
Valentina Postelnicu

Curriculum Vitae

Phone: (708)235-7639
Email: vpostelnicu@govst.edu

EDUCATION

- 2011 Ph.D. Curriculum and Instruction -Mathematics Education
Arizona State University, Tempe, Arizona
Dissertation: Student Difficulties with Linearity and Linear
Functions and Teachers' Understanding of Student Difficulties
Advisor: Carole Greenes, Arizona State University
- 1985 M.S. Mathematics & Applied Mathematics
University of Bucharest, Romania
Thesis: Wire Drawing: Mathematical Modeling and Optimization
Advisor: Nicolae Cristescu, University of Florida

LICENSURES AND CERTIFICATIONS

- Certificate of Online Course Design and Development, Texas A&M University-Corpus Christi.
(2017-Present).
- Certificate of Course Delivery and Peer-Review - Online Courses, Texas A&M University-Corpus
Christi. (2015-Present).
- Certificate of Professional Development in Best Practices for Online Course Design, Texas A&M
University-Corpus Christi. (2014-Present).
- Teaching Certificate Community College, Maricopa Community Colleges, Arizona. (1998-Present).
- Teaching Certificate Secondary Mathematics (6-12), Arizona Department of Education. (1997-
Present).

PROFESSIONAL EMPLOYMENT

- 2021-Present Assistant Professor (tenure track) Governors State University
Program Coordinator Secondary Mathematics College of Arts and Sciences
Division of Science, Mathematics, and Technology
- 2014-2021 Assistant Professor (tenure track) Texas A& M University-Corpus Christi
College of Science and Engineering
Mathematics and Statistics Department
- 2013-2014 Assistant Professor (tenure track) University of Wisconsin-Stout
College of Science, Technology, Engineering and Mathematics
Department of Mathematics, Statistics and Computer Science

2008-2013	Instructor	Arizona State University College of Technology and Innovation Applied Science and Mathematics Department
2007-2008	Graduate Research Associate	Arizona State University Division of Teacher Preparation Professional Development School (PDS) grant
2006-2007	Graduate Research Assistant	Arizona State University Mathematics and Statistics Department Teacher Professional Continuum (TPC) grant
2003-2004	Lecturer	Arizona State University New College of Interdisciplinary Arts and Sciences Department of Integrative Studies
1998-2007	Teacher	Phoenix Union High School District Alhambra High School Mathematics Department
1997-1999	Computer Programmer	Ticketmaster Phoenix, Arizona Research and Development Department

PROFESSIONAL MEMBERSHIPS

Member of the European Society for Research in Mathematics Education
Member of the National Council of Teachers of Mathematics
Member of the Arizona Association of Teachers of Mathematics
Member of the Illinois Council of Teachers of Mathematics
Member of the Illinois Mathematics Teacher Educators

TEACHING EXPERIENCE

Mathematics and Statistics Courses

Algebra 1-2, Geometry, Discrete Mathematics, Precalculus, Calculus,
Phoenix Union High School District (1998-2007).
Intermediate Algebra, Arizona State University (2011).
College Mathematics, Arizona State University (2004).
College Algebra, Arizona State University (2004, 2008-2011);
Texas A&M University-Corpus Christi (2020).
Precalculus, Arizona State University (2008-2011); Texas A&M University-Corpus Christi (2018).
Brief Calculus, Arizona State University (2008-2011).
Calculus I, Arizona State University (2013); University of Wisconsin-Stout (2013);
Texas A&M University-Corpus Christi (2015-2018).
Calculus for Engineers II, Arizona State University (2012-2013).

Mathematics of Change I (for Engineers), Arizona State University (2009).
 Mathematics of Change II (for Engineers), Arizona State University (2008).
 Discrete Mathematics, Arizona State University (2008-2012); University of Wisconsin-Stout (2013);
 Texas A&M University-Corpus Christi (2016, 2018-2020).
 Foundations of the Language of Mathematics, University of Wisconsin-Stout (2013).
 Mathematical Structures, Arizona State University (2003).
 Linear Algebra, Arizona State University (2003).
 Advanced Calculus I, Arizona State University (2003).
 College Geometry, Texas A&M University-Corpus Christi (2015-2016).
 History and Philosophy of Mathematics, Arizona State University (2003).
 Topics in Mathematics, Texas A&M University-Corpus Christi (2016).
 Introduction to Applied Statistics, Arizona State University (2003-2004).

