

- camera calibration[J]. *Transducer and Microsystem Technologies*, 2008, 27(2):106-108. [郭进, 刘先勇. 机器视觉标定中的亚像素中心定位算法[J]. *传感器与微系统*, 2008, 27(2):106-108.] [DOI: 10.3969/j.issn.1000-9787.2008.02.035]
- [2] Dold J. Influence of large targets on the results of photogrammetric bundle adjustment[J]. *Int. Arch. Photogramm. Remote Sens.* 1996; 31:119–23.
- [3] Ahn S J, Warnecke H J, Kotowski R. Systematic Geometric Image Measurement Errors of Circular Object Targets: Mathematical Formulation and Correction[J]. *Photogrammetric Record*, 1999, 16(93):485–502. [DOI: 10.1111/0031-868X.00138]
- [4] Heikkila J, Silven O. A four-step camera calibration procedure with implicit image correction[C]// *Computer Vision and Pattern Recognition*, 1997. *Proceedings. 1997 IEEE Computer Society Conference on. IEEE*, 2002:1106. [DOI: 10.1109/CVPR.1997.60]
- [5] Liao X C, Feng W H. Determination of the Deviation Between the Image of a Circular Target Center and the Center of the Ellipse in the Image[J]. *Geomatics and Information Science of Wuhan University*, 1999, 24(3):235-239. [廖祥春, 冯文灏. 圆形标志及其椭圆构像中心偏差的确定[J]. *武汉大学学报(信息科学版)*, 1999, 24(3):235-239.] [DOI: 10.3321/j.issn:1671-8860.1999.03.011]
- [6] Zhang G, Wei Z. A position-distortion model of ellipse centre for perspective projection[J]. *Measurement Science & Technology*, 2003, 14(8):1420. [DOI: 10.1088/0957-0233/14/8/331]
- [7] Huang D M. Projection eccentric error of round target in close-range photogrammetry and simulation analysis[J]. *Engineering Construction*, 2011, 43(2):10-13. [黄道明. 近景摄影测量中圆形目标的投影偏心差及模拟分析[J]. *工程建设*, 2011, 43(2):10-13.] [DOI: 10.3969/j.issn.1673-8993.2011.02.003]
- [8] Li Z L, Liu M, Sun Y. Research on calculation method for the projection of circular target center in photogrammetry[J]. *Chinese Journal of Scientific Instrument*, 2011, 32(10):2235-2241. [李占利, 刘梅, 孙瑜. 摄影测量中圆形目标中心像点计算方法研究[J]. *仪器仪表学报*, 2011, 32(10):2235-2241.]
- [9] He D, Liu X, Peng X, et al. Eccentricity error identification and compensation for high-accuracy 3D optical measurement[J]. *Measurement Science & Technology*, 2013, 24(7):075402. [DOI: 10.1088/0957-0233/24/7/075402]
- [10] Zhang Z. A flexible new technique for camera calibration[J]. *IEEE Transactions on Pattern Analysis & Machine Intelligence*, 1998, 22(11):1330-1334.
- [11] Zhu H, Zeng X J. Sub-pixel edge detection algorithm of Zernike moments and least-squares ellipse fitting[J]. *Computer Engineering and Applications*, 2011, 47(17):148-150. [祝宏, 曾祥进. Zernike 矩和最小二乘椭圆拟合的亚像素边缘提取[J]. *计算机工程与应用*, 2011, 47(17):148-150.] [DOI: 10.3778/j.issn.1002-8331.2011.17.040]
- [12] Chen X W, Xu C H, Guo H T, et al. Universal Sub-pixel Edge Detection Algorithm Based on Extremal Gradient[J]. *Acta Geodaetica et Cartographica Sinica*, 2014(5):500-507. [陈小卫, 徐朝辉, 郭海涛, 等. 利用极值梯度的通用亚像素边缘检测方法[J]. *测绘学报*, 2014(5):500-507.]
- [13] Wu P, Xu H L, Song W L, et al. A nonlinear quartic image interpolation based subpixel edge detection algorithm[J]. *Journal of Harbin Engineering University*, 2015(2):243-247. [吴鹏, 徐洪玲, 宋文龙, 等. 基于非线性四阶图像插值的亚像素边缘检测算法[J]. *哈尔滨工程大学学报*, 2015(2):243-247.] [DOI: 10.3969/j.issn.1006-7043.201312057]
- [14] Sheng D W, He X F, Lv Y. A Cattle Iris Segmentation Method Based on Least Square Principle[J]. *Journal of Image and Graphics*, 2009, 14(10):2132-2136. [盛大玮, 何孝富, 吕岳. 基于最小二乘原理的牛眼虹膜分割方法[J]. *中国图象图形学报*, 2009, 14(10):2132-2136.] [DOI:10.11834/jig.20091036]
- [15] Shi S L, Yin D Y. Improved Real-time Grayscale Centroid Algorithm[J]. *Opto-Electronic Engineering*, 2013(12):18-24. [史少龙, 尹达一. 改进型灰度质心

实时算法研究[J]. 光电工程, 2013(12):18-24.]
[DOI: 10.3969/j.issn.1003-501X.2013.12.004]