

1146-14-294

Timothy Duff, Kathlén Kohn, Anton Leykin* (anton.leykin@gmail.com) and **Tomas Pajdla**. *Minimal problems in multiview 3D reconstruction*. Preliminary report.

We consider a problem of relative camera pose recovery from points and lines in m views. In addition to classical point-point and line-line-line correspondences we use incidence correspondences in our framework, which result from features corresponding to world points lying on the features corresponding to world lines. The class of *minimal problems* is notable due to their potential practicality in engineering applications.

This talk will introduce several combinatorial encodings for 3D reconstruction problems, define minimality in the language of algebraic geometry, enumerate all minimal problems for $m = 3$ internally calibrated cameras, and discuss possible generalizations including problems for $m = \infty$ (countably many views). (Received January 25, 2019)