

Participation to research projects:

(1) **R3-POWERUP**: 300mm Pilot Line for Smart Power and Power Discretes

- Partners: 35 (14 Member States)
- Start date: 01/11/2017
- End date: 30/04/2021
- Funded under: H2020-EU.2.1.1.7.
- Project website: <https://r3powerup.eu/>
- POLITO role: partner

My Role:

A. Predictive Maintenance.

Implement a machine learning-based framework to process and analyze data collected from the production line in order to build a predictive maintenance (PM) model. This model, once integrated into the Fab-Automation platform, will allow predicting up-coming failures, at production time, and hence to optimize the maintenance costs.

B. Yield Optimization.

Implement a smart classification framework able to extract a unique set of signatures during a product testing period. Checking for possible correlations with the production flow/history in order to identify the possible root cause of failure.

(2) **MADEin4**: Next-generation metrology tools, machine learning methods, and applications in support of Industry 4.0 high volume manufacturing in the semiconductor manufacturing industry.

- Partners: 47
- Start date: 01/09/2018
- End date: 30/08/2021
- Funded under: H2020-EU.2.1.1.7. (ECSEL-IA)
- Project website: semi.org/eu/MADEin4
- POLITO role: partner

My role:

- ##### A. Implement an end-to-end solution to process and analyze during manufacturing process, in order to build a predictive maintenance model. The main objective is to improve the ability to predict up-coming failures optimizing the maintenance costs.