

## Organizers

VDE/VDI-Society Microelectronics,  
Microsystems- and Precision Engineering (GMM)

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### In cooperation with:

UBC Microelectronics

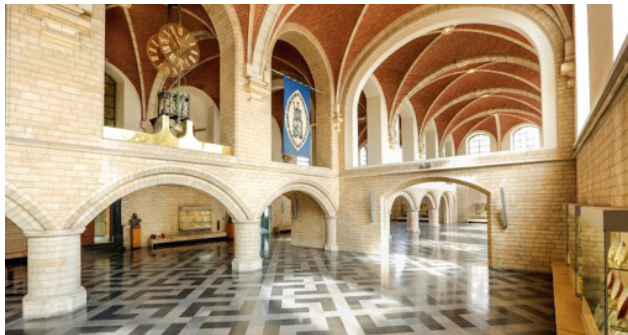
Dr. Uwe Behringer  
EMLC 2021 Conference Chair

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## Venue



KU Leuven, Belgium (© KU Leuven)



Jubilee Hall for Poster Session and Exhibition (© KU Leuven)

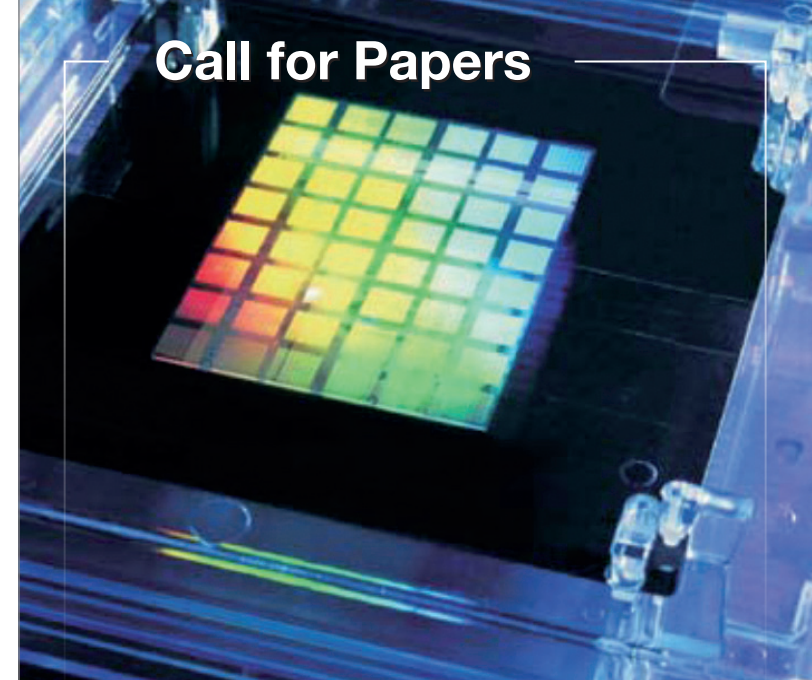
## The EMLC 2021 International Program Committee

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*Finders Jo*, ASML, Veldhoven, The Netherlands
- Conference Co-Chairs *Connolly, Brid*, Toppan Photomasks, Dresden, Germany  
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*Farrar, Dave*, Hoya, London, UK  
*Galler, Reinhard*, Equicon, Jena, Germany  
*Le Gratiet, Bertrand*, STMicroelectronics, Crolles, France  
*Levinson, Harry J.*, HJL Lithography, Saratoga, CA, USA  
*Muehlberger, Michael*, Profactor, Steyr-Gleink, Austria  
*Pain, Laurent*, CEA-LETI, Grenoble, France  
*Ronse, Kurt*, IMEC, Leuven, Belgium  
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*Scheruebl, Thomas*, Carl Zeiss SMT, Jena, Germany  
*Schnabel, Ronald*, VDE/VDI-GMM, Frankfurt am Main, Germany  
*Schulze, Steffen*, Mentor Graphics, Wilsonville, OR, USA  
*Sundermann, Frank*, ST Microelectronics, Crolles, France  
*Tiron, Raluca*, CEA-LETI, Grenoble, France  
*Tschinkl, Martin*, AMTC, Dresden, Germany  
*Waelpoel, Jacques*, ASML, Veldhoven, The Netherlands  
*Wiley, Jim*, Santa Clara, CA, USA  
*Wolf, Hermann*, Photonics MZD, Dresden, Germany  
*Wurm, Stefan*, ATICE LLC, Albany, NY, USA  
*Yoshitake, Shusuke*, NuFlare Technology, Yokohama, Japan  
*Zurbrick, Larry*, Keysight Technologies, Santa Clara, CA, USA

Cover picture:  
Courtesy of Toppan Photomasks



## Call for Papers

The 36<sup>th</sup> European  
Mask and Lithography  
Conference

# EMLC 2021

June 21 – 23, 2021  
KU Leuven, Belgium

[www.emlc-conference.com](http://www.emlc-conference.com)



The VDE/VDI-Society Microelectronics, Microsystems and Precision Engineering (GMM) and UBC Microelectronics in cooperation with BACUS, PMJ, SEMI-Europe, and SPIE, are pleased to announce the

## 36<sup>th</sup> European Mask and Lithography Conference, EMLC 2021 at the KU Leuven, Belgium June 21 - June 23, 2021

### and optional visit at IMEC on June 24, 2021

The focus of this 2½ day conference is state-of-the-art of mask technology and lithography, such as mask manufacturing, mask business, lithography and mask applications, emerging mask & lithography technologies, and mask & lithography equipment.

