

ANIE
AUTOMAZIONE



MECHATRONICS EXPLAINED BY COMPANIES

*Present and future of industrial
machines design*

WORKSHOP AGENDA

❖ OPENING SESSION

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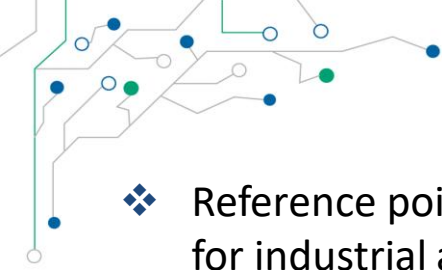
President of Mechatronics Group

❖ OEM SESSION

Case history: how the machine
manufacturer operates - IMA Group

❖ TECHNOLOGY PROVIDERS SESSION

Transmission and mechanical design	
Slot 1. Kinematics chain and dimensioning	LENZE ITALIA
Slot 2. Energy efficiency	ESA AUTOMATION
Safety and Security	
Slot 1. Safety	HEIDENHAIN ITALIANA - MITSUBISHI ELECTRIC
Slot 2. Cyber security	SIEMENS
Automation and Control	
Slot 1. Electrical design	SDPROGET - LAPP ITALIA
Slot 2. Motion control	SCHNEIDER ELECTRIC
Slot 3. Communication	B&R AUTOMAZIONE INDUSTRIALE
Simulation and virtualization	ROCKWELL AUTOMATION - SIEMENS
Logistics	SEW EURODRIVE - SICK



ANIE Automazione

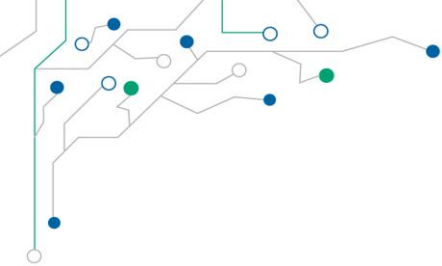
- ❖ Reference point for companies supplying advanced technological systems and solutions for industrial automation.
- ❖ Member companies are organized into working groups, distributed on two areas:

PRODUCT	SYSTEM
VARIABLE SPEED DRIVES	MECHATRONICS
COMPONENTS AND TECHNOLOGIES FOR MEASUREMENT AND CONTROL WG ENCODER, NETWORKING, RFID, SAFETY, WIRELESS, VISION SYSTEMS	INDUSTRIAL SOFTWARE
PROCESS CONTROL	REMOTE CONTROL SYSTEMS
HMI-IPC-SCADA	INTELLIGENT TRANSPORT SYSTEMS
PLC-I/O	
UPS	

- ❖ A network committed to supporting and promoting the technological excellence of the sector.
- ❖ At the forefront on issues of digitization and Industry 4.0.

Companies of Mechatronics Group





ANCONA
26 SETTEMBRE 2017
Mole Vanvitelliana



4ª edizione



LE TECNOLOGIE ABILITANTI

per la digitalizzazione 4.0 dell'industria

Sono già con noi:

B&R AUTOMAZIONE INDUSTRIALE · BALLUFF · BECKHOFF AUTOMATION · BONFIGLIOLI · BOSCH REXROTH ·
EPLAN SOFTWARE & SERVICE · ESA AUTOMATION · FESTO · HARTING · HEIDENHAIN ITALIANA ·
LAPP ITALIA · LENZE ITALIA · MITSUBISHI ELECTRIC EUROPE · NIDEC INDUSTRIAL AUTOMATION ITALY ·
OMRON ELECTRONICS · PANASONIC ELECTRIC WORKS ITALIA · PHOENIX CONTACT · RITTAL ·
ROCKWELL AUTOMATION · SEW-EURODRIVE · SICK · SIEMENS · WEIDMÜLLER · WITTENSTEIN



www.forumeccatronica.it





Production requirements

- ❑ Production of different, limited, high quality batches:
 - Flexible and quick configurability of machines
 - Reliability and low maintenance
 - Detection of process data and performance in the field

- ❑ Efficient and reliable new machine projects, reduce time to market:
 - Design approach with modular solutions
 - Easily adaptable and reconfigurable SW&HW platforms
 - Virtual prototyping and simulation



Smart Factory

Industry 4.0 gives direction to improve the plants' technological base
Some large technology areas for the Smart factory:

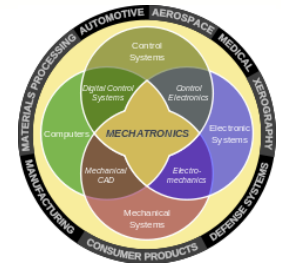
- Innovations that touch the heart of the manufacturing process:
 - more automated plants
 - smart solutions capable of offering high productivity, flexibility, efficiency
 - machines that interact with each other

- Innovations that support decisions to manage a factory:
 - systems to manage big data
 - IT solutions that allow operational management, eg. stocks and suppliers
 - solutions for managing risk: service monitoring on the line

The winning role of Mechatronics

In modern concept of **Smart factory**, mechatronic technologies play a Fundamental role with competitive impact:

- Mechatronic design means integrating technologies and solutions, but also **adopting new management methods and use of knowledge**.
- Engineering of more and more **reliable** and **versatile** machines, optimizing also the **prototyping phase with virtual simulations**.
- Production that ensures the optimization of resources, the reconfiguration flexibility and the use of energy with repercussions in terms of improving **production and energy efficiency**.
- Monitoring of parameters to perform in line with performance expectations and quality needs for **self-learning and continuous improvement**.





OEM SESSION

IMA GROUP

Davide Rossi

TECHNOLOGIES SESSION

1. Transmission & Mechanical design

- Kinematics & dimensioning
- Energy efficiency

4. Simulation & Virtualization

2. Safety & Security

3. Automation & control

- Electrical design
- Motion control
- Communication

5. Logistics



The workshop proceedings will be available
on www.anieautomazione.it

For the certificate of participation send an e-
mail to anieautomazione@anie.it