

VESNA KILIBARDA

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 Indiana University Northwest
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EDUCATION

Ph.D. Mathematics (minor: *Computer Science*)

University of Nebraska-Lincoln, 1994.

Dissertation: *On the Algebra of Semigroup Diagrams*.

Advisor: Professor John Meakin.

M.S. Mathematics, University of Nebraska-Lincoln, 1990.

M.S. Mathematics, University of Belgrade, Yugoslavia, 1985.

B.S. Mathematics, University of Belgrade, Yugoslavia, 1980.

TEACHING EXPERIENCE

Associate Professor of Mathematics, Department of Mathematics, Indiana University Northwest, 2003-present.

Courses taught: Real Analysis, Linear Algebra, Topics in Euclidean Geometry, Differential Equations, Modern Algebra, Number Theory, Foundations of the Number Systems, Bridge to Abstract Mathematics, Linear Algebra, Calculus I, II, and III, Statistics for Teachers (*hybrid and online course*), Trigonometry, Finite Mathematics (*hybrid and online course*), Mathematics for Elementary Teachers III, Basic Mathematics, Intermediate Algebra, Elementary Algebra, Extended Elementary Algebra 1. Courses taught with *TI-graphing calculators, Mathematica, Maple, The Geometer's Sketchpad, or GeoGebra*.

Assistant Professor of Mathematics, Department of Mathematics, Indiana University Northwest, 1999-2003.

Courses taught: Modern Algebra; Topics in Euclidean Geometry; Calculus I, II, III; Brief Survey of Calculus; Mathematics for Elementary Teachers I, II, III; Foundations of the Number Systems; Bridge to Abstract Mathematics, Elementary Mathematical Skills. Courses taught with *TI-graphing calculators, Mathematica, or The Geometer's Sketchpad*.

Assistant Professor of Mathematics, Department of Mathematics, University of Alaska Southeast - Juneau, 1994-1999.

Courses taught: Modern Algebra; Linear Algebra; Geometry; Calculus I, II, and III; Mathematics for Elementary School Teachers I, II; Elementary Statistics; Trigonometry; Concepts and Applications of Contemporary Mathematics; College Algebra; Intermediate Algebra; Fundamentals of Algebra. Courses taught with *TI-graphing calculators, Maple, or The Geometer's Sketchpad*.

Teaching Assistant, Department of Mathematics and Statistics, University of Nebraska-Lincoln, 1989-1994.

Courses taught: College Algebra, Precalculus, Calculus I, Multi-variable Calculus, and Calculus for Business Majors.

Teaching Assistant/Instructor, College of Philosophy - Nikšić, University Veljko Vlahović, Montenegro, Yugoslavia, 1982-1987 and 1988-1989.

Courses taught: Differential and Integral Calculus I and II.

Teaching Assistant/Instructor, Institute for Mathematics and Physics, University Veljko Vlahović, Podgorica, Montenegro, Yugoslavia, 1981-1982.

Courses taught: Modern Algebra and Linear Algebra.

ADMINISTRATIVE EXPERIENCE

Chair of the Department of Mathematics and Actuarial Science, Indiana University Northwest, Summer Session II, 2012,2013,2014.

Acting Associate Chair of the Department of Mathematics and Actuarial Science, Indiana University Northwest, Fall 2010.

Chair of the Department of Mathematics and Actuarial Science, Indiana University Northwest, 2005-2008.

Interim Associate Vice Chancellor for Academic Affairs, Indiana University Northwest, 2004-2005.

FELLOWSHIPS, AWARDS, AND HONORS

IU Northwest Undergraduate Research Fund for student Elise Correa, for the project "Platonic Solids in the World of Viruses," **\$550, 2013**.

IU Northwest Men's Basketball Recognition for my contribution, support, and positive influence to the university and to our student-athletes, **2013**.

Trustee Teaching Award, **\$2500**, IU Northwest, **2012**.

Geometry meets Algebra, workshop presented at the College of Philosophy - University of Montenegro, **Euro 1300**, Brain Gain Fellowship, World University Service-Austria, 2011.

Trustee Teaching Award, **\$2500**, IU Northwest, 2010.

When Math Theorems Become Tricks by Holly A. Krippel, Louis Stokes Alliances for Minority Participation Student Grant, **\$1200**, 2010.

Faculty Colloquium of Excellence in Teaching/FACET, Indiana University, 2005.