This conference has annually brought together scientists, researchers, engineers and developers from around the world to present papers at the forefront of research, manufacturing and application. It provides a place where both specialists from industry and advanced research as well as equipment and software providers become acquainted with new developments and results.

### Conference Schedule

The conference will be opened on Monday June 21<sup>st</sup> 2021 with a Tutorial at 02:00 PM following a Get Together and the first part of the Poster Session at 07:00 PM. On Tuesday, June 22<sup>nd</sup> 2021 the conference will continue at 09:00 AM and close on Wednesday, June 23<sup>rd</sup> 2021 at 6:30 PM.

The conference dinner will be held at the Faculty Club located in the magnificent Great Beguinage of Leuven, a UNESCO World Heritage, on Tuesday evening.

### Technical Exhibition

On Tuesday and Wednesday (June 22<sup>nd</sup> and 23<sup>rd</sup> 2021) there will be a technical exhibition with booth space for about 20 exhibitors. Presentation tables and pin boards will be available. To be part of this Technical Exhibition, please return the **en-closed registration** form to the Conference Exhibition Organization as soon as possible, since exhibition space is limited.

### Exhibition Organization

Dr. Uwe Behringer, UBC Microelectronics,  
Auf den Beeten 5 Phone: +49-171-4553196  
D-72119 Ammerbuch Fax: +49-7073-50216  
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### Abstract Information

Abstract quality will be the basis for selection of conference presentations. The abstracts will be assessed for:

- Originality of work
- Specific results reported
- Potential impact and interest to the attendees.

Therefore, we highly recommend that your abstract contains enough detail to clearly describe the content of your presentation. We recommend an abstract length of **two pages** (including figures, diagrams, formatted text) as Word-doc and PDF.

Commercial papers and papers with no new research / development content will not be accepted.

In order to submit your abstract to SPIE, please open the website [www.emlc-conference.com](http://www.emlc-conference.com)

### Deadline for Abstracts: Friday, April 9<sup>th</sup>, 2021

#### By submitting an abstract you agree to:

- present your work in person at the conference
- and to submit a manuscript and/or your presentation materials in time.

Authors will be notified of the acceptance of their submissions by **Friday, May 7<sup>th</sup>, 2021**; further manuscript format and layout instructions will be provided at that time.

### Please note that we plan to have oral and poster presentations.

### Deadline for submission of your manuscripts to SPIE: July 2<sup>nd</sup>, 2021.

Authors whose abstracts are accepted for presentation at the EMLC 2021 Conference will be asked by SPIE to provide a manuscript for publication in the SPIE Proceedings (published in the SPIE Digital Library).

PDF files of presentation materials, submitted by **Friday, July 30<sup>th</sup>, 2021** to VDE/VDI-GMM ([gmm@vde.com](mailto:gmm@vde.com)) will be made available to the participants of the conference.

For further information concerning the submission procedure, please visit our homepage [www.emlc-conference.com](http://www.emlc-conference.com)

### Important dates

#### Deadlines

- submission of abstracts: .....April 9<sup>th</sup>, 2021
- submission of manuscripts to SPIE: .....July 2<sup>nd</sup>, 2021
- submission of presentation materials:....July 30<sup>th</sup>, 2021

### Conference Topics

#### Mask Manufacturing and Mask Business

- Mask Data Preparation, MPC, etc.
- Pattern Generation: Multi Beam Mask Writing
- Photomask Processes & Materials
- Pattern Transfer, Etch, etc.
- Metrology Tools & Technologies
- Defect Inspection & Repair
- Cleaning & Haze
- Pellicles & Mask Boxes
- Mask Process Yield & Cycle Time
- Photomasks for RET (OPC, ILT) ; PSM
- Mask Business and Management
- Mask Cost and Mask Development Strategy
- Future Mask Demand

#### Lithographic Systems and Processes

- Optical Resolution Enhancements including OPC, Free-form Illumination, Source-Mask-optimization (SMO) and Inverse Lithography Technology (ILT)
- Material-and Process driven Resolution Enhancements including Multiple Patterning and Chemical Shrinking
- Immersion Lithography including Defectivity
- Lithography Process Control
- Lithography and Etch Simulation including rigorous physical/chemical Models and Compact Models

#### Emerging Mask and Lithography Technologies

- EUV-Lithography including Masks, Materials Processes and Infrastructure.
- Direct Write / Multi Beam Maskless Technologies
- Nano-Imprint Lithography (NIL), Soft Lithography, and Microprinting
- Application of Artificial Intelligence including Deep Learning in Lithography

#### Emerging Applications

- Non-IC Applications including Si-Photonics, Flat Panel Displays and MEMS/MEOMS
- Lithographic Systems for non-IC Applications, including Laser Direct Write, Interference Lithography, and Mask Aligners