## **Contents**

- Introduction with example application
- Development environment
- Image acquisition
- Image algebra and geometric operators
- Synthetic images
- Contrast manipulation
- Segmentation
- Labeling and blob measurement
- Linear filters
- Edge detection
- Binary morphology
- Non linear filters
- Distance and Hough Transforms
- 2D Camera calibration
- Fourier transform
- Color image processing
- Classification with neural networks
- Barcode identification (\* optional part)
- Infrared and thermal imaging (\* optional part)
- Robots and vision (\* optional part)
- Genetic algorithms (\* optional part)