





# Michael K. Janssen, Ph.D.

## Curriculum Vitae

712.722.6398 

mike.janssen@dordt.edu 

mkjanssen.org 

@mkjanssen 

### APPOINTMENTS

#### *Dordt University*

Associate Professor of Mathematics, August 2018–Present  
Assistant Professor of Mathematics, August 2014–July 2018

#### *University of Nebraska-Lincoln*

Adjunct Professor, Fall 2013  
Graduate Teaching Assistant, Fall 2007–Spring 2013

### EDUCATION

#### *University of Nebraska-Lincoln, Ph.D. in Mathematics, May 2013*

Dissertation: Symbolic Powers of Ideals in  $k[\mathbb{P}^N]$   
Advisor: Brian Harbourne

#### *University of Nebraska-Lincoln, M.S. in Mathematics, May 2009*

#### *University of South Dakota, B.S. in Mathematics and Physics, May 2007*

Honors thesis: Divisibility in  $A + xB[x]$  GCD Domains

### COURSES TAUGHT

Stat 131: Introductory Statistics  
Stat 201/202: Applied Statistical Models/Econometrics  
Stat 203: Generalized Linear Models  
Math 149: Explorations in Modern Mathematics  
Math 152: Calculus I  
Math 153: Calculus II  
Math 203: Elementary Linear Algebra  
Math 207: Number Theory  
Math 212: Discrete Structures  
Math 291: Problem Solving Seminar  
Math 304: Abstract Algebra I  
Math 311: Real Analysis  
Math 342: Special Topics–The Joy of Numbers  
Math 342: Special Topics–Foundations of Mathematics  
Math 343: Special Topics–Computational Algebra  
Math 344: Colloquium

Last updated: Sunday 24<sup>th</sup> October, 2021

Math 390: History of Mathematics

Core 399: Calling, Task, and Culture

RESEARCH  
MENTORING

Anika Homan and Jocelyn Zonnefeld, Summer 2021

Project Title: "Further Explorations of the Finite Tropical Semiring"

Elizabeth Wilterdink, Spring 2021

Project Title: "Opportunities in Elliptic Curves"

Caden Zonnefeld, Summer 2020

Project Title: "Exploring the Finite Tropical Semiring"

Paige Beyer and Hannah Fields (co-advised with Melissa Lindsey), Summer 2019

Project Title: "Interactions between algebra and graph theory"

Thomas Kamp and Jason Vander Woude, Summer 2017

Project Title: "Edge Ideals of Odd Cycles"

Yonatan Ashenafi, Spring 2015

Project Title: "Algebraic interactions with graph theory"

PUBLICATIONS

*Peer-Reviewed Publications*

J.B. Collins, A. Harsy, J. Hart, K. Haymaker, A. Hoofnagle, J. Stewart Kelly, M. Janssen, J. Stewart Kelly, A. Mohr, J. OShaughnessy, "Mastery-Based Testing in Undergraduate Mathematics." *PRIMUS*, Vol. 25, No. 5, 441-460. 2019.

M. Janssen, T. Kamp, J. Vander Woude, "Comparing Powers of Edge Ideals." *J. Algebra and its Applications*, Vol. 18, No. 10. 2019.

T. Clark, A. Harsy, M. Janssen, D. Klanderma, M. Maxwell, S. Robbert, "Start a Math Teacher Circle: Connect K-12 Teachers with Engaging, Approachable, and Meaningful Mathematical Problems." *Proc. 2017 Association of Christians in the Mathematical Sciences Biennial Conference*, 22-29. 2018.

C. Bocci, S. Cooper, E. Guardo, B. Harbourne, M. Janssen, U. Nagel, A. Seceleanu, A. Van Tuyl, T. Vu, "The Waldschmidt constant for squarefree monomial ideals." *J. Algebraic Combinatorics*, Vol. 44, 875-904. 2016.

