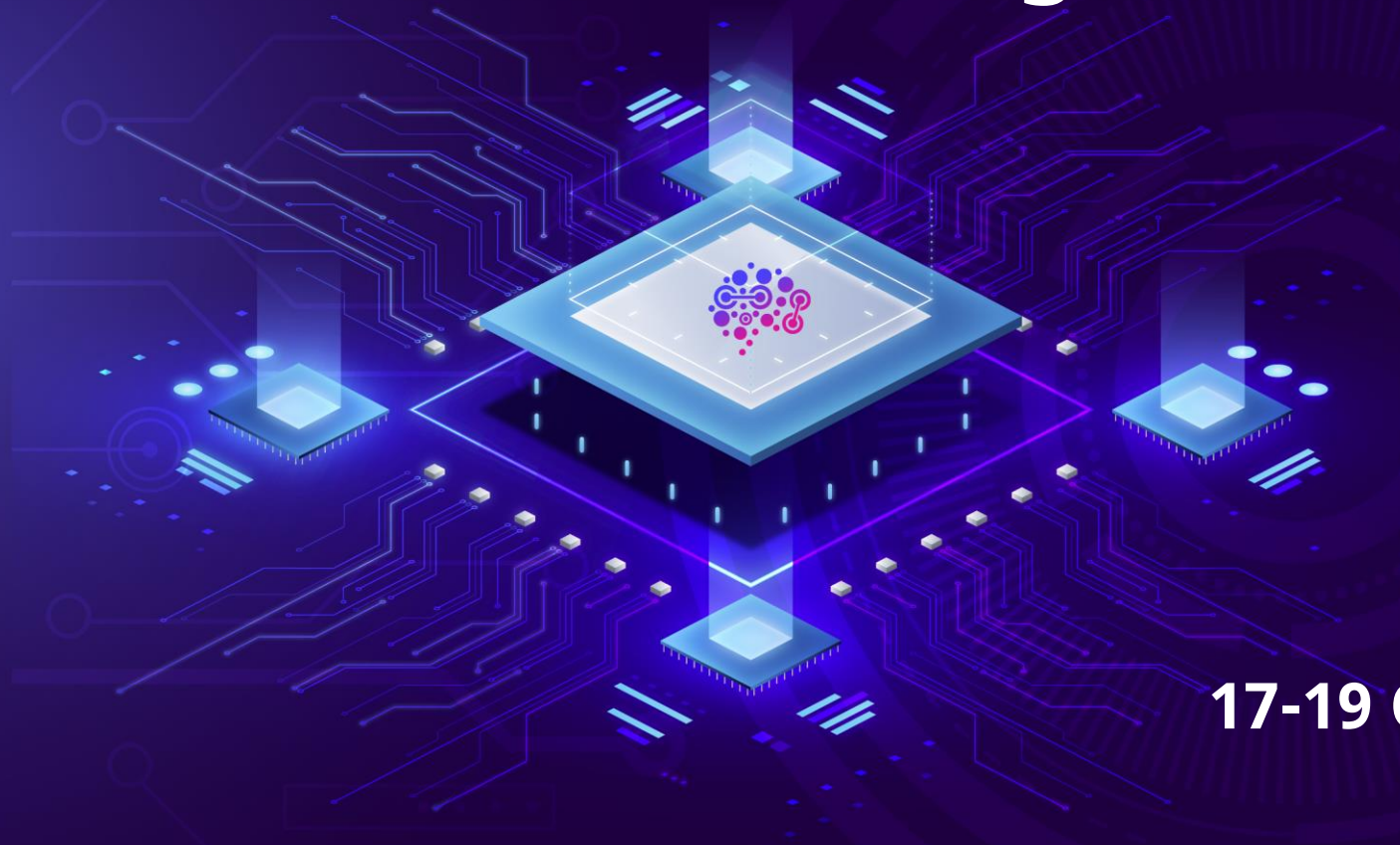
European Conference on EDGE AI Technologies and Applications - EEAI



Advancing emerging edge AI technologies and driving next generation intelligent applications.

