

JONATHAN TOTUSHEK

CURRICULUM VITA, MAY 22, 2015

CONTACT

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EDUCATION

SUMMER 2015 (expected) Ph.D. in MATHEMATICS, **North Dakota State University**, Fargo ND.
Advisor: Sean Sather-Wagstaff
Dissertation: “Homological Dimensions with Respect
to a Semidualizing Complex”
SPRING 2009 Bachelor of Science in MATHEMATICS
Cum Laude, **Regis University**, Denver CO.
Advisor: James Seibert

POSITIONS IN MATHEMATICS

FALL 2013 - Graduate Research Assistant at NORTH DAKOTA STATE UNIVERSITY
PRESENT Research funded from North Dakota EPSCoR.
SUMMER 2011 - NDSU Mathematics Computer Lab Manager
SUMMER 2012
SPRING 2010 - Mathematics Genealogy Project Data Manager
PRESENT www.genealogy.math.ndsu.nodak.edu
FALL 2009- Graduate Teaching Assistant at NORTH DAKOTA STATE UNIVERSITY
SUMMER 2013

RESEARCH

INTERESTS: Commutative Algebra, Homological Algebra, Ring Theory

PUBLICATIONS:

1. *Cosmic ray muon flux at the Sanford Underground Laboratory at Homestake*, with F. Gray, C. Ruybal, D.-M. Mei, K. Thomas, and C. Zhang, Nucl. Instr. and Meth. A (2011), doi:10.1016/j.nima.2011.02.032
2. *Homological dimensions with respect to a semidualizing complex*, submitted (2014).
3. *Using semidualizing complexes to detect Gorenstein rings*, with S. Sather-Wagstaff, to appear: Archiv der Mathematik (Basel), (2015).
4. *Complete intersection homological dimensions with respect to a semidualizing complex*, In preparation.

UNDERGRADUATE STUDENT MENTORING

SPRING 2015 - Senior seminar, Garrett Filipek, NDSU
Joint Mentoring with María de los Ángeles Alfonseca-Cubero

AWARDS AND ACKNOWLEDGMENTS

JULY 2013: North Dakota EPSCoR Doctoral Disertation Assistantship

INVITED CONFERENCE LECTURES

2009 - APS Special Session on Dark Matter Searches, APS APRIL MEETING, Denver, CO
2014 - AMS Special Session on Commutative Ring Theory, UNIVERSITY OF WISCONSIN-EAU CLAIRE
2015 - AMS Special Session on Syzygies, JOINT MATHEMATICS MEETINGS, San Antonio, TX

DEPARTMENT SEMINARS AND COLLOQUIA

2013 - Mathematics Department Junior Colloquium, NORTH DAKOTA STATE UNIVERSITY
2014 - Algebra and Discrete Mathematics Seminar, NORTH DAKOTA STATE UNIVERSITY

OTHER LECTURES

2011 - NDSU Math Club, *Calculating π*
2015 - NDSU Math club, "*Sweet*" *Clyde's Inversion Theorem (a.k.a. Keeler's Theorem)*

DEPARTMENT SERVICE

FALL 2013 - PRESENT: Organizer of the NDSU Junior Colloquium
www.ndsu.nodak.edu/pubweb/~totushek/colloquiumjr/
FALL 2013 - SPRING 2014: New Faculty Search Committee Member

SERVICE TO THE COMMUNITY

APRIL 2015: Math Fair presenter - visit and present mathematics at local elementary schools.

TEACHING AT NORTH DAKOTA STATE UNIVERSITY

AS PRIMARY INSTRUCTOR:	Trigonometry	(Summer 2013)
	Applied Calculus	(Summer 2010)
	Calculus II	(Summer 2012)
	Calculus III	(Summer 2011)
AS RECITATION INSTRUCTOR:	College Algebra	(Spring 2013)
	Trigonometry	(Fall 2010 & Spring 2013)
	Applied Calculus	(Fall 2009 & Fall 2011)
	Calculus I	(Fall 2010)
	Calculus II	(Fall 2009, Spring 2010 & Spring 2012)
	Calculus III	(Spring 2011)

MEMBERSHIPS

American Mathematical Society
Mathematical Association of America
Association for Women in Mathematics