M. Janssen, "On the Fattening of Lines in  $\mathbb{P}^3$ ." *J. Pure and Applied Algebra*, Vol. 219, No. 4, 1055-1061. 2015.

A. Denkert and M. Janssen, "Containment problem for points on a reducible conic in  $\mathbb{P}^2$ ." *J. Algebra*, Vol. 394, 120-138. 2013.

*General Audience Publications*

"More to Math." *Lighting a Fire Podcast*. May 2021.

"Burnt-Out Lightbulbs: A review of *Can't Even: How Millennials Became the Burnout Generation*." *inAllThings.org*. January 2021.

"Review: *Calling Bullshit*." *inAllThings.org*. October 2020.

"Open Educational Resources for the Kingdom." *inAllThings.org*. April 2020.

"A Guide to Digital Decluttering: a Review of *Digital Minimalism*." *inAllThings.org*. March 2019.

"Mathematical Beauty." *inAllThings.org*. March 2017.

#### GRANTS AND AWARDS

"Explorations in Modern Mathematics, an OER for a liberal arts math course," \$8805 (IPAL), 2021 *funded*

"The effects of pre-class web-based activities to motivate active learning in first- and second-year mathematics courses," \$7500 (IDEA), 2017 *funded*

"NSF Junior Oberwolfach Fellow," (NSF), 2015

"Project NExT Gold '14 Dot," (MAA), 2014–2015

#### WORKSHOPS

"IBL PRODUCT Workshop." DePaul University. June 20–23, 2017.

"Project NExT Workshop." MAA MathFest, Washington, DC. August 3–5, 2015.

"Pre-Conference Workshop for Early Career Faculty." 20th Biennial Meeting of the Association of Christians in the Mathematical Sciences, Hamilton, Ontario, Canada. May 25–27, 2015.

"Oberwolfach Mini-Workshop 1508a, Ideals of Linear Subspaces, Their Symbolic Powers, and Waring Problems." Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany. February 15–21, 2015.

"Project NExT Workshop." Joint Mathematics Meetings, San Antonio, TX. January 9–13, 2015.

"Project NExT Workshop." MAA MathFest, Portland, OR. August 4–6, 2014.

"Preparing Future Faculty." University of Nebraska-Lincoln. Summer 2012.

"Summer School on Algebra and Geometry." University of Regina, Saskatchewan. May 29–June 1, 2012.

#### CONFERENCE TALKS

"Pseudo-Ungraded Calculus Exams." MAA MathFest, Virtual. August 2021.

"Rings With Inquiry." MAA Themed Contributed Paper Session on Teaching Abstract Algebra, Joint Math Meetings (Denver, CO). January 2020.

"Delivering Pre-Class Activities Online to Impact Student Learning (Poster)." MAA Poster Session, MathFest (Cincinnati, OH). August 2019.

"Promoting Inquiry via Recreational Problems in a Liberal Arts Math Course." MAA Themed Contributed Paper Session on Inquiry-Based Learning, MathFest (Denver, CO). August 2018.

"A first experience in a flipped Calculus II course." MAA Themed Contributed Paper Session on Flipped Classes, Implementation and Evaluation, Joint Mathematics Meetings (San Diego, CA). January 2018.

"Cut Your Cake (And Eat It, Too!)." MAA Themed Contributed Paper Session on "My Favorite Math Circle Problem", MathFest (Chicago, IL). July 2017.

"An Overview of Specifications Grading." 21st ACMS Biennial Conference, Charleston Southern University (Charleston, SC). May 2017.

"My Favorite Math Circle Problem: Cut Your Cake (And Eat It, Too!)." 21st ACMS Biennial Conference, Charleston Southern University (Charleston, SC). May 2017.

"Specifications Grading in a First Course in Abstract Algebra." MAA Themed Contributed Paper Session on "Teaching Abstract Algebra, Topics and Techniques", Joint Mathematics Meetings (Atlanta, GA). January 2017.

