Camera calibration and 3D reconstruction (calib3d module)

Although we get most of our images in a 2D format they do come from a 3D world. Here you will learn how to find out 3D world information from 2D images.

- **Create calibration pattern**

  Languages: Python

  Compatibility: > OpenCV 2.0

  Author: Laurent Berger

  You will learn how to create some calibration pattern.

- **Camera calibration with square chessboard**

  Languages: C++

  Compatibility: > OpenCV 2.0

  Author: Victor Eruhimov

  You will use some chessboard images to calibrate your camera.

- **Camera calibration With OpenCV**

  Languages: C++

  Compatibility: > OpenCV 2.0

  Author: Bernát Gábor

  Camera calibration by using either the chessboard, circle or the asymmetrical circle pattern. Get the images either from a camera attached, a video file or from an image collection.

- **Real Time pose estimation of a textured object**

  Languages: C++

  Compatibility: > OpenCV 2.0

  Author: Edgar Riba

  Real time pose estimation of a textured object using ORB features, FlannBased matcher, PnP approach plus Ransac and Linear Kalman Filter to reject possible bad poses.

- **Interactive camera calibration application**

  Compatibility: > OpenCV 3.1

  Author: Vladislav Sovrasov

  Camera calibration by using either the chessboard, chAruco, asymmetrical circle or dual asymmetrical circle pattern. Calibration process is continuous, so you can see results after each new pattern shot. As an output you get average reprojection error, intrinsic camera parameters, distortion coefficients and confidence intervals for all of evaluated variables.