17-19 October 2023, Athens, Greece

European Conference on EDGE AI Technologies and Applications - EEAI

Artificial Intelligence in Manufacturing leading to Sustainability and Industry5.0

Thomas Gutt,Infineon Technologies AG, Germany

17-19 October 2023 Athens, Greece

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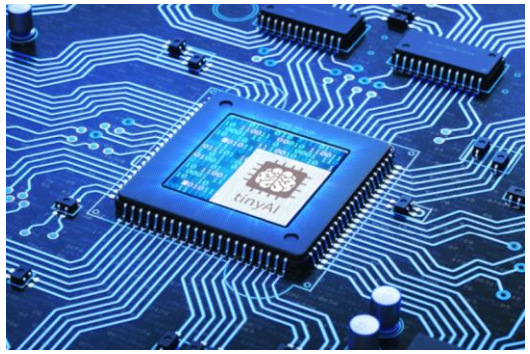
Project Overview



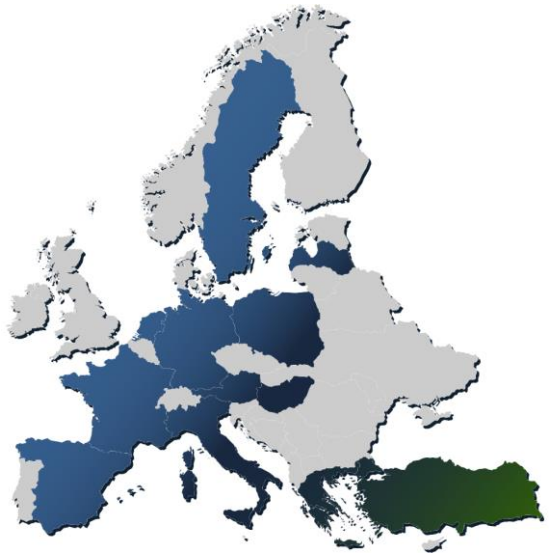
AI Technology
In Manufacturing

Sustainability,
a Challenge to
Industry

From Industry4.0
to Industry5.0

53 Partner
Budget: 70Mio€
20 use cases from
9 industrial domains
7080 PMs = 590 PJ

AIMS 5.0



One apprach across Europe
keep production in Europe

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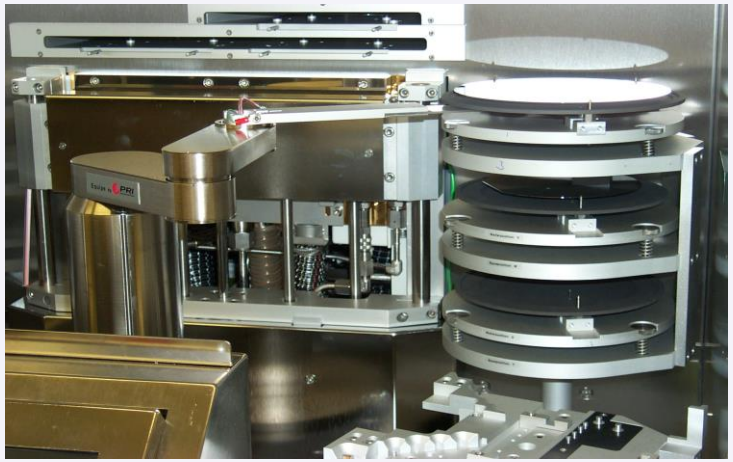
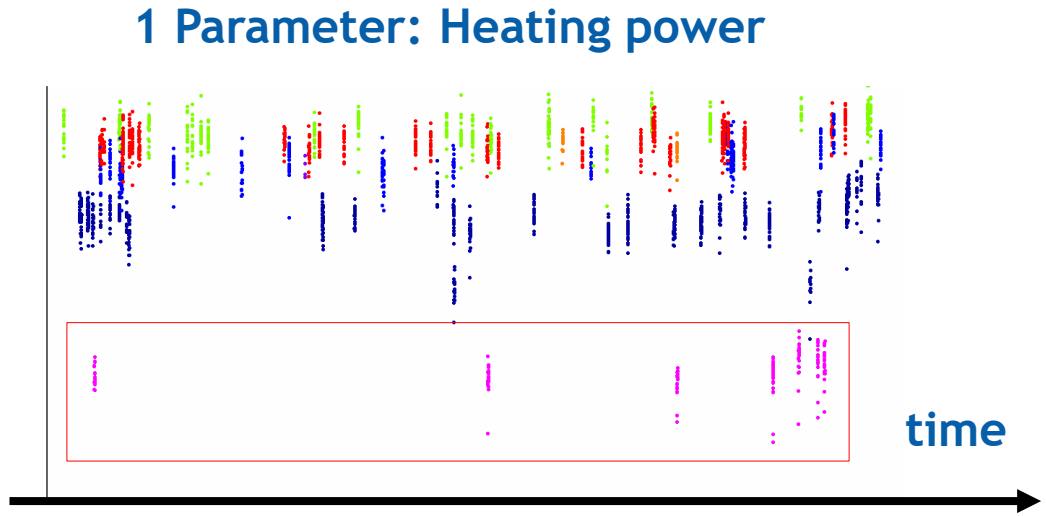
Why AI in Semiconductor

