

# Violeta Vasilevska

## CURRICULUM VITAE

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### Education

*Ph.D. in Mathematics*

The University of Tennessee, Knoxville, TN, 2004  
Dissertation: *Fibrator Properties of PL Manifolds*  
Advisor: Dr. Robert J. Daverman

*M.S. in Mathematics*

Sts. Cyril and Methodius University, Skopje, Republic of Macedonia, 1998  
Thesis: *Two Approaches to Proper Shape Theory—by Proper Fundamental Nets and Inverse Systems*  
Advisor: Dr. Nikita Shekutkovski

*B.S. in Mathematics*

Sts. Cyril and Methodius University, Skopje, Republic of Macedonia, 1992  
Bachelor Thesis: *Presentations of Groups and Cayley Graphs*  
Advisor: Dr. Dončo Dimovski

### Academic Positions

*Associate Professor*, Utah Valley University (UVU), 2013–present

*Assistant Professor*, Utah Valley University (UVU), 2010–2013

*Assistant Professor*, The University of South Dakota (USD), 2004–2010

*Visiting Assistant Professor*, IMMERSE (Intensive Mathematics: A Mentoring, Education and Research Summer Experience), The University of Nebraska–Lincoln (UNL), 2009

*Graduate Teaching Fellow*, The University of Tennessee–Knoxville (UTK), 2000–2004

*Graduate Teaching Assistant*, Sts. Cyril and Methodius University (Sts.C&M)  
(Faculty of Natural Sciences and Mathematics), 1993–1999

### Leadership Roles for Women in Math

*Director of the Math Girls Rock! Program*, UVU, 2011–present  
([www.uvu.edu/math/mgr/](http://www.uvu.edu/math/mgr/))

*Director of the USD Math Days for Women Program*, USD, 2007–2010

### Research Interests

Graph Theory  
Geometric/Algebraic Topology  
(Geometric) Group Theory  
Math, Art, and Origami  
Women and Math Studies

## Publications

- Research Articles**
- K. F. Benson, D. Ferrero, M. Flagg, V. Furst, L. Hogben, V. Vasilevska, “Note on Nordhaus-Gadum Problems for Power Domination,” (submitted, 2016) (<https://arxiv.org/abs/1610.03115>).
- K. F. Benson, D. Ferrero, M. Flagg, V. Furst, L. Hogben, V. Vasilevska, B. Wissman, “Zero Forcing and Power Domination for Graph Products,” (submitted, 2016) (<https://arxiv.org/abs/1510.02421>).
- D. Adams, D. Gulbrandsen, V. Vasilevska, “Investigating Properties of the Integers with Infinite Generating Sets,” *Mathematics Exchange*, Vol. 10, No. 1 (2016), 40-50.
- V. Vasilevska, “Homology  $n$ -Spheres as Codimension- $(n+1)$  Shape  $m_{\text{simple}}$ -Fibrators,” *Topology Appl.*, 155 (2008), 1140–1148.
- V. Vasilevska, “Special Manifolds and Shape Fibrator Properties,” *Topology Appl.*, 153 (2006), 2765–2781.
- N. Shekutkovski, V. Vasilevska, “Equivalence of Different Definitions of Space of Ends,” *God. Zb. Inst. Mat. Prir.-Mat. Fak. Univ. Kiril Metodij Skopje*, 39 (2001), 7–13.
- N. Shekutkovski, V. Vasilevska, “Two Approaches to Proper Shape Theory,” *Mat. Bilten*, No. 21 (1997), 51–66.
- Educational Research Articles**
- N. Benaki, J. Debnath, T. Magnus, V. Vasilevska, “(De)Encrypting with KidRSA? No KidING! Using mathematics to Keep Communication Private,” (submitted, 2017).
- M. A. Karim, V. Vasilevska, “Having Fun with Graph Theory and Forensics: CSI Fingerprint Analysis - Whose Fingerprint is this one?,” *CCICADA module series*, (2015), (<http://ccicada.org/wp-content/uploads/2015/06/Karim-and-Violeta-Module-for-Reconnect-2014-FINAL-4.pdf>).
- C. McBee, V. Vasilevska, “Information for Faculty New to Undergraduate Research,” *Special Issue of Involve: Trends in Undergraduate Research in the Mathematical Sciences (Chicago, 2012)*, Vol. 7, No. 3 (2014), 395–401.
- V. Vasilevska, “Ceva’s Theorem,” *Utah Mathematics Teacher*, 2013.
- V. Vasilevska, C. Wagner, “Winning High School Women’s Heart and Minds,” *Focus*, Vol. 31, No. 3 ( June/July 2011), 23–24.
- V. Vasilevska, “The Power of a Point with Respect to a Circle,” *Sigma*, Skopje, 45, Vol. 21, No. 1 (1999–2000), 7–10.
- V. Vasilevska, “The Honeybee–‘Mathematician,’” *Sigma*, Skopje, 43, Vol. 20, No. 2 (1998–1999), 65–68.
- Book**
- L. Babinkostova, V. Vasilevska, “Regional and State’s Olympiad Problems in Mathematics for High School Students from the Period of 1988–1997,” *Faculty of Natural Sciences and Mathematics, Skopje, Republic of Macedonia* ( 1999).
- Projects in Progress**
- V. Vasilevska, “Engaging Students as Math Researchers,” (in preparation for submission)
- L. Vasilevska, V. Vasilevska, “Playing with Continuous Fractions,” (work in progress)
- S. Nyhus, V. Vasilevska, “Conic Sections, Origami, Art and GeoGebra,” (work in progress)
- C. Hamilton, S. Nyhus, V. Vasilevska, “Investigating the Effect of After-school Programs on High School Students Attitude Toward Mathematics,” (work in progress).

