GMM VDE/VDI-GESELLSCHAFT MIKROELEKTRONIK, MIKRO- UND FEINWERKTECHNIK

Program

The 24th European Mask and Lithography Conference EMLC 2008

in cooperation with:
BACUS, PMJ, SEMI, SPIE

January 21 – 24, 2008
Hilton Hotel
Dresden, Germany
www.emlc2008.com

VDI

VDE

Welcome to the EMLC 2008 in Dresden

24th European Mask and Lithography Conference,
EMLC2008
being held on
January 21st to 24th 2008
at the Hilton Hotel, Dresden, Germany.

On behalf of VDE/GMM, the Sponsors, and the Organizing Committee, we would like the welcome you to the 24th European Mask and Lithography Conference, EMLC2008 at the Hilton Hotel in the city of Dresden. The conference has annually brought together scientists, researchers, engineers, and technologists from research institutes and companies from around the world to present innovations at the forefront of mask lithography and mask technology.

The technical conference is scheduled from Tuesday through Thursday and is dedicated to the science, technology, engineering and application of mask and lithography technologies and associated processes. Presenting an overview of the current status in mask and lithography technologies and of future strategies, this is the place where mask producers and users become acquainted with newest developments and results.

On Monday evening we welcome you to an informal Get Together at 19:00 at the Hilton Hotel. Officially, the conference will start on Tuesday with a Keynote Presentation by Steve McDonald from Photronics with the title: "Photronics US Nanofab: A Next Generation Merchant Photomask Operation". The keynote will be followed by the regular sessions, which include: "Hyper NA and Immersion", "Inspection and Defect Printability", "Mask Pattering and Process", "Metrology I + II", "Maskless Technologies I + II", "RET", "NIL", "Mask Management and Simulation".

On Tuesday and Wednesday, our traditional Technical Exhibition will take place. To foster the exchange between the conference attendees and the exhibitors, all coffee and lunch breakes will happen there.

Enjoy the technical sessions, but also enjoy your visit in Dresden, one of the most beautiful cities in Europe!

Dr. Uwe Behringer, UBC Microeletronic, Conference Chair
Dr. Wilhelm Maurer, Infineon Technologies, Program Chair
Jacques Waelpoel, ASML, Program Chair

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Members of the International Steering Committee of the EMLC and Members of the International Program Committee of the EMLC 2008(*)

Conference Chair: Dr. U. Behringer (*), UBC Microelectronics, Ammerbuch, Germany

Program Chairs: Dr. W. Maurer (*), Infineon Technologies AG, Munich, Germany
J. Waelpoel (*), ASML, Veldhoven, The Netherlands

Mr. F. Abboud, Intel Corp., Santa Clara, CA, USA
Dr. M. Arnz, Carl Zeiss SMT AG, Oberkochen, Germany (*)
Mr. E. Baracchi, ST Microelectronics, Agrate Brianza, Italy
Dr. C. Blaesing, Carl Zeiss SMS GMbH, Jena, Germany
Mr. P Chen, Taiwan Mask Corp., Hsinchu,Taiwan (*)
Dr. C. Constantine, Oerlikon USA Inc., St. Petersburg, FL, USA(*)
Prof. R. Engelstad, University of Wisconsin, Madison, WI, USA (*)
Mr. B.G. Eynon, Sematech-Samsung Assignee, Albany, USA (*)
Mr. D. Farrar, HOYA Corporation, LONDON, UK
Mr. M. Fischer, KLA Tencor GmbH, Puchheim, Germany
Mr. O. Fortagne, Vistec Semiconductor Systems GmbH, Jena, Germany
Mr. C. Gale, Applied Materials, Dresden,Germany (*)
Mr. B. Grenon,Grenon Consulting, Inc., Colchester,VT, USA (*)
Mr. H. Hartmann, s3solution, Munich, Germany
Mr. N. Hayashi, Dai Nippon Printing Co. Ltd., Saitama, Japan (*)
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Mr. J. Perrocheau, JEMI-France, Rousset, France
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Dr. F. Reuther, micro resist technology GmbH, Berlin, Germany
Dr. C. Romeo, ST-Microelectronics, Agrate Brianza, Italy (*)
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Mr. Gerd Scheuring, Mue Tec GmbH, Munich, Germany
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Mr. M. Staples, AMD Saxony LLC & Co. KG, Dresden, Germany
Mrs. I. Stolberg, Vistec Electron Beam GmbH, Jena, Germany (*)
Dr. S. Tedesco, CEA-LETI, Grenoble, France (*)

