

**WENBO NIU**

Associate Professor  
 Department of Mathematical Sciences  
 University of Arkansas  
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**EDUCATION**

Ph.D. Mathematics	University of Illinois at Chicago	2011
M.S. Mathematics	Fudan University, China	2005
B.S. Mathematics	Fudan University, China	2001

**POSITIONS**

Associate Professor	University of Arkansas	2021 - pres.
Visiting Scholar	Purdue University	2022 Jun - Dec
Assistant Professor	University of Arkansas	2015 - 2021
Visiting Assistant Professor	University of Notre Dame	2014 - 2015
Golomb Visiting Assistant Professor	Purdue University	2011 - 2014

**RESEARCH INTERESTS**

Algebraic Geometry and Commutative Algebra

**AWARDS AND GRANTS**

2023 - 2024	Fulbright College of Arts and Sciences Travel Funds, \$1,500
2021 - 2026	Simons Collaboration Grants for Mathematicians, \$42,000
2014 - 2016	AMS-Simons Travel Grant

**PH.D. STUDENTS**

Alexander Duncan	2024( <i>expected</i> )
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**POSTDOCS MENTORED**

Youngsu Kim	2017 – 2020
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**DEPARTMENTAL SERVICE**

2023 - 2024	Promotion and Tenure Committee	Math Department, University of Arkansas
2020, Oct	Doctoral Oral Exam Committee Chair	Math Department, University of Arkansas
2016 - 2019	Graduate Committee	Math Department, University of Arkansas

**CONFERENCE/MEETING ORGANIZED**

2018, Nov 3-4	AMS Fall Southeastern Sectional Meeting Special Session on Advances in Birational Geometry	University of Arkansas
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**PROFESSIONAL SERVICE**

*Journals refereed:* Algebra & Number Theory  
 Canadian Mathematical Bulletin  
 Communications in Contemporary Mathematics  
 Communications in Algebra  
 Duke Mathematical Journal  
 Geometriae Dedicata  
 Journal of Algebra  
 Journal of Commutative Algebra  
 Journal of European Mathematical Society  
 Journal of Pure and Applied Algebra  
 Proceedings of the American Mathematical Society  
 Taiwanese Journal of Mathematics

*Reviewer:* Zentralblatt MATH  
 MathSciNet

## PUBLICATIONS AND PREPRINTS

- *A bound for the Castelnuovo-Mumford regularity of log canonical varieties*,  
 J. Pure Appl. Algebra **215** (2011), 2180-2189.
- *Bounding the Castelnuovo-Mumford regularity of algebraic varieties*,  
 ProQuest LLC, Ann Arbor, MI, 2011. Thesis (Ph.D.)-University of Illinois at Chicago.
- *A vanishing theorem and asymptotic regularity of powers of ideal sheaves*,  
 J. Algebra **344** (2011), 246-259.
- *Some results on asymptotic regularity of ideal sheaves*,  
 J. Algebra **377** (2013), 157-172.
- *Geometric nullstellensatz and symbolic powers on arbitrary varieties*.  
 Math. Ann. **359** (2014), 745-758.
- *Singularities of generic linkage of algebraic varieties*,  
 Amer. J. Math. **136** (2014), 1665-1691.
- *Castelnuovo-Mumford regularity bounds for singular surfaces*,  
 Math. Z. **280** (2015), 609-620.
- (with L. Lombardi) *Theta-regularity of curves and Brill-Noether loci*,  
 Math. Res. Lett. **23** (2016), 1761-1787.
- (With J. Park) *A Castelnuovo-Mumford regularity bound for scrolls*,  
 J. Algebra **488** (2017), 388-402.
- *Mather-Jacobian singularities under generic linkage*,  
 Trans. Amer. Math. Soc. **370** (2018), 4015-4028.
- (With S. Ishii) *A strongly geometric general residual intersection*,  
 Contemp. Math. **712** (2018), 197-210.
- (With L. Ein) *Interpolation for curves of large degree*,  
 Asian J. Math. **22** (2018), 0307-0316.
- *On syzygies for Calabi-Yau varieties and varieties of general type*,  
 Adv. Math. **343** (2019), 756-788.
- (with L. Ein and J. Park) *Singularities and syzygies of secant varieties of nonsingular projective curves*,  
 Invent. Math. **222** (2020), 615-665.

- (with Y. Kim and L. Miller) *Log canonical thresholds of generic links of determinantal varieties*, Proc. Amer. Math. Soc. **149** (2021), 2777-2787.
- (with L. Ein and J. Park) *On blowup of secant varieties of curves*, Electron. Res. Arch. **29** (2021), 3649-3654.
- *Regularity bounds by projection*, Commutative algebra, Springer, Cham, (2021), 617-638.
- (with L. Ein and J. Park) *A remark on global sections of secant bundles of curves* Boll. Unione Mat. Ital. **15** (2022), 163-171.
- (With J. Park) *A Castelnuovo-Mumford regularity bound for threefolds with rational singularities*, Adv. Math. **401** (2022), 24 pp.
- (with B. Ulrich) *A note on Mather-Jacobian multiplier ideals*, submitted, arXiv:1404.5092.
- (with L. Ein) *On vanishing of fundamental forms of algebraic varieties*, submitted, arxiv:2304.08430.
- (with A.S. Duncan, J. Park) *A note on an effective bound for the gonality conjecture*, submitted, arXiv:2310.11419.
- *Vanishing theorems for Mather-Jacobian multiplier ideals on a Gorenstein projective variety*, arXiv:1508.02361.

