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RECONSTRUCTION FROM TWO DIGITAL IMAGES – EPIPOLAR GEOMETRY

Abstract

A central problem in computer vision is how to recover a 3D structure from a collection of 2D images. For more than 90 years this has been a standard problem of Descriptive Geometry and Photogrammetry (Remote Sensing), too. It will be demonstrated to which extent results from Descriptive Geometry can contribute to „Epipolar Geometry“, which is the new name for the geometry of multiple images. Of course, the previous graphical methods have to be replaced by numerical methods. But with the aid of both, software for measuring digital images and any computer algebra system, it is possible to solve such reconstruction problems 'manually'.

Keywords

Epipolar Geometry, Digital Photogrammetry