Mathematics Education Courses for Pre-service and In-service Teachers

Principles of Secondary Mathematics (for pre-service teachers), Governors State University (2021).
 Number Theory for Teachers (for pre-service teachers), Governors State University (2022).
 Number Sense K-6 (for pre-service teachers), Arizona State University (2008).
 Fundamentals of Mathematics I (for pre-service teachers),
 Texas A&M University-Corpus Christi (2018).
 Fundamentals of Mathematics II (for pre-service teachers),
 Texas A&M University-Corpus Christi (2014-2018, 2020).
 Fundamentals of Mathematics III (for pre-service teachers),
 Texas A&M University-Corpus Christi (2016-2017, 2020).
 Mathematics Education Topics I (for pre-service teachers),
 Texas A&M University-Corpus Christi (2017).
 Structure of Modeling with Rates of Change (for in-service teachers),
 Texas A&M University-Corpus Christi (2014, 2019).
 Structure of Geometry and Measurement (for in-service teachers),
 Texas A&M University-Corpus Christi (2016).
 Problem Solving and Mathematical Reasoning for Teachers (for in-service teachers)
 Texas A&M University-Corpus Christi (2016, 2019).
 Structure of Patterns and Algebra (for in-service teachers),
 Texas A&M University-Corpus Christi (2016).
 Evolution of Mathematical Systems (for in-service teachers),
 Texas A&M University-Corpus Christi (2015, 2017).
 Literature Review and Research,
 Texas A&M University-Corpus Christi (2014, 2016, 2019, 2020).
 Proposal Research (Mathematics Education), Texas A&M University-Corpus Christi (2019).
 Directed Independent Study, Texas A&M University-Corpus Christi (2017).
 Thesis, Texas A&M University-Corpus Christi (2015, 2020).

University Supervisor for Pre-service Secondary Mathematics Teachers

Student Teaching: Senior Capstone, Governors State University (2021-2022).
 Secondary Microteaching, Governors State University (2021-2022).

Master's Thesis Advisor (Committee Chair)

- Gonzalez, Mario (2020). *Undergraduate students' difficulties and convictions with mathematical induction*. Master's thesis. Mathematics & Statistics Department, Texas A&M University- Corpus Christi.
- Viera, Justene (2020). *Cognitive demand and the level of alignment in the mathematics items of the STAAR test and the textbook tasks in the intended curricular for 7th, 8th, and Algebra 1 students in South Texas*. Master's thesis. Co-Chair with Dr. James Dogbey. Mathematics & Statistics Department, Texas A&M University- Corpus Christi.
- Hesseltine, April (2015). *Algebra I Students' Understanding of Linear Functions*. Master's thesis. Mathematics & Statistics Department, Texas A&M University- Corpus Christi.

Master's Thesis/Project Committee Member

- Duchesneau, Brielle (in progress). *Undergraduate students' difficulties with strong and weak mathematical induction*. Mathematics & Statistics Department, Texas A&M University- Corpus Christi.
- Bogan, Jennifer (2021). *How scaffolding rate of change problems promotes positive mathematical transferability*. Mathematics & Statistics Department, Texas A&M University- Corpus Christi.
- Cloud, Amanda (2020). *The Effects of Previous Knowledge of Algebra on T.S.I. Mathematics Pass Rate of Incoming Early College High School Students*. Mathematics & Statistics Department, Texas A&M University- Corpus Christi.

