

Progress In Commutative Algebra 1

[DOWNLOAD HERE](#)

1;Preface;6 2;Boij-Sderberg Theory: Introduction and Survey;14 2.1;1 The Boij-Sderberg Conjectures;18
2.1.1;1.1 Resolutions and Betti Diagrams;18 2.1.2;1.2 The Positive Cone of Betti Diagrams;19 2.1.3;1.3
Herzog-Khl Equations;20 2.1.4;1.4 Pure resolutions;21 2.1.5;1.5 Linear Combinations of Pure
Diagrams;22 2.1.6;1.6 The Boij-Sderberg Conjectures;24 2.1.7;1.7 Algorithmic Interpretation;25 2.1.8;1.8
Geometric Interpretation;25 2.2;2 The Exterior Facets of the Boij-Sderberg Fan and Their Supporting
Hyperplanes;26 2.2.1;2.1 The Exterior Facets;26 2.2.2;2.2 The Supporting Hyperplanes;28 2.2.3;2.3
Pairings of Vector Bundles and Resolutions;34 2.3;3 The Existence of Pure Free Resolutions and of
Vector Bundles with Supernatural Cohomology;37 2.3.1;3.1 The Equivariant Pure Free Resolution;37
2.3.2;3.2 Equivariant Supernatural Bundles;42 2.3.3;3.3 Characteristic Free Supernatural Bundles;42
2.3.4;3.4 The Characteristic Free Pure Resolutions;43 2.3.5;3.5 Pure Resolutions Constructed from
Generic Matrices;46 2.4;4 Cohomology of Vector Bundles on Projective Spaces;48 2.4.1;4.1 Cohomology
Tables;48 2.4.2;4.2 The Fan of Cohomology Tables of Vector Bundles;50 2.4.3;4.3 Facet Equations;51
2.5;5 Extensions to Non-Cohen-Macaulay Modules and to Coherent Sheaves;54 2.5.1;5.1 Betti Diagrams
of Graded Modules in General;55 2.5.2;5.2 Cohomology of Coherent Sheaves;56 2.6;6 Further Topics;58
2.6.1;6.1 The Semigroup of Betti Diagrams of Modules;58 2.6.2;6.2 Variations on the Grading;62
2.6.3;6.3 Poset Structures;63 2.6.4;6.4 Computer Packages;63 2.6.5;6.5 Three Basic Problems;64
3;Hilbert Functions of Fat Point Subschemes of the Plane: the Two-fold Way;68 3.1;1 Introduction;68
3.2;2 Approach I: Nine Double Points;71 3.3;3 Approach I: Points on Cubics;80 3.4;4 Approach II: Points
on Cubics;87 4;Edge Ideals: Algebraic and Combinatorial Properties;98 4.1;1 Introduction;98 4.2;2
Algebraic and Combinatorial Properties of Edge Ideals;99 4.3;3 Invariants of Edge Ideals: Regularity,
Projective Dimension, Depth;103 4.4;4 Stability of Associated Primes;117 5;Three Simplicial
Resolutions;140 5.1;1 Introduction;140 5.2;2 Background and Notation;141 5.2.1;2.1 Algebra;141
5.2.2;2.2 Combinatorics;142 5.3;3 The Taylor Resolution;143 5.4;4 Simplicial Resolutions;145 5.5;5 The
Scarf Complex;148 5.6;6 The Lyubeznik Resolutions;149 5.7;7 Intersections;1515.8;8 Questions;152 6;A
Minimal Poset Resolution of Stable Ideals;156 6.1;1 Introduction;156 6.2;2 Poset Resolutions and Stable

Ideals;160 6.3;3 The Shellability of PN;163 6.4;4 The topology of PN and properties of D (PN);168 6.5;5 Proof of Theorem 2.4;173 6.6;6 A Minimal Cellular Resolution of R/N;176 7;Subsets of Complete Intersections and the EGH Conjecture;180 7.1;1 Introduction;180 7.2;2 Preliminary Definitions and Results;181 7.2.1;2.1 The Eisenbud-Green-Harris Conjecture and Complete Intersections;181 7.2.2;2.2 Some Enumeration;184 7.3;3 Rectangular Complete Intersections;186 7.4;4 Some Key Tools;190 7.4.1;4.1 Pairs of Hilbert Functions and Maximal Growth;190 7.4.2;4.2 Ideals Containing Regular Sequences;191 7.5;5 Subsets of Complete Intersections in P2;192 7.6;6 Subsets of C.I. (2, d2,d3) with d2 = d3;194 7.7;7 Subsets of C.I. (3, d2, d3) with d3 = d2;199 7.8;8 An Application: The Cayley-Bacharach Property;207 8;The Homological Conjectures;212 8.1;1 Introduction;212 8.2;2 The Serre Multiplicity Conjectures;214 8.2.1;2.1 The Vanishing Conjecture;217 8.2.2;2.2 Gabber's Proof of the Nonnegativity Conjecture;218 8.2.3;2.3 The Positivity Conjecture;219 8.3;3 The Peskine-Szpiro Intersection Conjecture;220 8.3.1;3.1 Hochster's Metatheorem;222 8.4;4 Generalizations of the Multiplicity Conjectures;224 8.4.1;4.1 The Graded Case;224 8.4.2;4.2 The Generalized Rigidity Conjecture;227 8.5;5 The Monomial, Direct Summand, and Canonical Element Conjectures;228 8.6;6 Cohen-Macaulay Modules and Algebras;230 8.6.1;6.1 Weakly Functorial B EAN/ISBN : 9783110250404 Publisher(s): De Gruyter Format: ePub/PDF Author(s): Francisco, Christopher - Klingler, Lee C. - Sather-Wagstaff, Sean - Vassilev, Janet C. - Clark, Timothy B. P. - Cooper, Susan M. - Flystad, Gunnar - Geramita, Anthony V. - Harbourne, Brian - Hummel, Livia - Leuschke, Graham J. - Mermin, Jeff - Migliore, Juan C. - Morey, Susan - Roberts, Paul C. - Villarreal Rodriguez, Rafael Heracio - Yao, Yongwei

[DOWNLOAD HERE](#)

Similar manuals:

[Progress In Commutative Algebra 1](#)

[Progress In Commutative Algebra 2](#)