CURRICULUM VITAE

MILÉ KRAJCEVSKI
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EDUCATION

Ph.D. in Mathematics, 1994 Binghamton University, State University of New York.
B.S. in Mathematics, 1979 (with emphasis on Mathematics Education)
St Cyril and Methodius University in Skopje, North Macedonia

POSITIONS HELD

2019-Present: Associate Professor, Department of Mathematics and Statistics
2013-2019: Assistant Professor, Department of Mathematics and Statistics, University of South Florida
2009-2013: Senior Instructor, Department of Mathematics and Statistics, University of South Florida
2008 Spring Semester: Visiting Scholar, Department of Mathematics and Applications University of Milano-Bicocca, Milano, Italy,
2000 Spring Semester: Visiting Assistant Professor, Department of Mathematics and Computer Science, Wesleyan University, Connecticut,
1995-2009: Instructor, Department of Mathematics and Statistics, University of South Florida
1988-1993: Teaching Assistant, Department of Mathematical Sciences, Binghamton University
1979-1988: Teaching Faculty, College of Natural and Mathematical Sciences, St Cyril and Methodius University in Skopje, Macedonia

AWARDS AND GRANTS

Helios STEM Middle School Residency Program Implementation Grant (PI Gladis Kersaint) 2012, Grant Partner
NSF Grant DUE-1035273, $ 1.2 million, Robert Noyce Science, Technology, Engineering and Mathematics (STEM)
Grant awarded to an interdisciplinary team of faculty from the College of Education (Gladis Kersaint as PI, Allan Feldman as co-PI) and the College Arts and Sciences (Milé Krajcevski and Jeffrey Ryan as co-PI's), from August 1, 2010, to July 31, 2015, Extended until July 2017.

USF STEM grant for creating online modules ($1,000)

USF World Faculty Travel Mobility Grant ($ 2,465)

PROMiSE, A Grant funded by the USDOE and awarded by FLDOE Mathematics and Science Partnership Initiative, in partnership with three Florida Public Universities, four large school districts, HEC, NEFEC. Grant Partner, 2009

Project ACE (Achievement through Content Experience) with Hillsborough County and Florida Department of Education, work on the design and development of professional modules to improve Mathematics content knowledge of Elementary and Middle School Teachers. Grant Partner, 2007

Internal CAS Travel Grant, for workshop on Teaching Mathematics in Colleges and Universities, AMS Meeting, Gainesville Florida, 2002

Recipient of the award for the Best Student of the year 1978 at the faculty of Natural and Mathematical Sciences, St Cyril and Methodius in Macedonia,

PUBLICATIONS

Preprints and in Preparation

Hand-drawing Modeling Mathematical Objects as Sense-Making Instrument in Pedagogical Practice (with Ruthmae Sears), submitted (2024)

Lifting Voltages in Graph Covers (joint with Natasha Jonoska and Greg McColm), submitted (2024)

Published

The Role of Visualization in Undergraduate Mathematics Contributions of the Macedonian Academy of Sciences, Section of Natural, Mathematical and Biological Sciences, 41, (2) ISSN 1857-9097, e-ISSN 1857-9949 (2020)

Common Visual Representations as a Source for Misconceptions of Pre-service Teachers in a Geometry Connection Course (with Ruthmae Sears) International Journal for Mathematics Teaching and Learning, Vol.20 (1), 85-105 (2019)

Assessing Visual Literacy Competency in Undergraduate Mathematics (with Deniz Kardes and Greg McColm) 21th Annual Conference on Research in Undergraduate Mathematics Education, San Diego, CA (2018)

On Prevalence of Images in High School Geometry Textbooks (With Megan Cannon)
Proceedings of the Second International Conference on Mathematics Textbooks, Research and Development, Rio de Janeiro, May 2017

Student's Inclination to Use Visual Images during Problem Solving (with Karen Keene)
Proceedings of the 20th Annual Conference on Research in Undergraduate Mathematics Education, San Diego, CA (2017) pp. 1273-1278.

The integration of Technology in Model Eliciting Activities to Support Mathematical Reasoning (with R. Sears, K.Butler) Dimensions in Mathematics, Vol. 37, No.2, (2017) pp.16-27

Multiple Perspectives on Collaborative Teaching: Mathematicians, Mathematics Teacher Educators, and Students (with C.Beneteau, S. Bleiler-Baxter, G. Kersaint, D. Thompson), Annual Perspectives in Mathematics Education (APME) 2017 volume, *Reflective and Collaborative Processes to Improve Mathematics Teaching.*

Navigating Co-Teaching: Perspectives from Mathematicians, Mathematics Educators, and Students (with C.Beneteau, S. Bleiler-Baxter, G. Kersaint), presentation at the 13th International Congress on Mathematical Education in Hamburg, July 2016

Traversal Languages Capturing Isomorphism Classes on Sierpinski Gaskets
(with Natasha Jonoska and Greg McColm)
UCNC Proceedings, Lecture Notes in Computer Science 9726 (2016)

Counter machines and Crystallographic Structures,
(with N.Jonoska, G.McColm) Natural Computing (2016) Vol.15, No.1 pp 97-113

Languages Associated with Crystallographic Symmetry
(with Natasha Jonoska and Greg McColm)
Lecture Notes In Computer Science 8553 (2014): 216-229.

