

**Angus Macintyre: On quotients of models of Peano arithmetic by principal ideals.**

Zilber raised a general question about quotients of models of true arithmetic by principal ideals. Can such a quotient ring interpret arithmetic? The answer is no, even in the Peano arithmetic setting. There are various cases, depending on the nature of  $m$ , a generator of the ideal. When  $m$  is prime, Ax's work gives a clear picture of the definability theory of the quotient. When  $m$  is a possibly nonstandard power of a prime, the matter is trickier, and relates to NTP2. The general case involves an internal version of the Mostowski-Feferman-Vaught theorem on products. This is joint work with Paola D' Aquino.