## INVITED TALKS

*Sem.*= Seminar, *Con.*= Conference, *Lec.*= Lecture, *Col.*= Colloquium

- 2023 Dec *Con.* Workshop on Classical Algebraic Geometry, Institute for Basic Science, Daejeon, Korea.  
 Oct *Sem.* University of Notre Dame, Algebraic Geometry and Commutative Algebra Seminar.  
 Jun *Sem.* East China Normal University, Algebra Seminar, China.  
*Sem.* Shanghai Jiaotong University, Algebra Seminar, China.  
*Sem.* Soochow University, Mathematics Seminar, China.  
*Sem.* Zhejiang University, Algebra Seminar, China.  
*Sem.* West Lake University, Algebra Seminar, China  
*Sem.* Shanghai University, Algebra Seminar, China.  
 May *Sem.* Tsinghua University, Mathematics Seminar, China.  
 Apr *Lec.* Syzygies and Regularity, Workshop For Graduate Students, Postdocs, and Young Researchers  
 University of Illinois at Chicago.
- 2022 Nov *Sem.* University of Connecticut, Algebra Seminar.  
 Oct *Sem.* Purdue University, Commutative Algebra Seminar.
- 2021 May *Lec.* Syzygies of algebraic curves  
 Algebraic Geometry Lecture (Online), Soochow University, China. (May 3 - Jul 5)  
 Mar *Sem.* Stony Brook University, Algebraic Geometry Seminar.
- 2020 Nov *Sem.* Shanghai University, Mathematics Seminar, China.
- 2019 Oct *Sem.* Iowa State University, Algebra Seminar.  
 Jul *Sem.* Tsinghua University, Mathematics Seminar, China.  
*Sem.* Shanghai University, Mathematics Seminar, China.  
*Sem.* Soochow University, Mathematics Seminar, China.
- Jun *Lec.* Syzygies of algebraic varieties  
 Summer Camp in Mathematics, West Lake University, China. (Jun 24 - Jul 5)
- 2018 Jun *Con.* AMS-CMS Joint International Meeting, Fudan University, China.  
 Jun *Con.* Positivity in Algebraic Geometry, Yonsei University, South Korea.  
 Jun *Sem.* KIAS, Mathematics Seminar, South Korea.

- Mar *Sem.* University of Illinois at Chicago, Algebraic Geometry Seminar.  
Jan *Con.* Conference on Dynamical System and Algebraic Geometry, Zhejiang University, China.  
2017 Apr *Sem.* University of Utah, Commutative Algebra Seminar.  
Mar *Con.* 42nd Spring Lecture Series: Geometry and the Equations Defining Projective Varieties, University of Arkansas.  
2016 Apr *Sem.* Purdue University, Commutative Algebra Seminar.  
Apr *Sem.* University of Missouri, Algebra Seminar.  
2015 Dec *Con.* Singularities and Invariants of Higher Dimensional Algebraic Varieties, RIMS, Japan.  
Oct *Con.* AMS Central Fall Sectional Meeting, Special Session on Commutative Algebra, Loyola University, Chicago.  
Apr *Sem.* University of Notre Dame, Algebraic Geometry and Commutative Algebra Seminar.  
Apr *Sem.* Purdue University, Commutative Algebra Seminar.  
Jan *Col.* University of Nebraska-Lincoln, Colloquium.  
2014 Dec *Col.* University of Arkansas, Colloquium.  
Mar *Sem.* Purdue University, Commutative Algebra Seminar.  
Feb *Sem.* University of Illinois at Chicago, Algebraic Geometry Seminar.  
Jan *Sem.* Purdue University, Commutative Algebra Seminar.  
2013 Oct *Sem.* University of Illinois at Urbana-Champaign, Commutative Ring Theory Seminar.  
May *Con.* The Commutative Algebra of Singularities in Birational Geometry, MSRI.  
Feb *Sem.* Purdue University, Working Algebraic Geometry Seminar.  
2012 Dec *Sem.* University of Notre Dame, Algebraic Geometry and Commutative Algebra Seminar.  
Jun *Con.* 3rd Bluegrass Algebra Conference, University of Kentucky.  
Apr *Sem.* Purdue University, Commutative Algebra Seminar.  
Feb *Sem.* University of Illinois at Urbana-Champaign, Algebraic Geometry Seminar.  
Feb *Sem.* Purdue University, Commutative Algebra Seminar.  
2011 Nov *Sem.* University of Utah, Algebraic Geometry Seminar.  
Nov *Sem.* Purdue University, Commutative Algebra Seminar.  
Oct *Con.* Algebra, Geometry and Combinatorics Day (ALGECOM5), IUPUI.  
Sep *Sem.* Purdue University, Working Algebraic Geometry Seminar.  
Mar *Sem.* University of Notre Dame, Algebra Seminar.  
Jan *Con.* AMS Session on Commutative Rings and Fields, New Orleans, Louisiana.  
2010 Oct *Con.* Midwest Algebraic Geometry Graduate Conference, University of Wisconsin-Madison.  
2009 Mar *Sem.* Purdue University, Graduate Student Commutative Algebra Seminar.