## Awards

*Outstanding Teaching Award*, awarded from the Intermountain MAA Section to recognize Distinguish College and University Teaching of Mathematics, Spring 2017

*2016 Champion of Inclusion Award for a faculty member*, Spring 2016

*2<sup>nd</sup> Place Faculty Poster*, UVU Engaged Learning Week, Spring 2016

*Faculty Senate Excellence Award*, Spring 2015

*Wolverine Achievement Award (Distinguished Volunteer Service)*, UVU, Spring 2014

## Honors and Recognitions

*Recognition during the Hoagies with Holland 2016*, recognizing the work on the outreach program *Math Girls Rock!* and the Inclusion award, Spring 2016

*Article in the UVU Review*, recognizing the work on the outreach program *Math Girls Rock!*, March 2015

*Recognition during the Presidential State of University Address 2015*, recognizing the work on the outreach program *Math Girls Rock!*, February 2015

*MAA Outstanding Presentation Award*, awarded to my students at MAA Math Fest, August 2014

*Recognition during the Presidential State of University Address 2015*, for my students' award, February 2015

*Presidential Engagement Award*, nominated (not received)

*Faculty Center/OTL Certificate of Accomplishment*, Learning Circle, Spring 2017, Spring 2015, Spring 2013, Fall 2012, Fall 2011, Spring 2011

*Certificate of Appreciation*, South Dakota Alpha Pi Mu Epsilon Chapter, April 21, 2010

*Nebraska IMMERSE–Early Career Faculty*, UNL, Summer 2009

*Administration Recognition for USD Math Days for Women*, USD Office of Research, 2009

*Certificate of Appreciation*, USD Math Club, April 10, 2006

*National Project NExT (New Experiences in Teaching) Fellow*, Summer 2005–Summer 2006

*Pi Mu Epsilon Member*, South Dakota Alpha Pi Mu Epsilon Chapter, April, 2005

*Center of Excellence (Science Alliance Fellowships)*, UTK, TN, 2001–2004

*SARIF (Scholarly Activity and Research Incentive Funds) Summer Graduate Research Fellowship* UTK, TN, Summer 2002

*Honored Student Award (Most Outstanding Graduate)*, Sts.C&M, R. of Macedonia, 1992

## Teaching Experience

### Utah Valley University

College Algebra (MATH 1050) (traditional & hybrid (flipped classroom))

Calculus I & II (MATH 1210 & MATH 1220)

Foundations of Geometry (MATH 3100)

Foundations of Analysis (MATH 3200)

Foundations of Abstract Algebra (MATH 3300)

Foundations of Topology (MATH 3500)

Introduction to Modern Algebra I & II (MATH 4310 & MATH 4320)

Advanced Calculus I & II (MATH 4210 & MATH 4220)

### The University of South Dakota

Calculus I & II

Modern Geometry

Linear Algebra (undergraduate/graduate level course)

Combinatorics (undergraduate/graduate level course)

Abstract Algebra I & II (undergraduate/graduate level course)

Introduction to Topology (graduate level course)

### IMMERSE (The University of Nebraska–Lincoln)

Co-designed and co-taught a graduate-level course:

Abstract Algebra (for pre-grad students)

(The course was based on a paper by P. J. Cahen, J. L. Chabert, “Elasticity for Integral-Valued Polynomials,” *J. of Pure and Applied Algebra* 103 (3) (1995) 303-311.)