Trustee Teaching Award,**\$2500**, IU Northwest, 2004.

Undergraduate Research Award,(with Jason McGee, a student), **\$1200**, IU Northwest, 2004.

COAS Dean's Award for Distinction in Research and Creativity, **\$500**, IU Northwest, 2003.

Trustee Teaching Award,**\$2500**, IU Northwest, 2002.

Indiana University Founder's Day Teaching Award, IU Northwest, **\$2500**, 2002.

Faculty Summer Fellowship for Research, IU Northwest, **\$5000**, 2002.

Faculty Summer Fellowship for Research, IU Northwest, **\$5000**, 2001.

Nominee for the Founder's Day Teaching Award, IU Northwest, 2001.

Faculty Summer Fellowship for Research, IU Northwest, **\$5000**, 2000.

Outstanding Graduate Student Award, University of Nebraska-Lincoln, 1991.

Fulbright Scholar, University of Nebraska-Lincoln, 1987-1988.

Outstanding Undergraduate Student Scholarship,Teacher's College, Nikšić, Yugoslavia 1978-1980.

PUBLICATIONS

V. Kilibarda, V. Maltcev, and S. Craik, *Ends for Subsemigroups of Finite Rees Index and Finite Green Index in Semigroups*, submitted to Semigroup Forum.

S. Craik, R. Gray, V. Kilibarda, V. Maltcev, J. Mitchell, N. Ruskuc, *Ends of Semigroups*, submitted to Semigroup Forum.

V. Kilibarda, *Five Pointed Stars and Escher's Reptile Drawing Through Course Management System with Sketchpad*, Proceedings of the Twenty First Annual International Conference on Technology in Collegiate Mathematics, Addison-Wesley, (2010) 188-192.

D. A. Jackson, V. Kilibarda, *Ends for Monoids and Semigroups*, J. Aust. Math. Soc. **87** (2009) 101-127.

V. Kilibarda, *Bungee Jumping and Murder Investigations using Maple and Oncourse in Differential Equations Class*, Proceedings of the Twentieth Annual International Conference on Technology in Collegiate Mathematics, Addison-Wesley (2009) 123-128.

V. Kilibarda, *Coset Decomposition of Positively Self-Conjugate Inverse Submonoids of Polycyclic Monoids*, Semigroup Forum, Vol. 66 (2003) 151-161.

V. Kilibarda, *Transformations and Analytic Geometry with Geometer's Sketchpad and Java Sketchpad*, Proceedings of the Thirteenth Annual International Conference on Technology in Collegiate Mathematics, Addison-Wesley, (2000) 197-202.

V. Kilibarda, *Teaching with Geometer's Sketchpad*, Proceedings of the Twelfth Annual International Conference on Technology in Collegiate Mathematics, Addison-Wesley, (1999) 190-195.

V. Kilibarda, *Statistical Thinking and Active Learning with TI-Graphing Calculators*, Proceedings of the Eleventh Annual International Conference on Technology in Collegiate Mathematics, Addison-Wesley, (1998) 230-234.

V. Kilibarda, *On Algebra of Semigroup Diagrams*, The International Journal of Algebra and Computation, Vol.7, No.3 (1996) 313-338.

V. Kilibarda, *The Group Congruencies on some Classes of Inverse Semigroups*, The Proceedings of Teacher's College, Nikšić, **9** (1986) 273-277 (in Serbo-Croatian).

V. Kilibarda, *On some Congruencies on Factorizable Semigroups*, The Proceedings of Conference on Algebra and Logic, Zagreb (1984) 69-74.

WORK IN PROGRESS

A. Coffman, J. Gash, V. Kilibarda, J. Rickert, *Indiana Collegiate Mathematics Competition Solutions*, book manuscript to be submitted to Mathematical Association of America

V. Kilibarda, C. Wiles, *Gender Differences in Mathematics Achievement: Perspectives from a State Contest*, to be submitted.

V. Kilibarda, *A Tale of Two Course Approaches*, to be submitted.

GRANTS

Co-Principal Investigator for NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) Proposal "Advancing Indiana Math and Science," \$620,973, submitted in August 2013. (with B.R. Kopparty, K. Huysken, and M. LaPointe)

Distance Learning Course Development Grant, \$4000, IU Northwest, 2012.

