

The Center for Electronics Design & Manufacturing (cEDM) mission: *To support industry by means of **knowledge creation and sharing, scientifically sound methodologies and collaboration throughout the electronic supply chain**, in the development and production of high quality, reliable electronic modules (PBA).*

The Center for Electronics Design & Manufacturing organizes workshops on a regular basis. During these workshops Printed Board Assembly topics are presented followed by a Q&A session. The participation of our cEDM partners allows us to enlighten the topic of the day from different viewpoints in the electronic supply chain.

This workshop is of interest to all involved in or responsible for the design, production, quality, test, supply and system integration of electronics in products for which reliability is an essential property. This workshop will take place on the 18<sup>th</sup> of September 2015 at imec, Kapeldreef 75, Heverlee, Belgium.

## PBA Risk Analysis Toolbox

### How to prepare for an efficient and low risk new product introduction

#### Abstract :

When developing a new product, an electronics designer is faced with a lot of risks to take into account, from the point of view of functionality, performance, design, manufacturability and reliability of the Hardware.

cEDM has developed several analysis tools that allow to estimate product reliability risks, help to mitigate the issues, and propose good design practices. In this way, the designer contributes to an efficient manufacturing and a low risk new product introduction.

The toolbox consists of :

- **NPI** : New Product Introduction methodology and Questionnaire, creating a comprehensive understanding of PCB/PBA requirements for the multifunctional project team.
- **Failure and reliability risk** analysis using an FMEA (Failure Mode Effect Analysis) methodology.
- BOM based **prediction** of production quality, test coverage, and assembly cost.
- Methods for thermal, thermo-mechanical and electrical **simulation**.
- Design for Manufacturing analysis based on **DFM** guidelines.
- **Qualification** methods for components, PCB supply and PBA manufacturing.

The cEDM team will provide an overview of the different risk analysis methodologies, and will focus on 3 specific methods. Practical examples to clarify the method and the outcome of the analysis will be presented.

After the workshop, participants will receive the Failure Risk Assessment table in electronic and poster format. This table can be used as a checklist for your project.

## Agenda

- 13:30 Doors open
- 14:00 Welcome
- 14:10 Overview of the methods in the risk analysis toolbox  
Geert Willems, imec CEDM
- 14:40 Failure Risk Assessment through an FMEA methodology.  
Riet Labie, imec CEDM
- 15:10 *Coffee break*
- 15:30 Pred-X 2.0 : a BOM-based prediction of the assembly flow of your product.  
Boris Leekens, imec cEDM
- 16:00 Simulation techniques as a tool for risk analysis.  
Bart Vandeveld, imec cEDM
- 16:30 Q&A – discussion
- 16:45 *Networking*
- 18:30 *Closure*

## Practical information

cEDM workshop participation:

- Participation fee: **€150**
- Participation is free of charge for cEDM members & cEDM partners.
- Location: imec, Kapeldreef 75, 3001 Heverlee
- Registration via e-mail: [training@imec.be](mailto:training@imec.be)
- Imec is a licensed service provider for training according to “kmo-portefeuille” : license number DV.O108298.



## Center for Electronics Design & Manufacturing

Interested in member- or partnership of cEDM, or need for more information :  
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