

CURRICULUM VITÆ

NICHOLAS SWITALA

Contact Information

- Address: UIC MSCS Department, 322 SEO (M/C 249), 851 S Morgan Street, Chicago, IL 60607
- Telephone: 312-996-5924
- Email: nswitala@uic.edu

Education

- (2015) **Ph.D. in Mathematics**, University of Minnesota.
 - Thesis adviser: Gennady Lyubeznik.
 - Thesis title: *Some local cohomology invariants of nonsingular projective varieties and complete local rings.*
- (2010) **M.S. in Mathematics**, University of Minnesota.
- (2008) **B.S. in Mathematics**, *summa cum laude*, University of Minnesota.

Appointments

- (2016–present) **Research Assistant Professor** and **NSF Postdoctoral Fellow**, Department of Mathematics, Statistics, and Computer Science, University of Illinois at Chicago.
- (2015–2016) **Postdoctoral Faculty Fellow**, Department of Mathematics, University of Nebraska-Lincoln.

Papers

- (1) Lyubeznik numbers for nonsingular projective varieties, *Bull. London Math. Soc.* **47** (1) 1–6, 2015.
- (2) Van den Essen’s theorem on the de Rham cohomology of a holonomic D -module over a formal power series ring, *Expo. Math.* **35** (2) 149–165, 2017.
- (3) On the de Rham homology and cohomology of a complete local ring in equicharacteristic zero, *Compos. Math.* **153** (10) 2075–2146, 2017.
- (4) (with Wenliang Zhang) Duality and de Rham cohomology for graded D -modules, submitted, 2017.
- (5) (with Wenliang Zhang) A dichotomy for the injective dimension of F -finite F -modules and holonomic D -modules, submitted, 2017.

Awards, Honors, and Grants (graduate school or later)

- (2016–2019) NSF Mathematical Sciences Postdoctoral Research Fellowship (NSF grant DMS-1604503)

- (2011–2012) School of Mathematics Outstanding Teaching Assistant Award, University of Minnesota

Talks and Conferences

- Conference on local cohomology (for Gennady Lyubeznik’s sixtieth birthday), University of Minnesota, invited speaker (August 2017)
- Commutative algebra seminar, University of Illinois at Chicago, invited speaker (April 2016)
- AMS Mathematics Research Community in commutative algebra, Snowbird, Utah, funded participant (June 2015)
- Workshop in commutative algebra and related topics, University of Kansas, invited speaker (March 2015)
- RTG local cohomology workshop, University of Illinois at Chicago, funded participant (February 2015)
- Commutative algebra seminar, University of Utah, invited speaker (January 2015)

Teaching Experience (as sole instructor)

- University of Illinois at Chicago
 - RTG mini-course on algebraic D -modules (fall 2016)
- University of Nebraska-Lincoln
 - Differential Equations (fall 2015)
 - Linear Algebra (fall 2015)
 - Elementary Analysis (spring 2016)
- University of Minnesota
 - Applied Linear Algebra (summer 2012, spring 2014)
 - Introduction to Modern Algebra (summer 2013)
 - Excursions in Mathematics (survey course for liberal arts majors, spring 2012)
 - Advanced Calculus I (summer 2011)
 - Short Calculus (summer 2010)

Service

- (2017–present) **Referee** for *Trans. Amer. Math. Soc.*
- (2010, 2012) **Facilitator for New Teaching Assistant Orientation**, School of Mathematics, University of Minnesota

References

- Gennady Lyubeznik (gennady@umn.edu)
- Wenliang Zhang (wzhang@uic.edu)
- Robin Hartshorne (robin@math.berkeley.edu)
- Jonathan Rogness (rogness@umn.edu): teaching reference