### The University of Tennessee–Knoxville

Calculus I & II (for math and science major students)

Statistical Reasoning (for not-math major students)

Finite Mathematics

### Sts. Cyril and Methodius University

Mathematical Analysis I

General Topology

Algebraic Topology

Analytic Geometry

Methodology of Teaching Mathematics

Calculus I & II

## Selected Teaching/Outreach and Research Grants (Received and Submitted)

### Selected Examples of Teaching/Outreach-Related Grants Received/Submitted

- Extramural Grants**
- NSF INCLUDES: Design & Development Launch Pilots: UTAH PREP.**  
*Co-PI. Organization: NSF (2016-2018). Funded: \$300,000.*
- Grant to attend and present at 2016 Circle on the Road Conference.**  
*Organization: Circle on the Road Conference (through various grants). Funded: \$500.*
- 2013 TENSOR–MAA Small Grant–to Encourage Women and Girls**  
*Principal Investigator. Organization: MAA/Tensor Foundation. Funded: \$6,000.*
- 2012 Conference on Trends in Undergraduate Research in the Mathematical Sciences**  
*Organization: MAA. Fully funded.*
- 2012 TENSOR–MAA Small Grant–to Encourage Women and Girls**  
*Principal Investigator. Organization: MAA/Tensor Foundation. Funded: \$6,000.*
- Institute for Advanced Study/Park City Mathematics Institute (IAS/PCMI) Three Week Summer Program 2012**  
*Organization: NSF (through IAS/PCMI). Partially funded.*
- 2011 TENSOR–MAA Small Grant–to Encourage Women and Girls**  
*Principal Investigator. Organization: MAA/Tensor Foundation. Funded: \$6,000.*
- Women Count Travel Grant**  
*Organization: National Security Agency and Tensor Foundation. Funded: \$450.*
- Intramural Grants**
- 2016 GEL Seed Grant**  
*Organization: Office of Engaged Learning, UVU. Funded: \$6,998.*
- 2016 UVU Math Initiative Grant**  
*Organization: Math Initiative, UVU. Funded: \$3,840.*
- 2015 UVU Math Initiative Grant**  
*Organization: Math Initiative, UVU. Funded: \$4,700.*
- 2015 GEL Seed Grant**  
*Organization: Office of Engaged Learning, UVU. Funded: \$8,860.*
- 2014 GEL Seed Grant**  
*Organization: Office of Engaged Learning, UVU. Funded: \$9,110.*
- 2012 GEL Quick Grant**  
*Organization: Office of Engaged Learning, UVU. Funded: \$2,250.*
- 2011-2016 Faculty Supplemental Travel Grant.**  
*Organization: Faculty Center, UVU. Funded: \$600–800 each year.*

## Selected Examples of Research Grants Received

### Extramural Grants

#### Summer REUF-2017 Continuation Grant.

*Organization:* NSF through AIM.

*Event:* Summer Research Collaboration, Ames, IA, July 3–7, 2017. *Funded:* Fully funded.

#### 2017 CCICADA Summer Reconnect Grant

*Organization:* DHS. *Funded lodging, partial travel, and most of the meals.*

*Event:* CCICADA Reconnect 2017 Workshop: Mathematical and Computational tools for Energy Efficiency and Reliability of Data Centers and the Electrical Grid – Individual Interests vs. the Common Good, Appalachian State University, Boone, NC, June 11–17, 2017.

#### PIC Math on Data Analytics Grant

*Organization:* MAA and SIAM (Through NSF grant)

*Event:* PIC Math Workshop on Data Analytics, Brigham Young University, Provo, UT May 29–June 2, 2017. *Fully funded.*

#### 2016 CCICADA Summer Reconnect Grant

*Organization:* DHS. *Funded lodging and most of the meals.*

*Event:* CCICADA Reconnect 2016 Workshop: Cyber Security, U.S. Military Academy, West Point, NY, June 12–18, 2016. *Funded lodging and most of the meals.*

#### Summer REUF-2016 Continuation Grant.

*Organization:* NSF through AIM. *Funded:* Fully funded.

*Event:* Summer Research Collaboration (through Skype), July 24–28, 2016.

