JOURNAL OF COMMUTATIVE ALGEBRA
Volume 1, Number 3, Fall 2009

SELECTED PROCEEDINGS FROM TWO SPECIAL SESSIONS ON COMMUTATIVE ALGEBRA SPONSORED BY AMERICAN MATHEMATICAL SOCIETY

Special Session of Free Resolutions
Fall 2007 AMS Central Section Meeting
De Paul University, Chicago, IL, October 5–6, 2007

Most of the talks in the Special Session on Free Resolutions were on graded finite free resolutions, infinite free resolutions over local rings, and Hilbert functions. The idea to associate a free resolution to a finitely generated module was introduced by Hilbert. Since then a lot of progress has been made on studying the structure of free resolutions and on using them in applications in Commutative Algebra, Algebraic Geometry, Combinatorics, Computational Algebra, Non-Commutative Algebra, and other mathematical fields. This has been a very active area of recent research. The Special Session on Free Resolutions provided a forum for the commutative algebraists working on resolutions (and related topics) to meet, present their latest results, and learn new techniques through formal talks and informal discussions. It also provided them with an opportunity to exchange open problems, share ideas, and explore in new directions. We had a lively exchange of ideas and methods that will foster further research.

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DOI:10.1216/JCA-2009-1-3-339