AIDEN BRUEN, University of Calgary,Mathematics and Statistics
Co-tangency sets and a configuration theorem

In the projective plane W over a field F let S be a set of points. Assume also that there is a 1-1 [injective] mapping f from S into the lines of W satisfying the following two properties.

A. For P in $S, f(P)$ does not contain P.

B. If P, Q are distinct points of S, then the points P, Q and R [which is the intersection of $f(P)$ with $f(Q)$] are collinear. Then S is called a CO-TANGENCY set in W.

In this lecture we present a structural result for co-tangency sets. Following this we present some applications including a classical result due initially to M. O. Nan.