

## Stefan Schreieder: **The construction problem for Hodge numbers**

What are the possible Hodge numbers of a smooth complex projective variety? We construct enough varieties to show that many of the Hodge numbers can take all possible values satisfying the constraints given by Hodge theory. For example, the  $k$ -th cohomology group of a smooth complex projective variety can take arbitrary Hodge numbers if  $k$  is odd; the same result holds for even  $k$  as long as the given middle Hodge number is larger than some quadratic bound in  $k$ .