Co-Principal Investigator for NSF STEM-Disciplines Scholarship Proposal "Great Lakes Power Scholarships," \$600,000, submitted in August **2012**. (with K. Huysken and M. LaPointe)

Distance Learning Course Development Grant, \$4000, IU Northwest, 2010

CETL Grant, IU Northwest, \$500, 2007. (with B. Vajiac and D. Dodson)

Center for Regional Excellence Grant, IU Northwest, \$1600, 2006. (with B. Vajiac and H. Wyzinski)

General Education Course Development Grant, IU Northwest, \$4000, 2006.(with S. Pudar-Hozo and H. Wyzinski)

IU Ameritech Fellows Program Grant , Ameritech, \$13000, 2000. (with G. M. Besana)

Statistical Thinking and Teaching Statistics, NSF funded grant for MAA, Colorado State University, Ft. Collins, 1995.

CONFERENCE PAPERS, PANEL DISCUSSIONS, WORKSHOPS

Solving Applications in Business, Life Sciences, and Transportation using Excel and Java Applets, AMS-MAA Joint Mathematics Meetings, Baltimore, **2014**.

Explorations in Topology, a presentation by student Lyndee Govert, COAS Student Research Conference, IU Northwest, **2014**.

Pseudosphere and Tractrix, a presentation by student Victor Martinez, COAS Student Research Conference, IU Northwest, **2013**.

Solving Applications in Business, Life Sciences, and Transportation using Excel and Java Applets, New Teaching Institute, IU Northwest, **2013**.

Cardio Fun with GeoGebra, Professional Development Workshop for Dual credit Teachers, IU Northwest, **2013**.

Geometry for Prospective Mathematics Teachers, AMS-MAA Joint Mathematics Meetings, San Francisco, **2012**.

Ends of Semigroups, Special Session of AMS on Algorithmic and Geometric Properties of Groups and Semigroups, with S. Craik, R. Gray, V. Maltcev, J. Mitchell, N. Ruskuc, Lincoln, NE, **2011**.

Geometry meets Algebra, workshop presented at the College of Philosophy - University of Montenegro, June 06-10, 2011.

Math/Science faculty speaker for the CISTL workshop *Students Talk With Faculty About What Helps Them Learn*, 2011.

Assessment of Mathematical Reasoning Courses, AMS-MAA Joint Mathematics Meetings, San Francisco, **2010**.

Using Technology in the Mathematics Classroom, Panel Discussion , Indiana Section of Mathematical Association of America Spring Meeting, Franklin College, **2010**.

Mathematics PRAXIS II - Deep Understanding of Simple Concepts, Indiana MAA Meeting, IUPUI, **2009**.

Ends for Semigroups and Monoids, North British Semigroups and Applications Network Meeting, St Andrews, UK, **2009**.

Mathematics PRAXIS II - Deep Understanding of Simple Concepts, Indiana MAA Meeting, IUPUI, **2009**. (with D. Dodson and B. Vajiac)

What Impacts the Success of Students in Mathematics General Education Class for Liberal Arts? Indiana Mathematical Association of America Spring Meeting, Indianapolis, **2007**. (with S. Pudar-Hozo and H. Wyzinski)

Impact of Prerequisites on Success of Students in Mathematics General Education Classes, College of Arts and Sciences 3rd Annual Research conference, **2006**. (with S. Pudar-Hozo and H. Wyzinski)

Ends for Monoids and Semigroups, Geometric Methods in Group Theory and Semigroup Theory, Fall Central Sectional Meeting of the AMS, Lincoln, Nebraska, **2005**. (with Dr. D.A. Jackson)

Gender Differences in Mathematics Achievement: Perspectives from a State Contest, College of Arts and Sciences 2nd Annual Research conference, **2005**. (with Dr. Clyde Wiles)

Ends for Monoids and Semigroups, Zassenhaus Group Theory Conference, Montgomery, Alabama, **2005**. (with Dr. D.A. Jackson)

Gender Differences in Mathematics Achievement: Perspectives from a State Contest, NCTM Annual Meeting, Philadelphia, **2004**. (with Clyde Wiles)

Discovering geometry in collaborative groups using Geometer's Sketchpad, AMS-MAA Joint Mathematics Meetings, Phoenix, **2004**.