#### NSF-AIM (REUF) Grant

*Organization:* NSF through AIM.

*Event:* Workshop: Research Experience for Undergraduate Faculty, Providence, RI, July 20–24, 2015. *Funded:* Fully funded.

#### 2014 CCICADA Summer Reconnect Grant

*Organization:* DHS.

*Event:* CCICADA Reconnect 2014 Workshop: Forensics, Massachusetts Maritime Academy Buzzards Bay, MA, June 1–7, 2014. *Funded lodging, meals and partially travel.*

#### 2014 RUMC Grant

*Organization:* MAA and NSF. *Funded:* \$1,650

#### 2013 CURM (Center for Undergraduate Research in Mathematics) Mini-Grant

*Organization:* CURM-BYU. *Funded:* \$15,000+.

### Intramural Grants

#### 2016 SAC Grant

*Organization:* College of Science and Health, UVU.

*Event:* ICME-13, Hamburg, Germany, July 24–31, 2016. *Funded:* \$2,000.

#### 2015 SAC Grant

*Organization:* College of Science and Health, UVU. *Funded:* \$5,871.

*Event:* Effects of Math After-School Programs on High School Female Students, UVU.

#### 2014 GEL Quick Grant

*Organization:* Office of Engaged Learning, UVU.

*Event:* MathFest 2014, Portland, OR, August 6–9, 2014. *Funded:* \$1,500.

#### 2014 GEL Quick Grant

*Organization:* Office of Engaged Learning, UVU.

*Event:* Undergraduate Research in Mathematics, UVU, 2014–2015. *Funded:* \$2,500.

## Selected Teaching- and Research-Related Presentations

### Selected Teaching-Related Presentations

*Note:* \* indicates invited presentation.

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| <b>International/<br/>National<br/>Presentations</b> | <p><b>Engaging Women in Extracurricular Math Activities.</b><br/>Joint Mathematics Meetings, Atlanta, GA, January 4–7, 2017.</p> <p><b>Assessing the Impact of an After-School Math Program for Girls.</b><br/>Circle on the Road Conference, New York, NY, October 28–30, 2016.</p> <p><b>Math Forensics Conference for High School Students.</b><br/>MathFest, Columbus, OH, August 3–6, 2016.</p> <p>* <b>Popularizing Math Through Outreach Programs for Young Women.</b><br/>13<sup>th</sup> International Congress on Mathematical Education, Hamburg, Germany, July, 2016.</p> <p><b>The Effect of Math-Art Projects on High School Students' Attitude toward Mathematics.</b> International Conference for Academic Disciplines, Venice, Italy, June, 2016.</p> <p><b>Math in Action: Solving Crimes.</b><br/>Joint Mathematics Meetings, Seattle, WA, January 6–9, 2016.</p> <p><b>Math Girls Rock!</b>, “Mathematical Outreach Programs for Underrepresented Populations,”<br/>Poster presentation, Joint Mathematics Meetings, Seattle, WA, January 6–9, 2016.</p> <p>* <b>The Math Behind Origami Folds.</b> MoSAIC, Lincoln, NE, November 14–15, 2015.</p> <p>* <b>Fun with Math and Origami.</b><br/>2 Workshop presentations, MoSAIC, Lincoln, NE, November 14–15, 2015.</p> <p><b>Enhancing High School Girls' Education through Technology.</b><br/>International Conference: Women of the Mountain Conference, Orem, UT, October 8, 2015.</p> <p><b>Engaging Students in a Flipped College Algebra Course.</b><br/>R. L. Moore Conference, Austin, TX, June 25–27, 2015.</p> <p><b>Hands-on Math Activities that Engage Girls in Math, Science, and Art.</b> Poster presentation, &amp; <b>Intersection of Math, Origami, Teaching, and Art.</b><br/>2015 S.T.E.A.M. Education Conference, Honolulu, HI, June 13–15, 2015.</p> |
| <b>Regional/<br/>Local<br/>Presentations</b>         | <p><b>Info on Starting a New Outreach Program.</b><br/>Intermountain MAA Section Meeting, Weber State University, Ogden, UT, 2017.</p> <p><b>Enhancing the College Algebra Classroom.</b><br/>T4L Conference: Soaring to New Heights, UVU, Orem, UT, March 30–31, 2017.</p> <p>* <b>MATH + ORIGAMI <math>\Rightarrow</math> The Odds are Always in Favor of FUN.</b><br/>3 Workshop presentations, SheTech Explorer Day, UVU, Orem, UT, March 3, 2017.</p> <p><b>Peculiar (but FUN) ways to multiply integers.</b><br/>Department of Mathematics Seminar, UVU, February 17, 2017.</p> <p>*<b>Graphs Change Live - for REAL?</b> PREP, UVU, Orem, UT, June 23, 2016.</p> <p><b>Flipping the College Algebra Classroom.</b><br/>2016 MAA Intermountain &amp; Rocky Mountain Section Meeting, Grand Junction, CO, 2016.</p> <p><b>Applications of Math in Forensics Science.</b> SoTE, UVU, Orem, UT, 2016.</p> <p><b>Activities that Spark Student Interest in STEM.</b><br/>Engaged Learning Week, UVU, Orem, UT, March 28–31, 2016.</p>  |

