962-14-134 **Gian Mario Besana*** (gbesana@emunix.emich.edu), Department of Mathematics, Indiana University Northwest, 3400 Broadway, Gary, IN 46408, **Alberto Alzati**, Dipartimento di Matematica, Via Saldini 50, Milano 20133, and **Marina Bertolini**, Dipartimento di Matematica, Via Saldini 50, 20133 Milano, Italy. *Ruled surfaces contained in quadric cones in five dimensional complex projective space.* Preliminary report.

A projective variety X is called *projectively normal* if its homogeneous coordinate ring is integrally closed. More geometrically, this means that hypersurfaces of any degree $t \geq 1$, in the ambient projecive space, cut on X complete linear systems. The hardest step in establishing the projective normality of a variety is usually the case $t = 2$. This question can be addressed by understanding how many quadric hypersurfaces contain the given variety. In this context, the present paper examines ruled surfaces in $\mathbb{P}^5$ which are contained in singular quadric hypersurfaces. A complete classification is given for ruled surfaces contained in quadrics of rank 5 and a series of general results are found in the cases of lower ranks. Part of the classification is achieved by first finding upper bounds for a list of numerical invariants and subsequently having Maple perform the remaining finite number of numerical checks. (Received August 08, 2000)