

Curriculum Vitae

Kazuma Shimomoto

- Citizenship** Japanese Citizen. Born in Osaka, Japan.
- Contacts** University of Minnesota, School of Mathematics
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- Current Position** Visiting faculty at the University of Minnesota (2006-2008).
- Personal Website** <http://www.math.umn.edu/~shimo027/>
- Education** University of Utah
Ph.D in Mathematics. May 2006.
Thesis Advisor: Paul C. Roberts.
- University of Utah
M.S. in Mathematics. May 2003.
- Okayama University of Science, Japan
B.S. in Mathematics. March 2001.
- Research Interests** Commutative Algebra and its applications to Algebraic Geometry and Arithmetic Geometry.
- Work in Progress** *Almost Cohen-Macaulay properties for commutative rings.*
- Papers Submitted** *On the localization theorem for F -pure rings (with W. Zhang).*
- Research Papers** (1) *On the upper-semicontinuity of Hilbert-Kunz multiplicity (with F. Enescu).* Journal of Algebra **285** (2005), 222-237.
- (2) *The Frobenius action on local cohomology modules in mixed characteristic.* Compositio Math. **143** (2007), 1478-1492.

Invited Lectures *On the upper-semicontinuity of Hilbert-Kunz multiplicity.*
AMS meeting in Nashville, Vanderbilt University 2004:

The Frobenius map in mixed characteristic.
AMS meeting in Atlanta, 2005:

The Frobenius map in mixed characteristic.
University of Nebraska on Commutative Algebra Seminar, 2005:

Local cohomology in mixed characteristic.
with G. Piepmeyer.
Minnowbrook Workshop on Commutative Algebra, 2005:

On certain big rings in mixed characteristic.
AMS meeting in San Francisco, 2006:

Galois cohomology and ring theory.
AMS meeting in Salt Lake City, 2006:

On the localization problem in characteristic $p > 0$.
AMS meeting in Davidson, North Carolina, 2007:

Talks

2004 Fall: Algebra Seminar at the University of Utah
“On the minimality of Hilbert-Kunz multiplicity.”

2005 Fall: Algebra Seminar at the University of Utah
“Semiperfect rings in mixed characteristic $p > 0$.”

2006 Fall: Algebraic Geometry Seminar at the University of Minnesota
“Frobenius map and local cohomology modules.”

2007 Fall: Algebra Seminar Seminar at the University of Illinois
“On the localization problem in positive characteristic.”

2007 Fall: Algebra Seminar Seminar at the University of Michigan
“Grothendieck’s localization problem.”

Activity

2004 Fall: Graduate Colloquium at the University of Utah
"Twin prime numbers."

2002 Summer: A public speech at Okayama University of Science
"What can you do after graduating from the college?" in Japan.

2003 Summer: A public speech at Okayama University of Science
"How to enjoy studying mathematics." in Japan.

Teaching History

2001-2002: Calculus I (TA), Business Algebra (TA) in Utah.

2002-2003: Calculus I (TA), Calculus II (TA) in Utah.

2003-2004: Differential Equation (TA), Calculus II (TA) in Utah.

2004-2005: Calculus II, Business Algebra in Utah.

2005-2006: Calculus I, Intermediate Algebra in Utah.

2007 (Spring): Precalculus I in Minnesota.

2008 (Spring): Linear Algebra with Applications in Minnesota.

References

David Frank (teaching)
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