

# La Manutenzione Predittiva esperienze, sfide, valutazioni

## 1

**CHALLENGES:**

- Working regime variability management
- Experimental run-to-failures cost reduction
- Fault interactions

**GOALS:**

- Fault localization
- Components Remaining Useful Life (RUL) prediction
- Probabilistic description of RUL

# DIGIMAN

Diagnostics and prognostics of tools and components by means of Digital Twin techniques

## 2

### Surfaces Characterization

**CHALLENGES:**

- Unseen working conditions management
- Unseen tools management

**GOALS:**

- Process quality feedback and control
- Tool damage/wear identification

**Artificial Intelligence**

## 3

### Tool Wear

**CHALLENGES:**

- Working regime variability management
- Experimental run-to-failures cost reduction
- New tool geometries

**Process modelling**

**Physical features**

**GOALS:**

- Tool wear quantification and prediction
- Transversality with respect to the process: milling, turning, drilling...
- Probabilistic description of RUL