

TITLE

“Self-diagnosis and total fault prediction solutions based on data and signals in autonomous machines for structural steel processing”

TOPIC

This research project is in collaboration with SCHNELL SpA (Pesaro, Italy), its objective is to develop advanced methodologies of condition monitoring and predictive maintenance to estimate the wear of the automatic machineries, mainly in their critical components such as tools, motor operated devices, actuators, mechanical or electrical devices, etc. in order to go towards self-diagnosis and total fault prediction of these machines. Further investigations and results should relate to solutions to predict production and machines needs without human intervention. Algorithms and solutions must be studied in a broad spectrum considering multiple approaches, such as signal-based, data-driven, machine learning, model-based nonlinear control methods and analysis, and so on, the solutions must be focused on forecasting the residual useful life of the devices and machines in more general sense.

REFERENCE PERSONS

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Type of scholarship:

DM 117/2023 – Project on PNRR (Italy's Recovery and Resilience Plan)

Study and research period outside the Hosting Institution:

Study and research period at the company:
SCHNELL SpA (Pesaro, Italy)