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BIOSKETCH

Irena Peeva

Currently, I am a tenured Full Professor of Mathematics at Cornell University.

My primary work is in Commutative Algebra, and my primary research is focused on Free Resolutions and their applications. I have also done work on the many connections of Commutative Algebra with Algebraic Geometry, Combinatorics, Computational Algebra, Noncommutative Algebra, and Subspace Arrangements, and I remain very interested in these fields as well.

Recently, Jason McCullough and I settled the longstanding Regularity Conjecture, which was raised by Eisenbud and Goto in 1984 and has deep connections to Commutative Algebra, Algebraic Geometry, and Computational Algebra. Our results are published in the Journal of the AMS. In a different direction, David Eisenbud and I settled in a series of papers the longstanding open problem to describe the structure of minimal free resolutions over complete intersections.

In 1995 I received a Ph.D. in Mathematics from Brandeis University under the supervision of David Eisenbud. After that I held a C.L.E. Moore Instructorship at MIT (Sept. 1995 – June 1998), and was a postdoc at UC Berkeley during the academic year 1995/1996. I joined the Cornell Mathematics Department in July 1998.

I was a Simons Foundation Fellow in 2019/2020 and 2012/2013, a Sloan Foundation Fellow during 1999 – 2001, a Sloan Doctoral Dissertation Fellow in 1994/1995, and I am an AMS Fellow since 2013. During 2004 – 2009 I held an NSF CAREER Grant, and my research has been continuously supported by the NSF since 1997.

I am invited to give a lecture at the ICM (International Congress of Mathematicians), Summer 2022. I delivered an AMS Invited Address at the national Joint Mathematics Meetings in 2015 and a Plenary Address at the Summer Meeting of the Canadian Mathematical Society in 2013. I have given plenary lectures at international conferences (listed in my CV), and have (co)organized 29 mathematical events (conferences, AMS special sessions, and a summer school).

Currently, I am an editor of the Transactions of the AMS, Memoirs of the AMS, and Algebra & Number Theory. During Sept. 2014 – Sept. 2018 I was a member of the Scientific Board of the Banff International Research Station. I was a Member at Large of the Council of the AMS during 2008, 2009, and 2010.

My book *Graded Syzygies* was published by Springer in 2011. I organized and edited two books with expository papers in Commutative Algebra published by Springer: the first book (608 pages) appeared in 2013 and the second book (889 pages) just appeared in 2022. I have published in leading mathematical journals including the following journals (listed alphabetically): Advances in Mathematics, American Journal of Mathematics, Compositio Mathematica, Duke Mathematical Journal, Journal of Algebraic Geometry, Journal of the American Mathematical Society, Journal of the European Mathematical Society, Mathematical Research Letters, Mathematische Annalen, Mathematische Zeitschrift, Publications Mathématiques IHÉS, and Transactions of the AMS.

I enjoy working with junior mathematicians and have written ten papers jointly with graduate students and postdocs. I have supervised graduate students, two visiting graduate students, and a postdoc. Currently, I serve as the Director of Graduate Studies at the Cornell Mathematics Department.

My teaching experience is broad. I received the Cornell Mathematics Department Senior Faculty Teaching Award in 2006.