The European Advanced Process Control and Manufacturing (apc|m) Conference is focussed on:

**Current challenges and future needs of Advanced Process Control and Manufacturing Excellence**

**Conference Program**

The conference program is organized with presentations/talks and poster sessions in parallel. Additionally, several half-day technical tutorials will be offered to you. The accompanying exhibition will provide excellent opportunities for product promotion. Usergroup Meetings are an easy way to meet your customers. The schedule of events will provide plenty of time to get in contact with your colleagues, customers and suppliers.

**Organized by**

**Sensing & Sense-making - from data to knowledge**

This call for papers is directed to:

- Manufacturers
- Suppliers
- Scientific Community

of

- Semiconductor
- Photovoltaic
- LED, Flat Panel, MEMS
- and other relevant industries

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**Abstract Submission Deadline:**

December 2, 2016

**www.apcm-europe.eu**

**René Weber**

weber@apcm-europe.eu

phone +49 351 8925-887

fax +49 351 8925-889
# CONFERENCE TOPICS

## Process Level APC

**Plasma etch, CVD and ALD**  
Chamber & process characterization (tool health, EEQA, finger printing, chamber matching), process models & model based sensors, dry clean, first wafer / wafer sequence effects, FDC (fault prediction), tool level APC, spare part assessment & qualification

**Sputtering, P3I, and e-beam**  
Chamber & processes characterization (tool health, EEQA, finger printing, chamber matching), spare part assessment & qualification, tool level APC, arcing

**Lithography**  
Exposure tools, coater & developer tracks, tool level APC, within wafer / within die close control

**Thermal, wet processing & CMP**  
EEQA and finger printing, RTP

**Backend**  
APC for testing, die bonding, wire bonding, plating, molding

**Metrology and R2R**  
Virtual, inline, and offline metrology; soft sensors principles, large-area metrology

**APC for legacy tools**  
Hardware & software modifications, integration into existing APC systems, sensor integration

## Fab Level APC

**Fab level process control methods**  
Run-to-run and wafer-to-wafer control, real-time control, control algorithms, defect inspection, test structures (wafer), sampling strategy

**Virtual metrology**  
Application of process models, control density improvement, reduction of measurement operations and non-product wafers, throughput increase, predictive maintenance

**Yield management**  
Prediction and improvement of product parameters and yield by use of APC methods, novel methods of yield modeling and management

**Factory data analysis**  
Real-time data collection aggregation, classification and quality, process and equipment capability, mathematical methods and model creation, novel methods of data visualization and data analysis

**IT infrastructure**  
Tool interfaces and communication, sensor/actuator bus, interfaces, demands on new standards

## Manufacturing Effectiveness and Productivity

**Unit process & equipment productivity**  
Throughput and uptime improvement, cycle time and variability reduction, non-productive wafer and substrate reduction, tool and unit process related productivity improvement

**Factory productivity and automation**  
Factory scheduling and dispatching optimization, throughput and uptime improvement, cycle time and variability reduction, automation-related productivity improvement, master data management, tracking of materials, spare parts and consumables, production planning & control, wafer handling, maintenance strategy, lean manufacturing

**Factory modeling, simulation and optimization**  
Design for manufacturing, future factory design, capacity and cost modeling, yield modeling & improvement, novel methods of manufacturing data analysis and visualization

**Cost optimization and end-of-life equipment issues**  
Fixed and variable cost reduction, cost of ownership (CoO) and overall equipment efficiency (OEE), unit cost modelling, equipment and maintenance optimization

**Environment and Green Manufacturing**  
Global ESH strategies, facilities operations, facility systems reliability improvements, manufacturing sustainability and resource conservation

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