"Improving proof-writing with reading guides." MAA Themed Contributed Paper Session on Encouraging Early Career Teaching Innovation, MathFest (Columbus, OH). August 2016.

"Implementing Specifications Grading in a Linear Algebra course." MAA Session on Assessing Student Learning, Alternative Approaches, Joint Mathematics Meetings (Seattle, WA). January 2016.

"The importance of  $\alpha$ ." MAA Invited Paper Session on Concrete Computations in Algebra and Algebraic Geometry, MathFest (Washington, D.C.). August 2015.

"Symbolic Powers of Ideals-Problems and Progress (15 minutes)." 20th ACMS Biennial Conference, Redeemer University College (Ancaster, Ontario, Canada). May 2015.

"Symbolic Powers of Ideals-Problems and Progress (50 minutes)." Mathematics Department Seminar, University of South Dakota (Vermillion, SD). March 2015.

"On the Fattening of Lines in  $\mathbb{P}^3$ ." Oberwolfach Mini-Workshop 1508a, Ideals of Linear Subspaces, Their Symbolic Powers and Waring Problems, Mathematisches Forschungsinstitut Oberwolfach (Oberwolfach, Germany). February 2015.

"On an Application of Bezout's Theorem." Math Department Colloquium, Calvin College. February 2014.

#### SERVICE

##### *Service to the Institution*

Senator, Dordt University Academic Senate. 2021–Present.

Organizer, Dordt Math/Stats Department Pizza and a Presentation Colloquium Series. 2021–Present.

Presenter, Summer Pedagogy Workshops and Faculty Fora (various topics). 2019–Present.

Coordinator, Calculus Placement Exam. 2020–Present.

Committee Member, Assessment and Program Review Committee, Dordt University. 2018–Present.

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Reviewer, internal undergraduate research grants. 2017–2018.  
 Facilitator, Northwest Iowa Math Teachers Circle. February 2016.  
 Student advisor, Dordt University Math/Stats Department. 2015–Present.  
 Committee Member, various search committees. 2015–Present.

*Service to the Profession*

Executive Secretary, Association of Christians in the Mathematical Sciences. July 1, 2020–June 30, 2024.  
 Reader, Advanced Placement Calculus Exam. June 2020.  
 Table Host, Mastery Grading Conference. June 5–6, 2020.  
 Co-Organizer/Presenter, Minicourse: *Beyond Traditional Grading Schemes: Mastery Based Grading*, MathFest 2019, Cincinnati, OH. August 2019.  
 Co-Organizer, Themed Contributed Paper Session: *Mastery Grading*, MathFest 2018, Denver, CO. August 2018.  
 Co-Organizer/Presenter, Minicourse: *Beyond Traditional Grading Schemes: Mastery Based Grading*, MathFest 2017, Chicago, IL. August 2017.  
 Co-Organizer, Themed Contributed Paper Session: *Formative Assessment Techniques for Undergraduate Math Courses*, MathFest 2016, Columbus, OH. August 2016.  
 Co-Organizer, Project NExT Panel Session on the recruitment and retention of mathematics majors, MathFest 2015, Washington, D.C.. August 2015.  
 Co-Organizer, Workshop for graduate students, 20th Biennial Meeting of the Association of Christians in the Mathematical Sciences. May 2015.  
 Organizer, Math on the Northern Plains, MAA Regional Undergraduate Mathematics Conference. April 2015.  
 Reviewer, MathSciNet Mathematical Reviews. 2014–Present.  
 Referee, *PRIMUS*, *Journal of Algebra and its Applications*, *Journal of Commutative Algebra*, and *Journal of Pure and Applied Algebra*. 2014–Present.

MEMBERSHIPS

Mathematical Association of America  
 American Mathematical Society  
 Association of Christians in the Mathematical Sciences  
 Phi Beta Kappa  
 Pi Mu Epsilon

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