematics*. Poster presented at the annual meeting of the American Educational Research Association (AERA), Philadelphia, PA.
- González, G., & DeJarnette, A. F. (2014, April). Teachers' negotiation moves when scaffolding group work. In G. González (Chair), *Using systemic functional linguistics to study mathematics classroom discourse*. Symposium presented at the annual meeting of the American Educational Research Association (AERA), Philadelphia, PA.
- DeJarnette, A. F. (2013). Students' moves to challenge their peers during group work: Interpersonal and mathematical implications. In M. Martinez & A. Castro Superfine (Eds.), *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. xx). Chicago, IL: University of Illinois at Chicago.
- DeJarnette, A. F. (2013, September). *Mathematizing a contextual problem in Algebra II using Etoys*. Paper presented at the Fourth Annual International Realistic Mathematics Education Conference, Boulder, CO.
- DeJarnette, A. F. (2013, April). *Exploring tasks related to congruence in three middle school textbooks*. Poster presented at the annual meeting of the National Council of Teachers of Mathematics Research Pre-Session, Denver, CO.
- DeJarnette, A. F., & González, G. (2013, April). Positioning during group work on a novel task in Algebra Two. In G. González (Chair), *Mathematics education research using Systemic Functional Linguistics*. Symposium presented at the annual meeting of the National Council of Teachers of Mathematics Research Pre-Session, Denver, CO.
- DeJarnette, A. F., & González, G. (2012). "Some students are more advanced and can just factor": Algebraic procedures and students' instructional identities. In L. R. Van Zoest, J.-J. Lo, & J. L. Kratky (Eds.), *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1002). Kalamazoo, MI: Western Michigan University.
- DeJarnette, A. F., & González, G. (2012, April). "Some students are more advanced and can just factor": Algebraic procedures and students' instructional identities. Paper presented at the University of Illinois 3rd Annual Graduate Student Conference, Champaign, IL.

González, G., Galloway, K., & Fricano, A. (2011, October). *Do you remember that? How to use students' prior knowledge*. Gallery workshop presented at National Council of Teachers of Mathematics 2011 Regional Conference & Exposition, St. Louis, MO.

Fricano, A., & González, G. (2011, April). *Understanding students' transitions from operational to structural understanding of change*. Paper presented at the University of Illinois 2nd Annual Graduate Student Conference, Champaign, IL.

Other Conference Presentations

DeJarnette, A. F., González, G., & Deal, J. T. (2014, October). *Can geometry help me locate a grocery store?* Workshop presented at the Illinois Council of Teachers of Mathematics 64th Annual Meeting and Conference, Tinley Park, IL.

González, G., Rosado Lausell, S. L., & DeJarnette, A. F. (2014, October). *A pottery design problem for teaching perpendicular bisector*. Workshop presented at the Illinois Council of Teachers of Mathematics 64th Annual Meeting and Conference, Tinley Park, IL.

Fricano, A., & González, G. (2011, October). *Talking about rates of change: Gaining insights from algebra students' conversations*. Paper presented at the Illinois Council of Teachers of Mathematics 62nd Annual Meeting and Conference, Springfield, IL.

University Internal Grant Awards

DeJarnette, A. F. (2017). *Creating Opportunities to Learn Through Opportunities to Teach Mathematics With Technology*. University Research Council Faculty Research Grant Program. University of Cincinnati. (\$10,000). Funded. (Principle Investigator).

Unfunded University Internal Grant Applications

DeJarnette, A. F. (2015). *Computational Thinking Skills and Competencies that Students Apply to Mathematical Problem Solving*. University Research Council Faculty Research Grant Program. University of Cincinnati. (\$6,000). Unfunded.

DeJarnette, A. F. (2014). *Computer Programming Activities to Support Conceptual Understanding of Algebra*. University Research Council Faculty Research Grant Program. University of Cincinnati. (\$6,500). Unfunded.

Unfunded External Grant Applications

Hord, C., & DeJarnette, A. F. (2015). *Developing a tutoring program for promoting success in Algebra I for students with disabilities*. National Science Foundation Discovery Research K-12 Program. (\$450,000). Unfunded.

DeJarnette, A. F. (2015). *Identifying Computational Thinking Skills and Competencies that Students Apply to Mathematical Problem Solving*. Spencer Foundation Small Research Grants Program. (\$50,000). Unfunded.

Teaching Experience

Fall 2017

MDL 3005—Middle School Mathematics Methods I 51 students, 2 sections

Summer 2017

CI 7001—Educational Research Methods 26 students

Spring 2017

CI 3003—Teaching and Learning in Diverse Classrooms 41 students

MDL 4000—Practicum 1 (Field Supervision) 11 students

Spring 2016

CI 7040—Mathematics as Problem Solving 19 students

Fall 2015

MDL 3005—Middle School Mathematics Methods I 22 students

MDL 3029—Teaching Geometry and Measurement in Middle Schools 38 students, 2 sections

Spring 2015

MDL 3028—Teaching Algebra in Middle Schools 40 students, 2 sections

Fall 2014

MDL 3029—Teaching Geometry and Measurement in Middle Schools 29 students

Mentorship

Doctoral Students

Advisor, Debra Hutchinson, Ph.D. student in Educational Studies
March 2017 – present

Committee Member, Matt Guenther, Ph.D. student in Educational Studies
Preliminary Hearing completed 3/11/15