SCHOLARLY AND CREATIVE ACTIVITIES

Publications**Peer Reviewed**

- Postelnicu, V., Gonzalez, M. A. (2020). Using Didactical Engineering to Teach Mathematical Induction. In Karunakaran, S. S., Reed, Z., & Higgins, A. (Eds.). *Proceedings of the 23rd Annual Conference on Research in Undergraduate Mathematics Education* (pp. 1272-1273). Boston, MA.
- Postelnicu, F. & Postelnicu, V. (2020). The Camel Problem: An example of computational thinking. *OnCore, Journal of Arizona Association of Teachers of Mathematics*, 82-88. <http://aatm.org/oncore-journal/>
- Postelnicu, V. (2019). Classroom communication: Defining and characterizing perpendicular lines in high school algebra. In U. T. Jankvist, M. van den Heuvel-Panhuizen, & M. Veldhuis (Eds.), *Proceedings of the Eleventh Congress of the European Society for Research in Mathematics Education* (pp. 1738-1745). Utrecht, the Netherlands: Freudenthal Group & Freudenthal Institute, Utrecht University and ERME. <https://hal.archives-ouvertes.fr/>
- Postelnicu, V. (2017). Didactic transposition in school algebra: The case of writing equations of parallel and perpendicular lines. In T. Dooley & G. Gueudet (Eds.), *Proceedings of the 10th*

Congress of European Society for Research in Mathematics Education (pp. 480-487). Dublin, Ireland: Dublin City University, Institute of Education and ERME. <https://hal.archives-ouvertes.fr/>

Postelnicu, V. (2017). The box problem from a Calculus point of view. *OnCore, Journal of Arizona Association of Teachers of Mathematics*, 61-69. <http://aatm.org/wp-content/uploads/2017/05/AATM-Journal-Spring-2017.pdf>

Postelnicu, V., Postelnicu, F. (2016). The role of logic in students' understanding of parameters in algebra. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), *Proceedings of the Thirty-Eighth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 707). Tucson, AZ: The University of Arizona. <http://www.pmena.org/pmenaproceedings/PMENA%2038%202016%20Proceedings.pdf>

Postelnicu, V., Postelnicu, F. (2015). College students' understanding of parameters in algebra. In Krainer, K., & Vondrová, N. (Eds.), *Proceedings of the Ninth Congress of European Research in Mathematics Education* (pp. 453-459). Prague, Czech Republic: Charles University in Prague, Faculty of Education and ERME. <https://hal.archives-ouvertes.fr/>

Postelnicu V. (2013). Students' difficulties with the Cartesian connection. In B. Ubuz, Ç. Haser, & M. A. Mariotti (Eds.), *Proceedings of the Eighth Congress of the European Society for Research in Mathematics Education* (pp.520-529). Ankara, Turkey: ERME. <https://hal.archives-ouvertes.fr/>

Postelnicu, V. & Postelnicu, F. (2013). The figurative method: A bridge from numerical to quantitative reasoning. In T. Dooley, S. NicMhuirí., M. O'Reilly, & R. Ward (Eds.), *Mathematics Education: Crossing Boundaries - Proceedings of the Fifth Conference on Research in Mathematics Education MEI5* (pp. 308-319). Dublin, Ireland: MEI.

Postelnicu, V. & Postelnicu, F. (2013). Quantitative reasoning and the Figurative Method for solving problems. *OnCore, Journal of Arizona Association of Teachers of Mathematics*, 13-17. <http://aatm.org/oncore-journal/>

Edited Chapters

Hewitt, D., Oldenburg, R., Postelnicu, V., Stromskag, H. (Eds.) (2017). TWG03 Algebraic Thinking. In T. Dooley & G. Gueudet (Eds.), *Proceedings of the 10th Congress of the European Society for Research in Mathematics Education* (pp. 419-558). Dublin, Ireland: Dublin City University, Institute of Education and ERME. <https://hal.archives-ouvertes.fr/>

Hodgen, J., Oldenburg, R., Postelnicu, V., Stromskag, H. (Eds.) (2015). TWG03 Algebraic Thinking. In Krainer, K., & Vondrová, N. (Eds.), *Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education* (pp. 385-509). Prague, Czech Republic: Charles University in Prague, Faculty of Education and ERME. <https://hal.archives-ouvertes.fr/>