Invited Research Presentations

- International/National Presentations**
- Comparing the Large Scale structure of Cayley Graphs of the Group of Integers.**  
Joint Mathematics Meetings, Atlanta, GA, January 4–7, 2016.
- Hopfian Manifolds as Shape  $m_{\text{simpl}}$  Fibrators.**  
AMS Sectional Meeting, Knoxville, TN, March 21–23, 2014.
- Introduction to Rewriting Systems**  
Group/Semigroup/Topology Seminar, Department of Mathematics,  
University of Nebraska–Lincoln, Lincoln, NE, 2013.
- Approximate Fibrations and Codimension-2 Fibrators**  
Topology Seminar, Department of Mathematics, University of Split, Split, Croatia, 2011.
- Regional/Local Presentations**
- Origami Applications in Math and Sciences.**  
Department of Physics, UVU, March 4, 2014.
- Math-Origami Applications.**  
NSF Scholar Roundtable, Orem, UT, February 24, 2014.
- Math + Origami = Fun.**  
College of Science and Health Symposium, Orem, UT, October 23, 2013.
- Hopfian Groups and Fibrator Properties of Manifolds**  
Topology Seminar, Department of Mathematics, Brigham Young University, Provo, UT, 2011.

Contributed Research Presentations

- International/National Presentations**
- Direct Products of Hopfian Manifolds as Shape  $m_{\text{simpl}}$  Fibrators**  
Summer Topology Conference, North Bay, ON, Canada, 2013.
- Fibrators and Hopfian Manifolds**  
PCMI–Undergraduate Faculty Program, Park City, UT, 2012.
- Products of Hopfian Manifolds as Shape  $m_{\text{simpl}}$  Fibrators**  
Dubrovnik VII–Geometric Topology Conference, Dubrovnik, Croatia, 2011.
- Regional/Local Presentations**
- Nordhaus-Gaddum Problems for Power Domination.**  
Seminar Talk, Department of Mathematics, UVU, Orem, UT, April 14, 2017.
- Power Domination and Zero Forcing Numbers and their relation.**  
Intermountain MAA Section Meeting, Weber State University, Ogden, UT, April 7–8, 2017.
- Power Domination and Zero Forcing.**  
Seminar Talk, Department of Mathematics, UVU, Orem, UT, March 25, 2016.
- Hopfian Groups.**  
Intermountain MAA Section Meeting, BYU, Provo, UT, March 20–21, 2015.
- Hopfian Groups.**  
Seminar Talk, Department of Mathematics, UVU, Orem, UT, November 30, 2012.



## Undergraduate Research and Mentoring

**Faculty Mentor** for the following undergraduate student research projects:

**RESEARCH PROJECT:** *Math and Art Designs*

**Student:** Stina Nyhus

**Presentations:**

*Conic Sections within Math-Art-Designs*, Engaged Learning week, March 29, 2016.

*The Math behind Art Designs*, Nebraska Conference for Undergraduate Women in Mathematics, Lincoln, NE, January 30, 2016.

*Conic Sections within Math-Art-Designs* Joint Mathematics Meetings, Seattle, WA, January 8, 2016.

*Connecting Math and Art through Geometry and GeoGebra*, MAA MathFest, Washington, DC, August 7, 2015.

*Enhancing High School Girls' Education Through Technology*, The Fourth International Women of the Mountain Conference, Orem, UT, October 7-9, 2015

**RESEARCH PROJECT:** *Counting Points in Scaled Polytopes*

**Students:** Daniel Gulbrandsen and Christopher VanderWilt

**Presentations:**

*Quasi-polynomials as Integer Point Counting Functions*, Daniel Gulbrandsen, MAA MathFest, Washington, DC, August 7, 2015.