Committee Member, Samantha Marita, Ph.D. student in Educational Studies
Dissertation Proposal approved 3/20/17

Committee Member, Lori Cargile, Ed.D. student in Educational Studies
Dissertation Proposal approved 9/22/15

Committee Member, Lori Ferguson, Ed.D. student in Educational Studies
Phase 1 Hearing completed 9/21/17

Committee Member, Lori Foote, Ph.D. student in Educational Studies
Dissertation Proposal approved 4/25/17

Committee Member, Jessica Kestler, Ph.D. student in Educational Studies
August 2016-Present

Masters Students

Advisor, Ian Olano, M.Ed. student in Curriculum and Instruction
August 2014 – August 2016

Advisor, Tricia Duffy, M.Ed. student in Curriculum and Instruction
August 2014 – May 2017

M.Ed. Capstone Project Second Reader

Tricia Duffy, completed spring 2017
Lauren Guban, completed spring 2017
Tyler Payne, completed fall 2016
Dawn Landrus, completed spring 2016
Lindsey Roth, completed spring 2016
Ashley Schwieterman, completed spring 2015
Stephanie Copley, completed fall 2014

Undergraduate Students

Edana Wilke, University Honors Program Discover Summer Research Program
Project completed summer 2017

Mitchell Camfield, Choose Ohio First Scholarship
Project completed 2014-2015

Juliana Castellanos, Choose Ohio First Scholarship
Project completed 2014-2015

September 2017

Professional Development

One-on-One Grant Writers' Workshop, presented by Grant Writers' Seminars & Workshop, LLC and sponsored by the University of Cincinnati Office of the Provost, 2017-2018

Grant Writing Seminar, "Write Winning Grant Proposals," presented by Grant Writers' Seminars & Workshop, LLC, April 2016

National Science Foundation CAREER Grants Webinar, February 2015

American Educational Research Association Institution on Statistical Analysis: Mathematics Education and Equity, Washington, DC, May 2013

Service

Co-Editor

2016-2017 "Palette of Problems," the monthly problems feature of the journal *Mathematics Teaching in the Middle School*, co-edited with Stephen Pelikan and Steve Phelps

Reviewer

2017 *Journal for Research in Mathematics Education, Educational Studies in Mathematics, Mathematical Thinking and Learning, International Journal of STEM Education, Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education*

2016 National Science Foundation Discovery Research K-12 grant program, *Educational Studies in Mathematics, Mathematical Thinking and Learning, Annual Conference of the American Educational Research Association, Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education*

2015 *Journal for Research in Mathematics Education, Annual Conference of the American Educational Research Association, Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education, Annual Conference of the Association of Mathematics Teacher Educators*

2013 National Council of Teachers of Mathematics Annual Research Conference

2012 *Journal of Mathematical Behavior*

2011-2013 Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education

Invited Presentations and Panels

2017 Guest Speaker, University of Illinois Doctoral course, *Discourse in STEM Classrooms*

2015 Invited Presenter, *Using Google Apps for Better Group Work*, University of Cincinnati School of Education eLearning Excellence Lunch, Cincinnati, OH (October)

- 2014 Guest Speaker, University of Illinois College of Education Professional Socialization Seminar, Champaign, IL (November)
- 2013 Panelist, Saint Mary's College *After Math* event, Notre Dame, IN (November)
 Panelist, University of Illinois Sonia Kovalevskaya Math Day for Girls, *Mathematics-Related Careers*, Champaign, IL (May)

State of Ohio

- 2015 Ohio Mathematics Initiative Student Success Summit: Defining Mathematics Practices and Pathways, Columbus, OH (April)

University of Cincinnati

- 2017-2018 University Research Council—Social and Behavioral Sciences

College of Education, Criminal Justice, and Human Services

- 2015-2016 College of Education, Criminal Justice and Human Services Research and Development Committee

School of Education and Associated Programs

- 2017-2018 School of Education Reappointment, Promotion, and Tenure (RPT) Committee
 Council for the Accreditation of Educator Preparation (CAEP) Technology Working Group
 Organizer, New Doctoral Student Orientation
- 2016-2018 Power Friday Planning Committee
 School of Education Working Group to Revise Reappointment, Tenure, & Promotion (RPT) Guidelines
 Representative of the Middle Childhood Education Program to the Licensure Council
- 2016-2017 Middle Childhood Education Program Revision for the Dual Licensure Program
 Implementation Science Workshop (June 2017, Columbus, OH) to improve the implementation of the Middle Childhood Education Dual Licensure Program
- 2015-2016 School of Education Graduate Faculty Committee to Clarify GIA Funding Criteria and Models
- 2014-2015 Ohio Assessment for Educators [OAE] Study Group for Middle Grades Mathematics, Coordinator
 University of Cincinnati School of Education Dean's Compact Initiative
 Representative of the Middle Childhood Education Program to the Licensure Council

Professional Affiliations

American Educational Research Association (AERA)

Division C—Learning and Instruction

Special Interest Group for Research in Mathematics Education (SIG-RME)

Association of Mathematics Teacher Educators (AMTE)

International Group for the Psychology of Mathematics Education – North American Chapter (PMENA)

National Council of Teachers of Mathematics (NCTM)

Ohio Council of Teachers of Mathematics (OCTM)