M. Rost:

On splitting varieties for 3-symbols mod 3

Consider a symbol $\{a_1, a_2, a_3\} \in K_3^M F/3$. Let $A = (a_1, a_2)$ be the degree 3 algebra given by a_1, a_2. Then a generic splitting variety for $\{a_1, a_2, a_3\}$ is given by

$$Z = \{\, x \in A \mid \mathrm{Nrd}(x) = a_3 \,\}.$$

Let $\bar{Z}$ be a smooth compactification of Z. Using the theory of exceptional Jordan algebras one can show that the direct image maps ($d = \dim Z = 8$)

$$H^d(\bar{Z}; \mathcal{K}_{d+i}) \to K_i F$$

are injective for $i = 0, 1$.

S. Saito:

Filtration on Chow groups
and generalized normal functions

Let $X \xrightarrow{f} S$ be a projective smooth morphism of non-singular algebraic varieties. We define a map

$$\rho^{r,\nu}_{X/S} \colon F^\nu_S \, \mathrm{CH}^r(X) \to \Gamma(S, DJ^{r,\nu}_{X/S}).$$

Here $\mathrm{CH}^r(X)$ is the Chow group of cycles of codimension r in X, $F^\nu_S \, \mathrm{CH}^r(X)$ ($\nu \geq 0$) is a filtration which is a relative version of Bloch-Beilinson filtration, $DJ^{r,\nu}_{X/S}$ is a sheaf on S_{an} and $\Gamma(S, DJ^{r,\nu}_{X/S})$ is the space of the sections which are called generalized normal functions. For $\nu = 1$, $F^1_S \, \mathrm{CH}^r(X)$ is the subgroup of cycles homologically equivalent to zero fiberwise and $\rho^{r,1}_{X/S}$ is the classical map associating normal functions due to Griffits. We investigate $\rho^{r,\nu}_{X/S}$ in the case that F is the universal family of complete intersections and show a modest generalization of Abel's theorem.

V. Voevodsky:

Milnor's conjecture

Abstract not provided by the speaker.