# SFB–Seminar

Am Montag, den 16.12.1996 findet folgender Vortrag statt:

## Chow Varieties and a better Cup Product

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Der Vortrag beginnt um 16:00 c.t. Uhr im Raum V2-205.

## Abstract

Subvarieties of projective spaces are irreducible sets of common zeros of finitely many homogeneous polynomials. To each subvariety we can assign one homogeneous form, the Chow form of the variety.
In this way we obtain a graded partition of the free semigroup which is generated by subvarieties of fixed dimension. Each part itself is an algebraic set called Chow variety. The *deg* 1 components can be viewed as the Grassmannian manifold given by the Plücker embedding. Between these *deg* 1 components we have a pairing given by a direct sum of linear subspaces. This pairing can be extended to the join pairing on Chow varieties.
In case the underlying field is $\mathbb{C}$ a suitably stabilized Chow variety becomes homotopy equivalent to a product of Eilenberg-MacLane spaces where the join pairing defines a "new" infinite loop space structure. Then the inclusion of the stable Grassmannian manifold represents the total Chern class map which becomes an infinite loop map in this way.
These constructions will be explained using methods of resultants.

Es gibt Kaffee und Tee im Blauen Salon schon um 15:30 Uhr.

G. Röhrle