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*Syzygies of ample line bundles on fake projective planes*

We will talk about the syzygies of the embeddings defined by the ample line bundles on a fake projective plane. The syzygies are studied in terms of the so-called  $N_p$  properties, in which for instance the  $N_0$  property is equivalent to projective normality and the  $N_1$  property is the same as projective normality together with the generation of vanishing ideal by quadratic polynomials. We will give an explicit lower bound  $M_p$  such that  $L^m$  will satisfy the  $N_p$  property for any ample line bundle  $L$  on a fake projective plane and when  $m$  is at least  $M_p$ . This is a joint work with Sai-Kee Yeung.