

Contents

Preface	v
General Introduction	xi
1 YOUNG TABLEAUX AND DETERMINANTAL POLYNOMIALS IN BINOMIAL COEFFICIENTS	1
1. Introduction	1
2. Notation and Terminology	4
3. Summation Lemmas	63
4. Binomial Lemmas	93
2 ENUMERATION OF YOUNG TABLEAUX	159
5. Preparation for Counting Tableaux	159
6. Conditional Equivalence of Certain Determinantal Polynomials of Any Width	184
7. Equivalence of Certain Determinantal Polynomials of Width 2	194
8. Recursive Relations	254
9. Counting Tableaux	301
3 UNIVERSAL DETERMINANTAL IDENTITY	312
10. Informal Discussion	312
11. Preview	327
12. Laplace Development of a Determinant	339
13. The Basic Case	352
14. Castification and the Maximal Size Case	364
15. Unification and the Mixed Size Case	377
16. The Full Depth Case	414
17. Partial Order and the Full Depth Case	432
18. Content and the Full Depth Case	433
19. An Alternative Treatment of the Full Depth Case	435

4	APPLICATIONS TO IDEAL THEORY	443
20.	Hilbertian Ideals and Generalized Second Fundamental Theorem of Invariant Theory	443
	Notation	495
	Index	503