Geometer's Sketchpad and Power Point: Involving art in projects by pre-service high school teachers, the 16th Annual International Conference on Technology in Collegiate Mathematics, Chicago, **2003**. (with three IUN students: Larry Hautzinger, May Lee, and Nicole Nigh)

The impact of problem-based learning in the teaching of geometry on pre-service elementary teachers, AMS-MAA Joint Mathematics Meetings, Baltimore, **2003**. (with G.M. Besana and M. Fries)

The Implementation of Dynamic Geometry Software in a Problem-Based Learning and Academic Service Learning Environment, Ameritech Fellows Summer Forum Showcases Technology in Teaching, Bloomington, 2002.

The Implementation of Dynamic Geometry Software in a Problem-based Learning and Academic Service Learning Environment, Indiana MAA Meeting, Anderson, 2002.

Learning to prove in a Problem-based Learning Environment, AMS-MAA Joint Mathematics Meetings, San Diego, 2002. (with G.M. Besana)

Geometer's and Java Sketchpad in a Problem-based Learning Environment, Fourteenth Annual International Conference on Technology in Collegiate Mathematics, Baltimore, 2001. (with G.M. Besana)

Dynamic Geometry Software in the Classroom, the workshop for Indiana High School Teachers, 2001. (with G.M. Besana)

The Implementation of Dynamic Geometry Software in a Problem-based Learning Environment, invited lecture at Saint Louis University, 2001.

Diagram Groups, invited lecture at Saint Louis University, 2001.

Square Dance, the workshop for Northwest Indiana High School Students attending the IUN Annual Calculator Tournament, 2001. (with G.M. Besana)

Classroom Demonstrations and Course Projects that Make a Difference, AMS-MAA Joint Mathematics Meetings, New Orleans, 2001.

Computer Minicourse *Geometer's Sketchpad and Java Sketchpad*, Thirteenth International Conference on Technology in Collegiate Mathematics, Atlanta, 2000.

Diagram Groups, invited lecture at Indiana State University, Terre Haute, 2000.

Computer Minicourse *Teaching with Geometer's Sketchpad*, Twelfth Annual International Conference on Technology in Collegiate Mathematics, San Francisco, 1999.

Assessment Innovations in Mathematics Education, the Second Annual Indiana Faculty Development Conference, Indianapolis, 1999.

Calculator Minicourse *Statistical Thinking and Active Learning with TI-Graphing Calculators*, Eleventh Annual International Conference on Technology in Collegiate Mathematics, New Orleans, 1998.

Innovations in Teaching Geometry, Education Session of Centennial Celebration of the Math Department, University of Nebraska-Lincoln, 1998.

Creativity and Technology in Student Projects, AMS-MAA Joint Mathematics Meetings, San Diego, 1997.

Students' Retention in the Light of Calculus Reform, AMS-MAA Joint Mathematics Meetings, Orlando, 1996.

Algebra of Semigroup Diagrams, AMS-MAA Joint Mathematics Meetings, Cincinnati, 1994.

PROFESSIONAL DEVELOPMENT

Indiana Signature Assignment Workshop, Indianapolis, **2014**.

9th Annual Hoosier Math Conference, Indianapolis, **2014**.

8th Annual Hoosier Math Conference, Indianapolis, **2013**.

Online Teaching Class, CISTL, **2012**.

Spring Meeting of the Indiana Section of MAA, Ball State University, **2012**.

7th Annual Hoosier Math Conference, Indianapolis, **2012**.

Spring Meeting of the Indiana Section of MAA, Indiana Wesleyan University, 2011.

6th Annual Hoosier Math Conference, Indianapolis, 2011.

Fall Meeting of the Indiana Section of MAA, University of Indianapolis, 2011

ACADEMIC SERVICE

Chair of the IU Northwest General Education/Assessment Committee, 2011-present.

Referee for *Semigroup Forum*, 2014

Teaching Nomination Committee of Indiana Section of the MAA, 2012-2016

Founders Day Teaching Award Committee, 2014.

Admissions Committee, 2014

FACET Campus Review Committee, 2010-present.

COAS Curriculum Committee, 2010-present.

Referee for *JoSoTL*, 2008-present.

MAA departmental liaison, 2001-present.

Math Club advisor, 2000-present

COAS P&T Committee, 2013.

Budget Committee, 2008-2013.

