

# Contents

<i>Preface</i>	iii
<i>Contributors</i>	v
Introduction <i>E. Ballico</i>	1
Remarks on Numerically Positive and Big Line Bundles <i>Mauro C. Beltrametti and Andrew J. Sommese</i>	9
A Report on Fano Manifolds of Middle Index and $b_2 \geq 2$ <i>Jaroslav Wiśniewski</i>	19
Order Sequences and Rational Curves <i>Eduardo Esteves and Masaaki Homma</i>	27
Classification of Smooth Congruences with a Fundamental Curve <i>E. Arrondo, M. Bertolini, and C. Turrini</i>	43
On a Result of Zak–L’vovsky <i>Lucian Bădescu</i>	57
On Logarithmic Bundles of $P^n$ in Positive Characteristic <i>E. Ballico, F. Giovanetti, and B. Russo</i>	75
Trisecant Formulas for Smooth Projective Varieties <i>Lothar Göttsche</i>	81
Derived Triangles and Differential Systems <i>Robert Speiser</i>	97
Computing Gaps Sequences at Gorenstein Singularities <i>Letterio Gatto</i>	111

On the Weierstrass Weights at Gorenstein Singularities <i>Fabrizio Ponzà</i>	129
Weierstrass Loci and Generalizations, I <i>Letterio Gatto</i>	137
Weierstrass Loci and Generalizations, II <i>E. Ballico</i>	167
A Problem of Trigonalality for Some Fano Varieties <i>E. Ambrogio and L. Picco Botta</i>	175
Families of Singular Meromorphic Foliations <i>E. Ballico</i>	181
On Stable Sheaves on Algebraic Surfaces <i>E. Ballico</i>	187
Cohomology of Generic Rank 2 Stable Bundles on Fano 3-folds of Index 2 <i>Edoardo Ballico and Rosa Miró-Roig</i>	197
Linear Series of Low Degree on Plane Curves and the Castelnuovo Function <i>Luisella Caire</i>	215
Rational Curves on Calabi-Yau Manifolds: Verifying Predictions of Mirror Symmetry <i>Sheldon Katz</i>	231