

1030-51-91

Sai-Kee Yeung* (yeung@math.purdue.edu), Department of Mathematics, Purdue University,
West Lafayette, IN 47906. *Fake projective planes and fake Hermitian symmetric spaces.*

The main theme of the talk is about classification of fake projective planes. We would mention the geometric techniques in proving arithmeticity of the associated lattice due independently to Bruno Klingler and myself, explain the main classification and constructions of Gopal Prasad and myself using number theoretical and algebraic group theoretical techniques, and introduce results of Martin Deraux and myself on a problem of Toledo related to Deligne-Mostow surfaces. We would also mention results of Gopal Prasad and myself on partial classification and construction of other fake Hermitian symmetric spaces. (Received July 21, 2007)