Single equipment
Furnace in semiconductor production



Via the GEM/SECS Interface
The Maschine was connected
to the APC Host

Data from the system
Are available for analysis



100
Parameters

150.000
Wafer starts per week

1000
Process steps

10.000
Different chips layouts

AI

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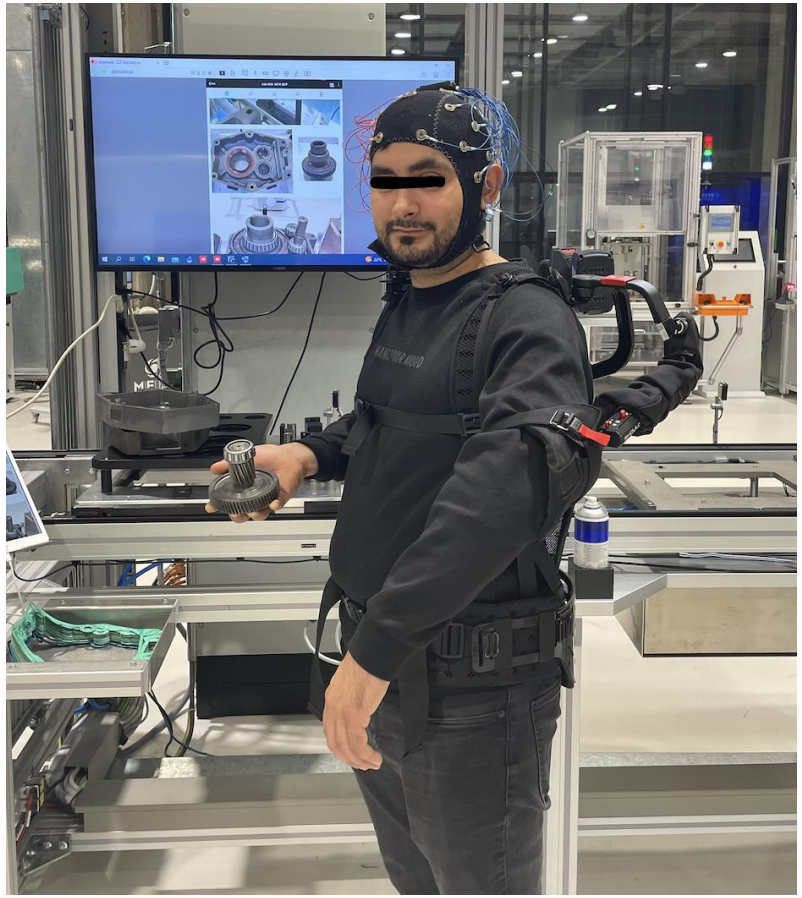
Industry5.0:
… and placing the wellbeing of the industry worker at the centre of the production process



UC8: AI supporting and strengthening human and manufacturing cycles

Electroencephalography EEG is one the methods to measure brain activity and due to its being non-invasive and offers easy way to collect data, this case has resulted in the way brain computer interface (BCI) based systems.

The exoskeleton as an auxiliary tool to increase the capacity of the human strength in situations where high physical workloads are needed can also be an application area for BCI systems.

