

# UNIVERSITY OF ZAGREB FACULTY OF CHEMICAL ENGINEERING AND TECHNOLOGY





# DIAGNOSTICS ADVANCED CONTROL PROCESS OPTIMIZATION







LABORATORY FOR AUTOMATION AND MEASUREMENTS

http://lam.fkit.hr

### **LABORATORY FOR AUTOMATION & MEASUREMENTS**

SIEMENS
Ingenuity for life

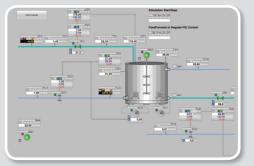
Teaching **measurements**, **basic** and **advanced process control**, **diagnostics** and **optimization**.

Supported by industrial controllers, SCADA systems and diagnostic tools. Simulation tools and 3D visualization.











### **SOFTWARE TOOLS**







**APROMON** – Process monitoring and diagnostics **PITOPS** – Identification, control tuning and optimization **SIMCET** – Process control analysis and simulation



- PID control loop tuning and optimization
- Process control analysis and simulation
- System identification
- Soft sensor design and application
- Advanced process control (APC) design and implementation
- Advanced batch process control
- Diagnostics, statistical analysis and predictive maintenance
- SCADA system design
- Process control education

## **INFRARED THERMOGRAPHY**

- Heat loss in plants and buildings
- Faults on electric installation and mechanical parts
- Leakage on heat equipment and piping

Infrared Training Center international certificates (ITC Level I & Level II)

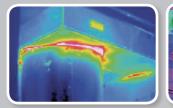


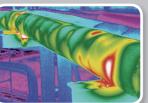


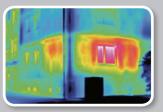


**SERVICES** 







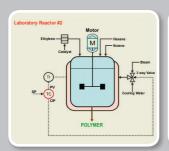


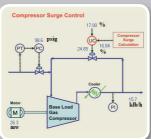


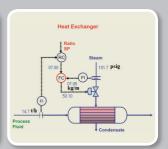
# **EDUCATION & TRAININGS**

**Practical process control courses** with case studies from the real plants (petrochemical, chemical, paper, pharmaceutical, food, beverage, cement industries, power plants, *etc.*) using industrial process **interactive simulator**:

APC-1	Process control fundamentals
APC-2	Advanced process control
APC-3	Process and control diagnostics and optimization
APC-4	Process measurement
APC-5	Batch process control and optimization
APC-6	Statistical process control







### **CONTACT**

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