Non Refereed

- Hewitt, D., Oldenburg, R., Postelnicu, V., Strømskag, H. (2017). Introduction to the papers of TWG03: Algebraic thinking. In T. Dooley & G. Gueudet (Eds.), *Proceedings of the 10th Congress of the European Society for Research in Mathematics Education* (pp.420-423). Dublin, Ireland: Dublin City University, Institute of Education and ERME. <https://hal.archives-ouvertes.fr/>
- Hodgen, J., Oldenburg, R., Postelnicu, V., & Strømskag, H. (2015). Introduction to the papers of TWG03: Algebraic thinking. In Krainer, K., & Vondrová, N. (Eds.), *Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education* (pp. 386-389). Prague, Czech Republic: Charles University in Prague, Faculty of Education and ERME. <https://hal.archives-ouvertes.fr/>
- Postelnicu, V., & Greenes, C. (2012). Do teachers know what their students know? *National Council of Supervisors of Mathematics Newsletter*, 42 (3), 14-15. <http://www.mathedleadership.org/resources/newslettersvol42.html>

Presentations

- Research Presentation (video). *Solving Computational Thinking Problems: Examples of Successful Teaching Practices?* National Council of Mathematics Teachers (NCTM) Fall Virtual Conference (2021).
- Research Presentation (poster). *Using Didactical Engineering to Teach Mathematical Induction*. Research in Undergraduate Mathematics Conference, Boston, MA (2020).
- Research presentation (paper) *Classroom communication: Defining and characterizing perpendicular lines in high school algebra*, 11th Congress of the European Society for Research in Mathematics Education (CERME 11), Utrecht, the Netherlands (2019).
- Research presentation, *Didactical engineering in Calculus*, Mathematics Seminar, Texas A&M University-Corpus Christi. (2017).
- Research presentation (paper), *Didactic transposition in school algebra: The case of writing equations of parallel and perpendicular lines*, 10th Congress of European Research in Mathematics Education (CERME 10), Dublin, Ireland. (2017).
- Research presentation (poster), *The role of logic in students' understanding of parameters in algebra*. 38th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 38), Tucson, AZ. (2016).
- Research presentation, *Students' understanding and difficulties with optimization problems in Calculus I*, ME by the SEa Conference, Texas A&M University-Corpus Christi. (2016).
- Research presentation (paper), *College Students' Understanding of Parameters*, 9th Congress of European Research in Mathematics Education (CERME 9), Prague, Czech Republic. (2015).
- Research presentation, *Topics of Research in Undergraduate Mathematics Education*, Mathematics Seminar, Texas A&M University-Corpus Christi. (2014).

Research presentation, *Transforming Remedial Mathematics: Embodied Geometry*, AATM 2014 Fall Conference: Bringing the Mathematical Practices to Life, Arizona Association of Teachers of Mathematics Conference, Phoenix, AZ. (2014).

Research presentation, *New Trends in Research in Mathematics Education* Mathematics Colloquia University of Wisconsin-Stout. (2014).

Research presentation, *Student and Teacher Assessment of Problem Difficulty*, Mathematics Colloquia, University of Wisconsin-Stout. (2013).

Research presentation (paper), *The figurative method: A bridge from numerical to quantitative reasoning*, Fifth Conference on Research in Mathematics Education in Ireland, Dublin, Ireland. (2013).

Research presentation (paper), *Student and Teacher Assessment of Problem Difficulty*, National Council of Teachers of Mathematics (NCTM) Annual Conference, Denver, CO. (2013).

Research presentation (paper), *Students' Difficulties with the Cartesian Connection*, 8th Congress of European Research in Mathematics Education (CERME 8), Manavgat-Side, Antalya-Turkey. (2013).

Paper accepted for presentation, *Student Difficulties with Linear Functions and Teachers' Understanding of Student Difficulties*, World Education Research Association Focal Meeting, Taiwan. (2011).

Research presentation (research report), Workshop for teachers, *Prime the Pipeline Project: Putting Knowledge to Work*, Arizona State University. (2009).

Research presentation (research report), Annual State of the State Conference on Teacher Preparation in Arizona, Arizona State University. (2007).

Grants Writing and Activities

Participant, Faculty Research Development Program activities for grant writing, Texas A&M University - Corpus Christi. (2014-2015).

