

Thesis — Results outputed  
— end

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Background — Alg. Geom

- Dimension, degree, conic, projective space  
singular locus
- Segre embedding  $\mathbb{P}^3 \times \mathbb{P}^3 \hookrightarrow \mathbb{P}^{3^2-1}$
- primary decomposition  
Hilbert Nullstellatz — ?
- Point Scheme of a Regular Algebra  
p.30 of NC Algebraic Geometry

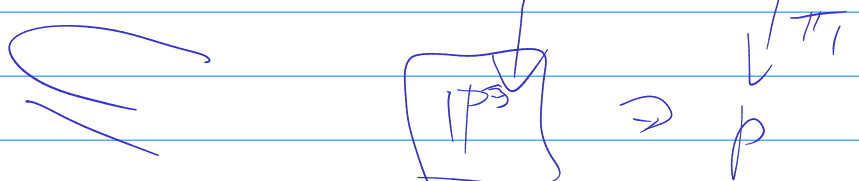
I-Curves Aug. 31

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— Pym Thesis, pdf  
≈ Galois — lots of points  
— random

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$A \xrightarrow{\text{alg}} P_A = \text{Pt scheme of } A \subseteq \mathbb{P}^3 \times \mathbb{P}^3 \xrightarrow{\pi_1} \mathbb{P}^3 \xrightarrow{\pi_1} p$



$\mathbb{P}^{15}$   
 $\leadsto S = k[\cancel{x}, w, z, \dots]$   
 $= k[x_{00} \dots x_{33}]$

$\mathbb{P}^3 \times \mathbb{P}^3 \hookrightarrow \mathbb{P}^{42-1}$   
 earlier  
 $\mathbb{P}^3 \times \mathbb{P}^3 \subseteq \mathbb{P}^{15}$   
 $(p, q) \mapsto$   
 vectors  $\rightarrow$  matrices  
 $(a, b) \times (c, d) \rightarrow$  outer product  
 $\begin{pmatrix} ac & bc \\ ad & bd \end{pmatrix}$

$R = k[\cancel{x}, h, c, d]$   
 $\text{map}(R, S)$   
 $\text{map}(S, R, \{x_{00}, \dots, x_{33}\})$   
 $T = \text{ideal from relations}$   
 $T_{\text{proj}} = \text{preimage} - \text{proj } T$   
 Analyse  $T_{\text{proj}} \leftarrow \text{different?}$