SEMINARIO DI GEOMETRIA

21 Settembre 2016,   h.15.00-16.00

Politecnico di Torino,

Dipartimento di Scienze Matematiche,

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Instanton bundles on the flag variety $F(1,2)$

Instanton bundles on $\mathbb{P}^3$ were defined as the algebraic counterpart to $SU(2)$-connections with self-dual curvature on the real sphere S^4. Their study prompted the development of many techniques that have become central in algebraic geometry (monads, loci of jumping lines...). In recent work by Faenzi, Kuznetsov and Sanna, Instanton bundles have been defined and studied in other Fano threefolds of Picard number one. Motivated by the fact that the flag variety $F(1,2)$ is the only case, besides $\mathbb{P}^3$, of projective twistor space associated to a real 4-manifold, we pursue early work by Donaldson and Buchdahl to study instanton bundles on this Fano threefold, underlining the similarities and differences with the classical case. Work in progress with F. Malaspina and S. Marchesi.