*Polygons and Counting: Where's the Point?*, Daniel Gulbrandsen, Christopher Vander Wilt, Engaged Learning Week, Orem, UT, March 31, 2015.

*Using Quasi-polynomials to Count Integer points*, Daniel Gulbrandsen, Christopher Vander Wilt, MAA Intermountain Section, Provo, UT, March 20, 2015.

*Counting Integer Points in Scaled Polytopes*, Daniel Gulbrandsen, Christopher Vander Wilt, UCUR (Utah Conference for Undergraduate Research), St. George, UT, February 27, 2015.

*Counting Integral Points Contained in Scaled Polygons*, Daniel Gulbrandsen, Christopher Vander Wilt, Utah Regional Undergraduate Mathematics Conference, Orem, UT, November 1, 2014.

**RESEARCH PROJECT:** *Investigating Properties of the Cayley Graph of the Group of Integers with respect to Infinite Generating Sets*

**Students:** Daniel Adams, Daniel Gulbrandsen, and Kristen Smith

**Presentations:**

*Investigating Properties of  $\text{Cay}(\mathbb{Z}, \{\pm 2^n\})$  and  $\text{Cay}(\mathbb{Z}, \{\pm 3^n\})$* , Daniel Gulbrandsen, Joint Mathematics Meetings, San Antonio, TX, January 12, 2015. (Poster Presentation)

*Exploring Properties of  $\text{Cay}(\mathbb{Z}, \{\pm 2^n\})$  and  $\text{Cay}(\mathbb{Z}, \{\pm 3^n\})$* , Daniel Adams, Daniel Gulbrandsen, Utah Regional Undergraduate Mathematics Conference, Orem, UT, November 1, 2014.

*Exploring Properties of  $\text{Cay}(\mathbb{Z}, \{\pm 2^n\})$  and  $\text{Cay}(\mathbb{Z}, \{\pm 3^n\})$* , Daniel Adams, Daniel Gulbrandsen, MAA MathFest, Portland, OR, August 7, 2014.

*Ends of Cayley Graphs of with Infinite Generating Sets*, Daniel Adams, Kristen Smith, MAA Intermountain Sectional Meeting, Orem, UT, March 28, 2014.

*Hyperbolicity of Cayley Graphs of with Infinite Generating Sets*, Daniel Gulbrandsen, MAA Intermountain Sectional Meeting, Orem, UT, March 28, 2014.

*Having Fun with Cayley Graphs*, Daniel Adams, Daniel Gulbrandsen, Kristen Smith, UVU Engagement Week, Orem, UT, March 25, 2014.

*Ends of the Cayley Graphs of with Infinite Generating Sets*, Daniel Adams, Kristen Smith, CURM Student Research Conference, Provo, UT, March 14, 2014.

*Hyperbolicity of the Cayley Graphs of with Infinite Generating Sets*, Daniel Gulbrandsen, CURM Student Research Conference, Provo, UT, March 14, 2014.

*Are  $Cay(\mathbb{Z}, \{\pm 2^n\})$  and  $Cay(\mathbb{Z}, \{\pm 3^n\})$  quasi-isometric?*, Daniel Adams, Daniel Gulbrandsen, CURM Student Research Conference, Provo, UT, March 14, 2014.

*Exploring Properties of Cayley Graphs of with Infinite Generating Sets*, Daniel Adams, Daniel Gulbrandsen, UCUR, Provo, UT, February 20, 2014.

*Exploring Properties of Cayley Graphs with Infinite Generating Sets*, Daniel Adams, Daniel Gulbrandsen, UVU Math Department Seminar, Ore, UT, February 21, 2014.

**RESEARCH PROJECT:** *Outreach and Mentoring through Math Girls Rock! program*

**Presentations:**

*Encouraging High School Girls to Study Math*, Sydney Butler, Kristen Smith, Engagement Week, Orem, UT, March 26, 2014.

*Encouraging High School Girls to Study Math*, Sydney Butler, Emily Stucki, Kristen Smith, Nebraska Conference for Undergraduate Women in Mathematics, January 31–February 2, 2014, Lincoln, NE.

*Mentoring High School Girls*, Megan deJager, Kristen Smith, Student Leadership and Mentoring Conference, Orem, UT, May 3, 2013.

*Mentoring High School Girls (Through Math Girls Rock! Program)*, Megan deJager, Kristen Smith, Scholarship of Teaching and Engagement, Orem, UT, March 28, 2013.