Providing written feedback on students' mathematical arguments: proof validations of prospective secondary mathematics teachers
(with Sarah K. Bleiler and Denise Thompson)
Journal of Mathematics Teacher Education (2014) 17:105-127

Tilings and groups PROCEEDINGS, Volume xiii, Systemics, Cybernetics, Information Technologies and Applications, Orlando FL, 2003

Tilings of the Plane, Hyperbolic Groups and Small Cancellation Conditions
Memoirs of the American Mathematical Society, Number 733, 2001

TECHNICAL REPORT

Report on *Making Real World Mathematics Connections in Middle and Upper High School Mathematics Curriculum*
Report prepared for Tampa Preparatory School, Tampa, FL, (2019), 38 p.
(Joint with Ruthmae Sears and Sanghoon Park)

CONFERENCES AND INVITATIONS:
(From 2014)

2025 Joint Meetings of the Florida Section of MAA and FTYCMA, Embry-Riddle Aeronautical University, Daytona Beach, February 21-22, 2025
A picture is worth 1001 words

2024 Joint Meetings of the Florida Section of MAA and FTYCMA, Florida Gulf Coast University, February 23-24, 2024
Implementing Drawing as a Predictive and Productive Tool in Undergraduate Vector Calculus

2023 MAA MathFest, Tampa, FL August 2-5, Presentation: *Straightening the Ability to Visualize in Undergraduate Mathematics Courses Using Drawing-to-Learn Framework*

2021 Joint Meetings of the Florida Section of MAA and FTYCMA (Virtual Meeting)
Presentation: *The Role of Visualization in Undergraduate Mathematics.*

2018 Joint Mathematics Meetings, MAA Session on Innovative and Effective Ways to Teach Linear Algebra, San Diego, Jan. 10-13. Presentation: *Investigating drawing as a cognitive strategy in undergraduate linear algebra course.*

2018 Joint Meetings of the Florida Section of MAA, Florida Atlantic University, Davie Campus, February 9-10, 2018. Presentation: *Navigating mathematical formalism through visualization in Undergraduate Linear Algebra*

2017 SIGMAA – RUME Conference on Research in Undergraduate Education,
February 23-25, San Diego CA. Presentation: *Student's Inclination to Use Visual Images During Problem Solving* (with Karen Keene)

2017 The Second International Conference on Mathematics Textbook Research and Development, May 7-11, Rio de Janeiro, Brazil. Presentation: *On Prevalence of Images in High School Geometry Textbooks* (with Megan Cannon).

2017 MAA MathFest, Chicago, July 26-29. Presentation: *The Use of Drawing as a Cognitive Tool in Undergraduate Mathematics* (with Deniz Kardes). Session on Innovative Approaches on Calculus Preparation.

2016 AMS Joint Mathematics Meeting, Seattle, WA, January 5-9,
Presentation: *Students' Inclination to incorporate sketches during problem solving*
(MAA Session on the Scholarship of Teaching and Learning in Collegiate Mathematics)

2016 SIAM Conference on Mathematical Aspects of Material Science, Philadelphia, PA
May 8-12, With Gregory McColm, Jean-Guillaume Eon and Marjorie Senechal organized Mini Symposium: Mathematical Crystallography I-IV.

13th International Congress on Mathematical Education in Hamburg, July 2016.
Presentation: *Navigating Co-Teaching: Perspectives from Mathematicians, Mathematics Educators, and Students* (with C.Beneteau, S. Bleiler-Baxter, G. Kersaint), Topic Study Group 48, Pre-Service Mathematics Education of Secondary Teachers.

