Cloud computing

Big data

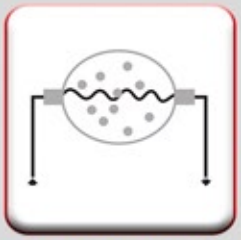
MediCon

MediCon Ingegneria s.r.l.

... but which data?

Sensor fusion

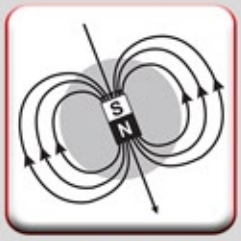
State of the art sensors *for real-time measuring of physical quantities* + Mathematical methods and Algorithms *to improve accuracy of measurements*



Optoelectronics

Accelerometes

Touch and proximity

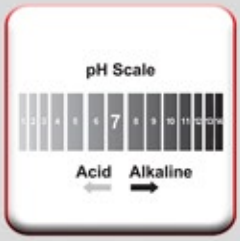


Magnetometers

Pressure sensors

Sensors

Gyroscopes



Chemicals and biologicals

Temperature sensors

Ultrasounds

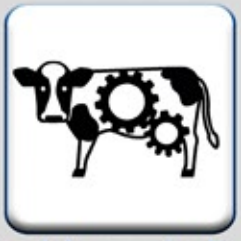
Wearables / Smart fabrics

Industry 4.0 / Smart factory

Applications

Smart farms

Home appliances



Precision agricolture

e-health

Transportation and Logistics

GOAL

- Improve comprehensions of physical phenomena through sensor data

KEY POINTS

- Use of state-of-the-art sensors, for real-time measuring of physical quantities
- Low noise and high precision analog hardware, to improve signal-noise ratio
- Mathematical methods and Algorithms, by which data from several different sensors are "fused" in order to:
  - to improve accuracy of measurements
  - to compute “something more" than could be determined by any one sensor alone
- Off-line modeling and simulation of real-time system
- Low power, low cost, and high performance microcontrollers, in order to implement sensor fusion into any real-time embedded system
- Integration of “Internet of everything” technologies, to transport data to the cloud for further processing

APPLICATIONS

- e-health
- Wearable / Smart fabrics
- Industry 4.0 / Smart Factory
- Smart Farms / Precision agriculture
- Transportation and Logistics
- Home appliances

EXAMPLES

- Data from accelerometer, magnetometers, gyroscopes and GPS may be fused in order to compute the dynamic motion of a device in three-dimensional space.
- Data from optical, electrical and chemical sensors can be combined to compute and monitor vital parameters.
- Capacitive, ultrasound and optical sensors data can be combined to measure filling status of containers of every shape and content.

MediCon

Measurement & digital Control

MediCon Ingegneria s.r.l.
Via dell'Artigianato, 13 - 40054 Budrio (BO) - Italy
Tel./FAX +39 051 692 63 98
www.mediconingegneria.it
© 2016 MediCon Ingegneria s.r.l.