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Hon Leung Lee* (h1lee@uw.edu). *Problems in Algebraic Vision.*

Reconstructing a three-dimensional world using two-dimensional images from multiple cameras is a fundamental problem in computer vision. We rewrite the existence of such reconstruction from two views as the existence of a common real solution of a bunch of linear equations and polynomial equations/inequalities. In this talk we discuss the recent progress of certifying the existence of such real solution. This is a joint work with Sameer Agarwal, Bernd Sturmfels and Rekha R. Thomas. (Received February 28, 2017)