

Jonathan Rogness *MathCEP Director of Educational Programs*

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Research and Scholarship Interests

Algebraic Topology, Mathematics Education, Mathematical Visualization

Education

University of Minnesota	Ph.D. Mathematics, 2005
Friedrich-Alexander Universität, Erlangen-Nürnberg, Germany	Fulbright Fellow, 1999
Augustana College, Sioux Falls, SD	B.A. Mathematics, Computer Science & German, 1998

Academic Postions - University of Minnesota

Director, Math Center for Educational Programs (MathCEP)	2010–
Associate Professor, Mathematics	2018–
Assistant Professor, Mathematics	2010–2018

Develop, implement and supervise all MathCEP activities, including:

- *University of Minnesota Talented Youth Mathematics Program (UMTYMP)*, an accelerated five year program for highly talented middle- and high-school students, from algebra through linear algebra and vector calculus; serves 500-600 students per year.
- *Enrichment Programs*. One-time special events, summer camps, and academic year programs serving over 400 students per year.
- *Teacher Professional Development*. Summer institutes and academic year programs for K-12 teachers.

Teaching duties include multiple UMTYMP courses per year in addition to regular math department offerings.

Assistant Professor, Mathematics & Associate Director, ITCEP/MathCEP	2007–2010
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The IT Center for Educational Programs (ITCEP) was rebranded as MathCEP in 2009

Teaching Postdoc, ITCEP	2005–2007
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Other Educational Activities

MathPath, Regular Faculty Member	2010–
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Teach breakout sessions and give plenary lectures at this national [math camp](#) for 11-14 year olds who are exceptionally talented in mathematics.

College in the Schools (CIS) Faculty Coordinator, Math 1371	2009–
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Oversee a cohort of approximately 450 students at 15 high schools in a single variable calculus CIS course.

Grants

Tensor-SUMMA Managed by the MAA.

- \$4.6K to support Girls Excel in Math (GEM) summer enrichment camp for girls in grades 4-6, 2007
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Dolciani Mathematics Enrichment Grant Managed by the MAA.

- \$4.6K to support Adventure in Math (AIM) summer enrichment camp for elementary and middle school students, 2010

Improving Teacher Quality (ITQ) Program Minnesota Office of Higher Education.

- \$137K to support teacher professional development programs during 2009-12.
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Selected Honors and Awards

Project NExT Fellow	2006
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A selective professional development program of the Mathematical Association of America.

International Science & Engineering Visualization Contest	2007.
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Honorable Mention. For the short film *Möbius Transformations Revealed*. Contest sponsored by the NSF and Science Magazine

Publications

- [1] Jonathan Rogness. "Interactive Gallery of Quadric Surfaces". In: *Journal of Online Mathematics and its Applications* 5 (2005).
 - [2] Jonathan Rogness and Martin Kraus. "Constructing Mathlets Quickly Using LiveGraphics3D". In: *Journal of Online Mathematics and its Applications* 6 (2006).
 - [3] Douglas N. Arnold and Jonathan Rogness. "Möbius Transformations Revealed". In: *Notices of the American Mathematical Society* 55.10 (2008).
 - [4] Harvey Keynes and Jonathan Rogness. "Historical Perspectives on a Program for Mathematically Talented Students". In: *International Congress on Mathematical Education*. 2008.
 - [5] Harvey Keynes and Jonathan Rogness. "Historical Perspectives on a Program for Mathematically Talented Students". In: *The Montana Mathematics Enthusiast* 8.1 & 2 (2011). Revised version of the earlier ICME paper for a special edition of TMME., pp. 189–206.
 - [6] Jonathan Rogness. "Mathematical Visualization". In: *Journal of Mathematics Education at Teachers College* 2.2 (2011).
 - [7] Jane Butterfield et al. "Analyzing the Gender Gap on an Entrance Exam for Mathematically Talented Students". In: *The Journal of Mathematics and Science: Collaborative Explorations* (2014).
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Selected Presentations and Talks

Over 50 talks at various departments or conferences around the country, including:

- **JMM 2014**, AMS Special Session on Outreach for Mathematically Talented Youth
UMTYMP: An Accelerated Program for Highly Talented Secondary Students
 - **MAA Wisconsin Section Meeting Opening Keynote**, WI, April 2012
 - **MAA North Central Section Meeting Opening Keynote**, MN, April 2011
 - **Garden State Undergraduate Mathematics Conference**, NJ, April 2011
 - **Harvey Mudd College**, CA, November 2010
Invited to give the second address in the Moody Public Lecture Series
 - **MathFest Opening Banquet Address**, August, 2010
Opening event of the MAA's summer national meeting.
 - **Weber State University**, UT, April, 2010
Invited to give the inaugural address in the Richards Math Lecture Series.
 - **MAA Nebraska-SE South Dakota Section Meeting Banquet Address**, March 2007
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Selected Professional Service

Managing Editor, MN Journal of Undergraduate Mathematics	2015–
Faculty Advisor for MS Math/MathEd program	2010–
Faculty Advisor for MS in Mathematics with Emphasis in Math Education program; 9 graduates and 5 current students	
Dolciani Editorial Board, MAA Book series	2007–14
Joint Mathematics Meetings Undergraduate Poster Session Judge	2007,2009,2012,2014,2015
Task Force on e-Communities, MAA	2010–12
NSF Review Panel for Math & Science Partnership (MSP) Grants	2012
MAA Course Communities for Undergraduate Mathematics	2011
Working group developing an area on the MAA's Math Digital Library for Multivariable Calculus.	
Associate Editor, Journal of Online Mathematics and its Applications	2005–09

Professional Societies

- Mathematical Association of America (MAA)
- American Mathematical Society (AMS)
- Association for Women in Mathematics (AWM)