

THE DIMENSION OF THE HILBERT SCHEME OF SPECIAL THREEFOLDS

MARIA LUCIA FANIA

In this talk I will report on a joint work with Gian Mario Besana. We study the Hilbert scheme of 3-folds in \mathbb{P}^n , $n \geq 6$ that are scrolls over \mathbb{P}^2 or over the smooth quadric surface $\mathbf{Q} \subset \mathbb{P}^3$ or that are quadric or cubic fibrations over \mathbb{P}^1 . All known such threefolds of degree $7 \leq d \leq 11$ are shown to correspond to smooth points of an irreducible component of their Hilbert scheme, whose dimension is computed.

The relation between such an irreducible component and the locus of good determinantal subschemes in \mathbb{P}^n , $n \geq 6$ is also investigated.

MARIA LUCIA FANIA, DIPARTIMENTO DI MATEMATICA, UNIVERSITÀ DEGLI STUDI DI
L'AQUILA, VIA VETOIO LOC. COPPITO, 67100 L'AQUILA, ITALY
E-mail address: fanial@univaq.it