MAA-41st FL Suncoast Regional Meeting, St. Petersburg College-Seminole Campus, December 2, 2016. Presentation: *Prevalence of Typical Images in High School Geometry Textbooks* (with Megan Cannon, presenter)
2015 **Guest Lecturer** for the course Computational Hydraulics at the Department of Integrated Water Systems and Governance, UNESCO-IHE Institute for water Education, Delft

2015 AMS Joint Mathematics Meeting, San Antonio, TX, January 10-13
Presentation: Do typical visual representations obstruct mathematical cognition?
(MAA general Contributed Paper Session on Research in Geometry)

2015 Fall Western Sectional Meeting of AMS, Fullerton CA, October 24,
Presentation: *Pre-service Teachers' Misconceptions about Visual Representations of altitude, median and angle bisector of a triangle,* (with R. Sears)

2014 Annual Association of Mathematics Teacher Educators (AMTE) Conference, Irvine CA, February 5-8, 2014, Presentation: *Partnership to Design a Middle School Mathematics Teacher Preparation Program from the Ground Up* (Gladis Kersaint, Ruthmae Sears & Mile Krajcevski)

2014 MAA Florida Section Meeting, Fort Myers, February 21-22, 2014. Presentation:
The role of visualization in undergraduate mathematics

AMS Spring Eastern Sectional Meeting, University of Maryland, Baltimore
March 29-30, 2014, Special Session on Discrete Geometry in Crystallography.
Presentation: N. Jonoska (presenter), G. McColm, M. Krajcevski, *Crystallographic Structures and Intersection Hierarchy of Context-free Languages*

2014 Canadian Mathematical Society Summer Meeting, Winnipeg June 6-9.
Presentation: *Challenges with using visual representations in undergraduate mathematics*
(Session on Innovation and outreach in mathematics education)

UCNC 2014, July 14–18, 2014, London Ontario, Canada. Presentation: N. Jonoska, G. McColm, M. Krajcevski *Languages associated with crystallographic structures*
MAA-FL Suncoast Regional Meeting XXXIX, USF Sarasota-Manatee, December 5, 2014

PROFESSIONAL AND SERVICE ACTIVITIES

Organized AMS Special Session (jointly with Karen Keene) at 2018 Joint Mathematics Meetings, San Diego, Jan 10-13 on Visualization in Mathematics: Perspectives of Mathematicians and Mathematics Educators I & II

Organized a workshop at 2017 Joint Annual Meeting of MAA-Florida Section, State College of Florida (Bradenton) February 17-18, *Visualizing mathematical notions through freehand drawing.*

Organized Mini-Symposium (jointly with Gregory McColm, Jean-Guillaume Eon and Marjorie Senechal) Mathematical Crystallography I-IV at 2016 SIAM Conference on Mathematical Aspects of Material Science, Philadelphia, PA (May 8-12)

Member of the Publicity committee (2023-)
President of the Florida Section of Mathematical Association of America (2020-2021)
Chair of the Advisory Committee (twice, 2020,2021)
Permanent Correspondent of Florida Epsilon Chapter of Pi Mu Epsilon
Faculty Sponsor of USF Math Club
Nagle Lecture Series Committee 2004-2005, 2013-2014 (Co-Chair)
Member of the Undergraduate Committee,
Member of two Search Committees, 1999, 2000

Member of two tenure-track positions Search Committees at College of Education, Department of Secondary Education, 2011, 2012

TEACHING

Expert reviewer for the Doctoral Dissertation of Joseph Ours, Doctoral Candidate from College of Education, Department of Curriculum and Instruction with Concentration in Mathematics Education (2024)

Reviewer for the 2024 AMTE Annual Conference in Orlando, Florida (2023)

Postdocs mentored:
Deniz Kardes Birinci (2017-2018)

Master thesis mentor:
Megan Cannon (2017 with theses: Prevalence of Typical Images in High School Geometry Textbooks)

Member of the Doctoral Dissertation Committees
Sofia Hadziminadakis (College of Education (2020);
Ahmed Elsayed (Department of Mathematics & Statistics, (2020);

Tiffany C. Miller (Department of Electrical Engineering, College of Engineering (2021);
Cynthia Castro-Minnehan (College of Education (2021);
Queshonda Kudaisi (College of Education (2021);
Alexandra Green (College of Education 2024)

Chair of the Examining Committee for the Defense of a Doctoral Dissertation
Caree Pinder (College of Education (2022)
Lakesia Dupree (Department of Teaching and Learning, College of Education (2023)

Course development

I have created new graduate course MAE 5177 Teaching College Mathematics.
This course is part of the department's redesigned PhD program in Mathematics, and it is one of the core requirements for the program.
Redesigned Undergraduate course MTG 4214 Modern Geometry.
I was also involved in reshaping the content of MTG 3212 Geometry.
In 2013 I designed geometry course for middle school teachers MTG3207 Geometry Connections.

In 2009-2012 I designed a sequence of undergraduate courses under a common name **Visual Mathematics**, with idea to promote and encourage visual arguments in Undergraduate mathematics. I designed and taught three different courses in this series:
Visual Complex Analysis, **Visual Topology**, and **Visual Algebra**.

MEMBERSHIPS

American Mathematical Society,
Mathematical Association of America,
National Council of Teachers of Mathematics
Pi Mu Epsilon, National Honorary Mathematics Society