*Mentoring High School Girls*, Megan DeJager, Kristen Smith, Nebraska Conference for Undergraduate Women in Mathematics, January 25–27, 2013, Lincoln, NE.

*Math Projects that Spark the Interest of High School Girls*, Joylyn Loveridge, Mary Petersen, Victoria Trevino, Nebraska Conference for Undergraduate Women in Mathematics, January 27–29, 2012, Lincoln, NE.

**RESEARCH PROJECT:** *Various Topics*

**Presentations:**

*Investigating Instructional Methods for High School Geometry*, Katie Graves (USD student), IdeaFest, April 7–8, 2010, Vermillion, SD.

*Investigating Instructional Methods for High School Geometry*, Katie Graves (USD student), MAA Sectional meeting, April 9–10, 2010, Vermillion, SD.

*Structure of a Finitely Generated Carrey Group*, Meshack Kiplagat (USD student), IdeaFest, March 31–April 1, 2009, Vermillion, SD.

*Math Origami Projects for High School Geometry Class*, Nicholas Wulf (USD student), IdeaFest, April 1–2, 2008, Vermillion, SD.

## Selected Examples of Professional Development

### **REUF Continuation Research Week**

July 3–7, 2017. Iowa State University, Ames, IA.

### **CCICADA Reconnect 2017 Workshop: Mathematical and Computational tools for Energy Efficiency and Reliability of Data Centers and the Electrical Grid – Individual Interests vs. the Common Good.**

June 11–17, 2017. Appalachian State University, Boone, NC.

### **PIC Math Data Analytics**

May 29–June 2, 2017. Brigham Young University, Provo, UT.

### **REUF Continuation Research Week**

July 25–29, 2016. AIM, San Jose, CA, (Skype participation).

### **CCICADA Reconnect 2016 Workshop: Cyber Security.**

June 12–18, 2016. U.S. Military Academy, West Point, NY.

### **CCICADA Reconnect 2014 Workshop: Forensics.**

June 1–7, 2014. Massachusetts Maritime Academy, Buzzards Bay, MA.

### **Park City Mathematical Institute Summer Session–Undergraduate Faculty Program.**

July 1–21, 2012. Park City, UT.

### **MAA Minicourses** (at the Joint Mathematics Meetings and Math Fest).

### **Learning Circles, workshops, seminars, panels, fairs**

Organized by the Office for Teaching and Learning, UVU, Orem, UT.

## Professional Memberships

Mathematical Association of America (MAA) (<http://www.maa.org/>)

American Mathematical Society (AMS) (<http://www.ams.org/>)

Association of Women in Mathematics (AWM) (<http://www.awm-math.org/>)

Society for Industrial and Applied Mathematics (SIAM) (<http://www.siam.org/>)

Higher Education in Teaching and Learning (HETL) (<https://www.hetl.org/>)

Utah Association of Mathematics Teacher Educators (UAMTE) (<http://uamte.math.byu.edu/>)

The Scientific Research Society (Sigma Xi) (<http://www.sigmaxi.org/>)

## Selected Conferences Attended (without Presentation)

**34<sup>th</sup> Annual Workshop in Geometric Topology.** Provo, UT, June 8–10, 2017.

**2<sup>nd</sup> Annual Open Education Symposium.** UVU, Orem, UT, February 9, 2017.

**Fall Conference on Teaching and Learning.** UVU, Orem, UT, September 17, 2016.

**Utah Women in Higher Education Spring Leadership Conference.** UVU, Orem, UT, April 4, 2014.

**MOVES Conference.** New York City, NY, August 4–6, 2013.

**29<sup>th</sup> Annual Workshop in Geometric Topology.** Corvallis, OR, June 28–30, 2012.

**Moab Topology Conference.** Moab, UT, May 30– June 1, 2012.

## Service

### Selected Examples of Service to the Mathematics Community

**MAA Governor** of the Intermountain Section, July 1, 2016–present

**Member of the Committee on Undergraduate Student Activities and Chapters**  
Part of the Council on Programs and Students in the Mathematics Science Council  
(MAA Committee), January 1, 2016–present

**Judge** for the Moody's Mega Math ( $M^3$ ) Challenge, 2017, 2016, 2015.

**Participant in the Cengage Focus Group:** *Expanding The Digital Mathematics Experience: An Investigation of Proofs in Online Homework*,  
at the 2017 Joint Mathematics Meetings, Atlanta, GA, January 6, 2017.