Chair of the Departmental P&T Committee, 2012.
Past Chair of the Executive Board of Indiana Section of the MAA, 2011-2012.
Referee for Journal Sains Malaysiana, 2012
Chair of the IU Northwest Founders Day Teaching Committee, 2011-2012.
 Reviewer and Scientific Committee member of North American GeoGebra Conferences, 2009-2012.
 Ivy Tech Advisory Board on General Education, 2006-2012.
 Board of Trustees Teaching Committee, 2011.
 COAS Promotion and Tenure Committee, 2011.
 Search Committee for Mathematics Program Coordinator, 2011
Chair of the Executive Board of Section of the Indiana MAA, 2010-2011.
Chair, Search Committee for Assistant Professor of Mathematics, 2010-2011
Co-Chair of the IU Northwest General Education/Assessment Committee, 2005-2011.
Vice Chair of the Executive Board of Indiana Section of the MAA, 2009-2010.
Chair, Search Committee for Assistant Professor of Mathematics, 2009-2010.
 COAS Promotion and Tenure Committee, 2009.
 COAS Promotion and Tenure Committee, 2006.
 University Workshops for Gifted Youth, 2006.
State Coordinator ICTM Indiana State Math Contest Coordinator, 2004-2006.
Algebra II test writer for the ICTM Indiana State Mathematics Contest 2000-2006.
 University Workshops for Gifted Youth, 2005.
Chair, Board of Trustees Teaching Committee, 2004-2005.
 Board of Trustees Teaching Committee, 2004.
 COAS Promotion and Tenure Committee, 2004.
 ICTM Indiana State Mathematics Contest site organizer, 2000-2004.
Tests writer and Sharing Solutions session leader for grades 11/12, IUN Annual Calculator Tournament, 2004.
 Indiana Section of the MAA nominating committee, 2002-2004.
Reviewer for the Indiana University program of Ameritech Fellows, 2003.
 Board of Trustees Teaching Committee, 2003.
Chair of the COAS Promotion and Tenure Committee, 2003.
 IUN Vision Task Force Campus Climate: Classrooms that are fully conducive to teaching and learning, 2000-2003.
Host Institution Principal Organizer for the Fall 2002 Meeting of Indiana Section of Mathematical Association of America, IUN, 2002.
 Library Committee, 2001/2002.
 University Workshops for Gifted Youth, 2001.
Tests writer for grades 9/10 and 11/12, IUN Annual Calculator Tournament, 2001.

Reviewer for the new addition of the calculus textbook *Calculus 7e* by Howard Anton, 1999-2001.

University Workshops for Gifted Youth, 2000.

Tests writer for grades 9/10 and 11/12, IUN Annual Calculator Tournament, 2000.

Principal Organizer for the session, Innovations in Teaching Abstract Algebra, at the AMS-MAA Joint Mathematics Meetings, San Antonio, 1999.

Referee for *Mathematics and Computer Education* journal, 1998-1999.

Referee for *PRIMUS* journal, 1998-1999.

Teaching, Learning, Technology Round Table, University of Alaska Southeast - Juneau, 1998-1999.

Faculty Reader for the BLA Writing Portfolios, University of Alaska Southeast - Juneau, 1997-1998.

Lecturer at the Annual AP Calculus Retreat for Juneau-Douglas High School, Juneau, 1995-1999.

Participant in *Eisenhower Grant for Improving Secondary Mathematics*, Juneau-Douglas High School/University of Alaska Southeast - Juneau, 1994-1997.

Quantitative Competency Workshop, Convocation at the University of Alaska Southeast - Juneau, 1997.

Change Agent for Student Assessment, University of Alaska Southeast - Juneau, 1995-1996.

Partnership for Active Learning, University of Alaska Southeast - Juneau, 1995-1996.

PROFESSIONAL SOCIETY MEMBERSHIP

Mathematical Association of America (1994-present)

American Association of University Professors (1998-present)

American Mathematical Society (1992-2001 and 2013-present)

Association for Women in Mathematics (1992-2000)

REFERENCES

Professor Iztok Hozo, Department of Mathematics and Actuarial Science, Indiana University Northwest, 3400 Broadway, Gary, IN 46408-1197 (219) 980-6980.

Professor John Meakin, Department of Mathematics and Statistics, University of Nebraska-Lincoln, 810 Oldfather Hall, Lincoln, NE, 68588-0323 (402) 472-3731.

Professor Bhaskara Rao Kopparty, Department of Computer Information Systems, Indiana University Northwest, 3400 Broadway, Gary, IN 46408-1197 (219) 980-6977.