

TABLE OF CONTENTS

	<u>Page</u>
Chapter 1. A STRATIFICATION OF THE HILBERT SCHEME	1
1A. Summary	2
1B. Standard Generators for an Ideal in R when $\text{char } k = 0$	6
Chapter 2. Z_T AND G_T IN THE CASE $\text{char } k = 0$	17
Chapter 3. Z_T AND G_T WHEN $\text{char } k = p$	31
3A. Every Ideal has a Normal Pattern: Z_T and G_T when $r = 2$, $\text{char } k > T $	31
3B. Low Characteristics, $\text{char } k < T $; Weak-Normal Patterns	35
Chapter 4. VECTOR SPACES OF FORM, LOCAL PARAMETERS ON THE HILBERT SCHEME	49
4A. Normal Presentations	50
4B. Vector Spaces of Forms	55
4C. Order on the Types	66
4D. Local Parameters on the Hilbert Scheme	68
Chapter 5. IRREDUCIBILITY OF $\text{Hilb}^n R$, AFTER BRIANÇON	79
5A. Outline of Briançon's proof; $\text{char } k = p$	81
5B. Comments on the real case	92
Chapter 6. PROBLEMS AND COMMENTS	97
BIBLIOGRAPHY	105
INDEX OF THEOREMS, PROPOSITIONS, LEMMAS	109