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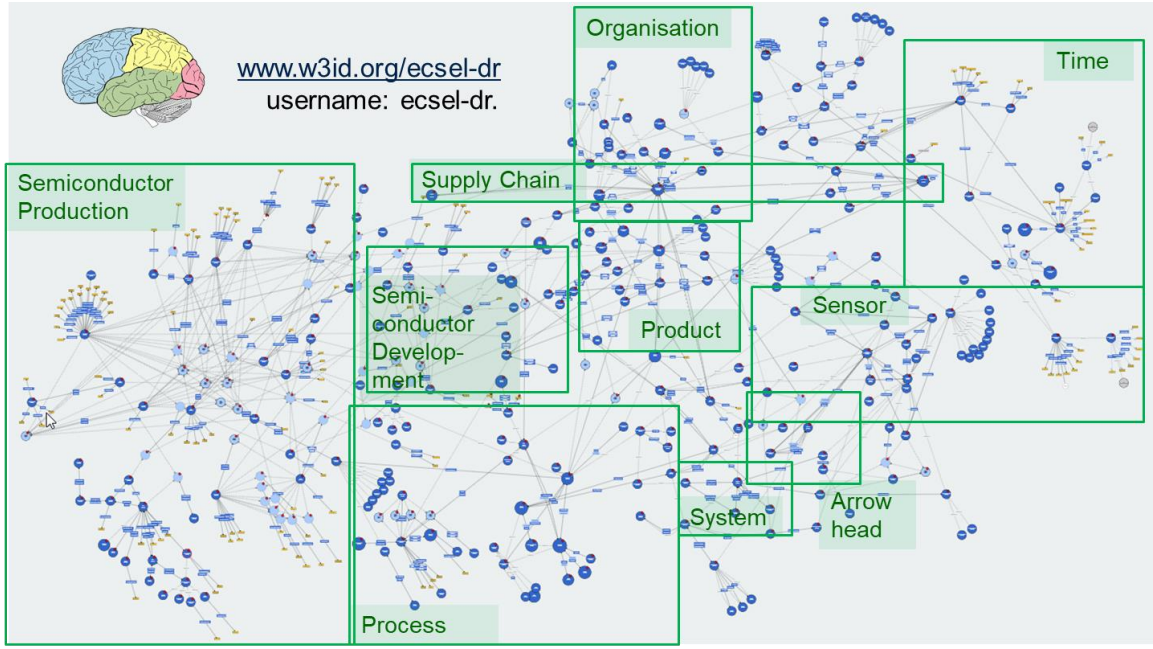
Digital Reference, a languages that can be understood by humans and mashines

Target: optimizing forcast in complex supply chains

The digital reference combines different
supply chain structures and semiconductor production concepts and entities

It will help to reduce problems like the bull whip effect



Semantic Web model

Digital Reference (DR) platform that can handle data of different quality and structure from various sources

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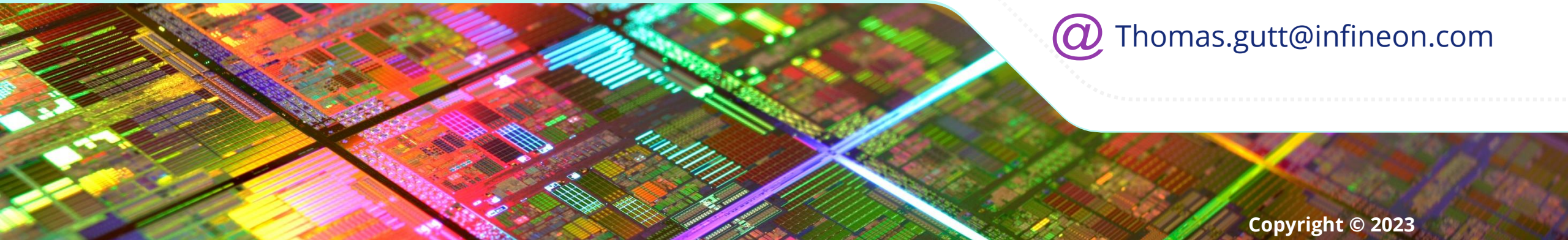
EDGE AI

Thank You

For your attention



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