



UNIVERSITÀ DEGLI STUDI DI PADOVA

ThermoBot project presentation
MANUFUTURE 2013,
6-8 October 2013, Vilnius, Lithuania

THERMOBOT



DI
DIPARTIMENTO
DI INGEGNERIA
DELL'INFORMAZIONE

INTELLIGENT AUTONOMOUS SYSTEMS LAB

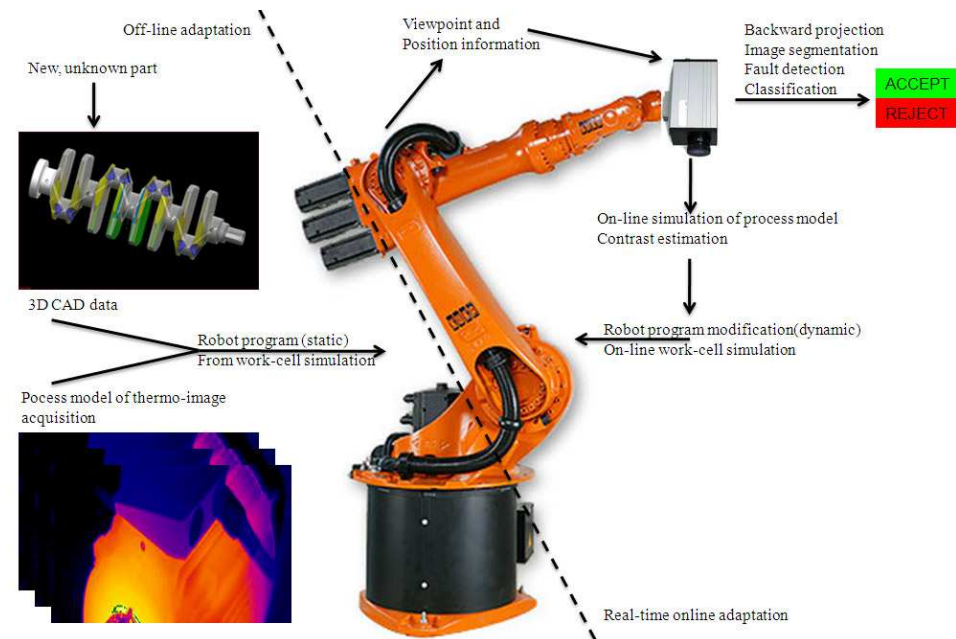




- Develop a fast, reliable and non-polluting quality inspection system for metal and carbon fiber parts
 - Based on heat transfer rather than particle inspection
 - Short inspection time
 - Can handle parts of complex geometry
 - Defects at micrometric scale
 - Deep knowledge of the inspection process (parts, workcell)

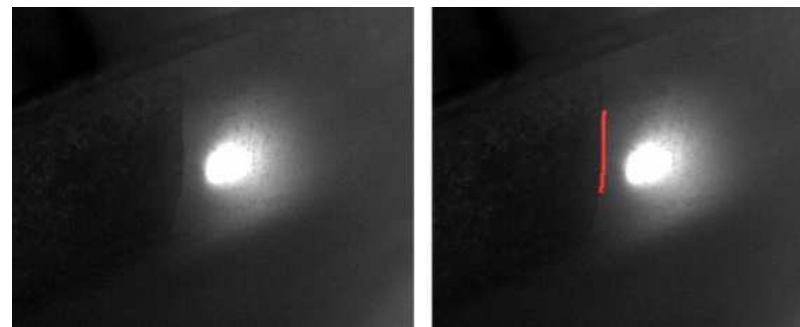


- Robot-driven process
- Thermal excitation methods:
 - Laser
 - Pulsed phase thermography
- Thermocamera
- Automatic path generation
- Autonomous path replanning based on defect classification output





- Complete simulation of the workcell
- Path planning for complete inspection of complex parts like a crankshaft
- Crack detection on metal parts
- Pulsed phase thermography being developed





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Project partners

IAS-LAB



InfraTec



BENTELER-SGL
AUTOMOTIVE COMPOSITES

BAM

TRIMEK
METROLOGICAL ENGINEERING

THERMOBOT

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