

2021 IEEE INTERNATIONAL WORKSHOP ON METROLOGY FOR INDUSTRY 4.0 & IoT

ROME, ITALY / JUNE 7 - 9, 2021

METROIND4.0&IoT

CALL FOR PAPERS for the Special Session on ZERO DEFECT MANUFACTURING

ORGANIZERS



Daniela **KIRCHBERGER**
PROFACTOR GmbH, Austria



Christian **EITZINGER**
PROFACTOR GmbH, Austria



Raul **POLER**
CIGIP - Universitat Politècnica de València, Spain

ABSTRACT

“Zero Defect Manufacturing” (ZDM) is a research field that aims at avoiding (or at least substantially reducing) reject parts in industrial manufacturing. ZDM enhances the productivity in the manufacturing lines but contributes at the same time to the “circular economy” by avoiding waste generated through reject parts and through materials needed for re-work processes. There are two approaches for ZDM: product-based, which assesses the quality of the product and its relation to process parameters, and process-based, which assesses the condition of the machinery and its impact on quality.

TOPICS

As ZDM entails a whole range of methods, this Workshop will specifically address the following topics:

- Process optimization methods to achieve zero defects
- Machine learning for process modelling and data analysis
- Sensor technologies for process monitoring
- Digital twins of processes
- Digital twins of products
- Data visualization

ORGANIZERS

Daniela Kirchberger is Research Engineer at the Machine Vision Group at PROFACTOR GmbH located in Steyr, Austria. She received her master degree in Mechatronics from the Johannes Kepler University in Linz, Austria in 2007. She is working at PROFACTOR since 2008 in many different research fields, eg. noise vibration harshness, acoustics and robotics. Since 2011 she is mainly working as projectmanager of national (FFG, FIT-IT) funded and international (EU) funded research projects. She is also projectmanager of industrial projects, eg. in the automotive manufacturing (eg. BMW) and fuel cell production field (eg. Fronius). She is currently involved as workpackage leader in the european funded project ZDMP- Zero defects manufacturing platform.

Dr. **Christian Eitzinger** received his Master degree from the University of Linz in 1995. In 1997 he started working at Profactor as a researcher in the field of image processing and is head of the machine vision group since 2001. He received the Erwin-Wenzl Prize for his thesis on training methods for fuzzy neural networks and is member of the Austrian Association for Pattern recognition. He has coordinated 8 European projects in FP6, FP7 and H2020. He is currently involved in the european funded project ZDMP- Zero defects manufacturing platform.

Raul Poler is Professor in Operations Management and Operations Research at the Universitat Politècnica de València (UPV), València, Spain. He received his PhD in Industrial Engineering from UPV in 1998. He is Director of the Research Centre on Production Management and Engineering (CIGIP). He is founding partner of the Spin-off UPV EXOS Solutions S.L. He is Director of the Master in Industrial Engineering and Logistics (MUIOL) at Alcoy Campus UPV. He has led several Spanish Government and European R&D Projects. He has published more than 300 research papers in a number of leading journals and in several international conferences. He is currently involved in the european funded project ZDMP- Zero defects manufacturing platform.

CONTACTS



www.metroind40iot.org



info@metroind40iot.org



facebook.com/MetroInd40IoT

Visit the conference website as well as Facebook page for each specific call and additional news.