**Co-organizer** of the panel session *What Every Student Should Know about the JMM*,  
at the 2017 Joint Mathematics Meetings, Atlanta, GA, January 4, 2017.

**Co-organizer** of the panel session *What Every Student Should Know about the JMM*,  
at the 2016 MathFest, Columbus, OH, August 3, 2016.

**Chair** of the MAA Intermountain Sectional Meeting 2014–2016.

**Chair Elect** for the MAA Intermountain Sectional Meeting 2013–2014.

**Masters Thesis Adviser**

for a master degree student from University of Utah in the MSSST (Master of Science Degree for Secondary School Teachers) program.

**Co-organizer of the Contributed MAA Teaching Session**  
MAA Intermountain Section Spring Meeting, 2014, 2013, 2012, 2011.

**Judge for the MAA Undergraduate Student Poster Session**  
Joint Mathematics Meetings, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2009.

**AP Calculus Reader** at the 2013, 2011, 2010 and 2008 Annual AP Reading, Kansas City, MO.

**Service to the University**

**Member of the NAPE PIPELine STEM Committee.** Fall 2014–2016

**Math Week Committee,** Fall 2011–present.

**Faculty Senate.** Spring 2014–2016

**Member of the UVU STEMLink committee.** Fall 2013–Spring 2014

**Member of the “Recruiting Women into STEM” committee.** Fall 2011–Spring 2013

**Center for Teaching and Learning Task Force.** USD, Spring 2010.

**Senate.** UVU, 2014–present, USD, 2008–2010.

**Council on Undergraduate Research and Creative Activity.** USD, 2008–2010.

**IdeaFest Working Committee.** USD, 2008–2010.

**(USD) Chapter Vice President/Program Chair for Sigma Xi.** 2007–2010.

**(USD) Student Scholarship Committee at the College of Arts and Sciences.** 2006–2008.

**EEO Representative for the College of Arts and Sciences.** USD, 2005–2010.

**Hiring Committee for the Department of Physics.** USD, 2005–2006.

**Service to the College of Science and Health (CSH)**

**Faculty Excellence Award Committee** for the CSH, Fall 2015.

**NSF Mentor,** for the NSF scholar Adam Smith, UVU, Orem, UT, 2013–2014.

**Service to the Department**

**Search Committee** for Mathematics tenure-track position, Spring 2016.

**Undergraduate Research Committee – Chair,** Spring 2015–present.

**Graduate Committee,** Spring 2014–present.

**Math Program Outcomes Committee,** Fall 2012–present.

**Capstone Committee,** Fall 2011.

**Test Writing Committee for Utah State Math Contest,** 2010–2011.

**MATH 1050, Concurrent Pilot Grading (Volunteer),** 2010–2011.

**Coordinator for the American Mathematics Competitions.** USD, 2008–2009.

**Coordinator for the Geometry Exam of the Annual USD High School Math Contest: Marten Hasse Math Competition.** USD, 2005–2010.

**Advisor of Pi Mu Epsilon.** USD, 2004–2010.

**Undergraduate Program Committee.** USD, 2004–2010.

**Assessment Program Committee.** USD, 2004–2010.

**Calculus Textbook Selection Committee.** USD, 2005.

**Departmental Committee for Appendix G.** USD, 2005.

## Service to the Community

**Established and have been leading the outreach program *Math Girls Rock!*, to encourage girls to study mathematics**, UVU, Orem, UT, 2011–present

**Co-organized the *Math, Cryptography, and Cyber security Conference*, for high school students**, UVU, Orem, UT, 2017

**Co-organized the *Math-Forensics Conference: Whodunite, Howdunite, Whendunite*, for high school students**, UVU, Orem, UT, 2015–16

**Established and run the outreach program *USD Math Days for Women*, to encourage girls to study mathematics**, University of South Dakota, Vermillion, SD, 2007–2010

**Republic of Macedonia-Cradle of Culture, Land of Nature.** Invited Talk, Vermillion Rotary Club, Vermillion, SD. March 29, 2005.

## Personal Data

Languages: Macedonian (native), English, Serbian, Croatian.

Computer Skills/Experience: Microsoft Word, Microsoft Excel, LaTeX, Power Point, Scientific Workplace, The Geometer's Sketchpad, MATLAB, GeoGebra, GAP.

Hobbies: Traveling, yoga, origami, stamping, hiking, ballroom and folk dancing.