



Automating Semiconductor Manufacturing with Computer Vision

5 November 2025, 09:30 am - 12:00 pm CET

University of Sarajevo, Faculty of Electrical Engineering, Room 3-46, Bit Alliance Lab

Topics:

- Classical image processing
- Deep learning for defect image classification
- IPCEI ME/CT collaboration on XAI
- Networking session

Curious about how we use computer vision at Infineon?

In this talk, we will first showcase how classical image processing techniques automate repetitive image measurements, saving time while improving result quality and customer satisfaction. Next, we will dive into deep learning, focusing on convolutional neural networks (CNNs), which have revolutionized defect image classification with exceptional accuracy and efficiency. However, the lack of interpretability in CNNs remains a barrier to adoption in critical manufacturing processes.

To address this, Infineon and KAI partnered with the University of Sarajevo on an IPCEI ME/CT funded PhD project to integrate explainable AI (XAI). By improving the transparency and reliability of CNN predictions, XAI empowers experts to understand and validate AI outputs. This builds trust, accelerates AI adoption, and boosts efficiency across Infineon's manufacturing operations.

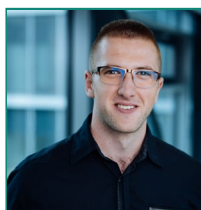


Interested?

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Corinna Kofler is a computer vision expert in the Data Science group at KAI in Villach, a well-established research center 100% owned by Infineon Technologies, a global leader in the semiconductor market. Corinna has been with Infineon since 2005 and has specialized in data science since 2016. Her expertise lies in applying computer vision, machine learning, and deep learning techniques to improve quality inspections in semiconductor manufacturing, contributing to the advancement of high-tech production processes.



Vahidin Hasić, a PhD student specializing in explainable AI at the University of Sarajevo. His PhD research is supported within the framework of IPCEI on Microelectronics and Communication Technologies. He collaborates with KAI and Infineon to advance defect image classification by integrating explainability into black-box AI models, enhancing transparency and trust in machine learning for this critical domain. His work contributes to bridging the gap between AI-driven innovation and practical implementation in semiconductor manufacturing.



IPCEI Microelectronics and
Communication Technologies

