

Machine Vision Lab



Overview

Machine Vision Lab is designed for laboratory and practical study in the field of machine vision.

Technologies of machine vision (digital image processing and analysis) are used for flow process automation, product quality control and parameters non-contact measurements of industrial process. Students can also study video analysis and use it to solve the basic tasks of machine vision, such as:

- Edge detection
- Pattern matching
- Dimensional measurements
- Reader function
- Optical character recognition

Course includes applying of all of the mentioned functions.

Hardware and software

- NI 1752 Smart Camera, lens, light ring
- Camera holder base
- Set of disks: position of the object, barcodes, contacts, linear dimensions, geometric shapes
- PC, display, keyboard, mouse
- Software CD

List of Labs

1. Study of edge detection function
2. The use of the edge detection function
3. Study of the pattern matching function
4. The use of the pattern matching function
5. Study of the dimensional measurements function
6. The use of the dimensional measurements function
7. Study of the reader function
8. Barcode Inspection
9. Study of the Optical Character Recognition function
10. The use of the Optical Character Recognition