Pre-Award proposal writer, IES Teacher Quality Partnership Grant funded by IES, \$33,800,000, PI: Scott Ridley, Texas Tech University. (2008).

Pre-award proposal writer, and co-researcher, NSF Prime the Pipeline Project grant funded by NSF, \$1,350,000, PI: Carole Greenes, Arizona State University. (2008-2012).

Graduate Research Associate, Professional Development School (PDS) grant, Arizona State University, PI: Scott Ridley, Texas Tech University. (2007-2008).

Graduate Research Assistant, NSF Teacher Professional Continuum (TPC) grant, Arizona State University, PI: Patrick Thompson, Arizona State University. (2006-2007).

Curriculum Design

Designer, online mathematics courses (Foundations of Mathematics II & III, Calculus I, Evolutions of Mathematical Systems, Discrete Mathematics, College Algebra, Business Mathematics), Texas

A&M University-Corpus Christi. (2015-Present).
Member, Algebra I Team, Phoenix Union High School District, Arizona. (2000-2007).

SCHOLARLY AND CREATIVE AWARDS AND HONORS

Dean's Fellowship, Arizona State University, Mary Lou Fulton College of Education. (2007-2008).

SERVICE

University - Governors State University
Committee Member, Institutional Review Board Committee. (2021-2024).

University -Texas A&M University-Corpus Christi

Committee Member, Institutional Review Board Committee. (2016-2020).
Committee Member, High Impact Initiative Committee. (2016-2018).
Committee Member, Center for Faculty Excellence (CFE) Committee. (2015-2018).

College - College of Science and Engineering, Texas A&M University-Corpus Christi

Committee Member, College Grade Appeal Committee. (2015-2016).

Department - Mathematics & Statistics, Texas A&M University-Corpus Christi

Committee Member, Undergraduate Mathematics Major & Minor (2018-2020).
Committee Member, Search Committee Assistant Professor. (2016-2017).
Committee Member, Search Committee Visiting Professor. (2016).
Leader Calculus I Common Assessment Group. (2016).
Member, Calculus I Group (2015-2019).
Committee Member, Upper Division Mathematics Majors Committee. (2015).
Member, Mathematics Education Group. (2014-2021).

Professional

Co-Leader of the Algebraic Thinking Team TW03, 10th Congress of European Research in Mathematics Education. (2016-2017).
Reviewer (conference papers), 38th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. (2016).
Reviewer (conference papers), National Council of Teachers of Mathematics. (2013-2016).
Co-Leader of the Algebraic Thinking Team TW03, 9th Congress of European Research in Mathematics Education. (2014-2015).

Public Outreach to K-20 Students, Educators, Parents, and Community

Organizer, together with Dr. George Tintera, Professional Development Workshop for Teachers from Tuloso Midway Independent School District (Grades 4-8), Texas A&M University-Corpus Christi, April 19-20, 2018.

Partner-in-charge, Mathematics Education Partnership between Texas A&M University-Corpus Christi and Tuloso Midway Independent School District (2017-2018);

Attendee, and Exhibit Presenter, The School and University Partnership Conference for Education, Texas A&M University-Corpus Christi, Corpus Christi, Texas (2017).

Member, Innovation Advisory Board, Foy H. Moody CITGO Innovation Academy for Engineering, Environmental & Marine Sciences, Corpus Christi, Texas. (2016-2018).

Judge, 12th Annual Pathways Student Research Symposium, Texas A&M University System. (2015).

Collaborator, Updating the WeBWorK National Problem Library, NSF grant (PI: John Jones), Arizona State University. (2013).

Grand Awards Judge, Intel International Science and Engineering Fair (Intel ISEF), Society for Science & the Public. (2013).

Member, STEM Education K-12 Initiative Task Force, College of Technology and Innovation, Arizona State University. (2011).

Member, Quality Assurance Review Team, McClintock High School, Tempe Union High School District, Arizona. (2010).

Academic Chair and Member of the Site Council Ward Traditional Academy, Tempe School District, Arizona. (2006-2007).