

1096-13-1415 **David Eisenbud*** (de@msri.org). *Residual Intersections and Duality*. Preliminary report.

Some 25 years ago Duco van Straten proved a surprising generalization of a basic result on duality: if $J=(f_1,\dots,f_d)$ is an ideal of dimension 1 in a d -dimensional power series ring, and I is the unmixed part of J , then I/J is self-dual. Around the same time, Craig Huneke and Bernd Ulrich showed that the canonical module of a (sufficiently nice) residual intersection could be expressed in terms of certain powers of the ideals involved. Ulrich and I recently understood how these results fit together in a general duality theorem for (sufficiently nice) residual intersections. I will explain this group of results. (Received September 15, 2013)