

# WEDNESDAY 08:30 – 17:50

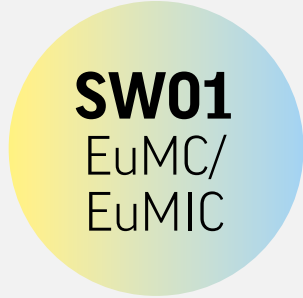
## Embedding Sustainability into RF Technologies

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Co-Chair: Cedric Rolin<sup>2</sup>

<sup>1</sup>imec & VUB, <sup>2</sup>imec

Room: Juliana 2



**SW01**  
EuMC/  
EuMIC

Our world is constrained by environmental limits and finite resources. Today's innovation process must factor in these limitations to foster the advent of technologies that remain sustainable on the long term. Sustainability is however a broad complex multidisciplinary topic, joining engineering with environmental sciences and encompassing full product life-cycle, which includes material and energy sourcing, product manufacturing, product usage and end-of-life disposal. Addressing this may seem a daunting task for the engineer involved in early technology R&D and product design.

This short course aims to address these difficulties by providing actionable insights and tools to integrate sustainability into the development of RF technologies. Our aim

is to equip the course attendees with the knowledge and methodologies needed to incorporate sustainability into their research practices, with a focus on RF technologies that are currently being intensively researched for the deployment of our future wireless communication networks. The event will be structured around three key axes: (i) the sustainability of the semiconductor industry, (ii) the embodied emissions of RF chips, and (iii) the operational emissions of RF technologies. By offering a deep dive into these areas, the workshop will empower engineers to make informed, sustainable decisions throughout the product lifecycle.

### PROGRAMME

#### Sustainability in ICT: the double-edged quest for efficiency

David Bol<sup>1</sup>

<sup>1</sup>UCLouvain

#### Perspectives for sustainable ICT

Hughes Ferreboeuf<sup>1</sup>

<sup>1</sup>The Shift Project

#### Sustainability in the context of technological innovation

Anna Wiczorek<sup>1</sup>

<sup>1</sup>Eindhoven University of Technology

#### Quantifying the environmental impact of IC chip manufacturing

Cedric Rolin<sup>1</sup>

<sup>1</sup>Imec

#### Assessing the environmental impact of R&D cleanroom operations

Enola Fidon<sup>1</sup>

<sup>1</sup>CEA Leti, France

#### A life-cycle assessment study of RF technologies

Benjamin Vanhouche<sup>1</sup>

<sup>1</sup>Imec & VUB

#### Indium Phosphide Semiconductor Technology for Next Generation Communication Systems: Sustainability and Material Considerations

Laura Vauche<sup>1</sup>

<sup>1</sup>CEA Leti, France

#### Sustainable engineered substrate at Soitec

Alexandra Lelong<sup>1</sup>

<sup>1</sup>SOITEC

#### Bottom-up model of the life-cycle environmental impacts of cellular networks

Louis Golard<sup>1</sup>

<sup>1</sup>UCLouvain