Mr. M. Tissier, Toppan Photomasks S.A., Rousset, France (*)
Mr. G. Unger, Qimonda GmbH & Co. OHG, Dresden, Germany (*)
Mr. J.T. Weed, SYNOPSYS, Inc., Mountain View, CA, USA
Mr. J. Whittey, Vistec Semiconductor Systems, Oakdale, USA (*)
Mr. J. Wiley, Brion Technologies, Santa Clara, CA, USA
Mr. H Wolf, Photronics MZD GmbH, Dresden, Germany (*)
Mr. N. Yoshioka, Renesas Technology Corp., Tokyo, Japan
Mr. L. Zurbrick, Agilent Technologies, Santa Clara, CA, USA (*)

Organizers

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Cover picture:
Courtesy of Toppan Photomasks

Program Overview

Monday, January 21, 2008

15:00 **MEDEA+ project MUSCLE**
"Standardization of photomask supply chain"
Meeting in cooperation with SEMI Europe.

16:00 Set-up for the Technical exhibition

17:00 Steering and Program Committee Meeting

18:00 - 19:30 Check in / Registration

19:00 Get Together Reception

Tuesday, January 22nd , 2008

09:00 **Welcome and Introduction**
Uwe Behringer, UBC Microelectronics, Ammerbuch, Germany, Conference Chair

09:20 **Invited Welcome Speaker**
Dirk Hilbert, Mayor of Economic Affairs of the City of Dresden

Plenary Session I

Session Chairs:
Uwe Behringer, UBC Microelectronics, Ammerbuch, Germany;
Wilhelm Maurer, Infineon Technologies AG, Munich, Germany

09:45 **Photronics US Nanofab: A Next Generation Merchant Photomask Operation (invited)**
S. McDonald, Photronics Inc., Boise, USA

10:15 **Mask Industry Assessment Trend Analysis (invited)**
G. Shelden, Shelden Consulting; P. Marmillion, SEMATECH/IBM Corp., G. Hughes, SEMATECH, Austin, TX, USA

10:45 **Coffee Break**

Plenary Session II

Session Chairs:
Wilhelm Maurer, Infineon Technologies AG, Munich, Germany;
Jaques Waelpoel, ASML, Veldhoven, The Netherlands

11:15 **Best Paper from PMJ 2007 (invited)**
Progress of NIL Templare Making
S. Yusa, T. Hiraka, S. Sasaki, K. Itoh, N. Toyama, M. Kurihara, H. Mohri, N. Hayashi, Dai Nippon Printing Co., Ltd., Saitama Japan

11:40 **3-Dimensional bridged structures by thermal-UV imprint using a novel mask**
K. Okuda, H. Kawata, Y. Hirai, Osaka Prefecture University, Japan

12:05 **Best Paper of BACUS 2007 (invited)**
Polarization-induced astigmatism caused by topographic masks
J. Ruoff, J. T. Neumann, B. Geh, Carl Zeiss SMT AG, Oberkochen, Germany;
E. Schmitt-Weaver, ASML US, Inc., Albany;
C. Progler, Photronics Inc., Allen, USA;
E. van Stetten, N. le Masson, ASML Netherlands B.V., Veldhoven, The Netherlands

12:30 **Best Poster of BACUS 2007 (invited)**
Practical use of hard mask process to fabricate fine photomasks for 45nm node and beyond
Y. Kushida, H. Handa, H. Maruyama, Fujitsu Ltd.; Y. Abe, Y. Fujimura, T. Yokoyama, Dai Nippon Printing Co., Ltd., Saitama, Japan

12:55 **Lunch Break**

Session 3 Double Patterning

Session Chairs:
Michael Arnz, Carl Zeiss SMT AG, Oberkochen, Germany;
Peter Nikolsky, ASML, Veldhoven, The Netherlands

14:20 **Double Exposure Technology for KrF Lithography**
S. Geisler, J. Bauer, U. Haak, K. Schulz, E. Matthus, B. Kuck, IHP, Frankfurt/Oder; D. Stolarek, H. Beyer, Technische Fachhochschule Wildau; H. Wolf, Photronics, Dresden; W. Meier, Nikon Precision Europe GmbH, Langen; M. Trojahn, Rohm und Haas Materials Deutschland GmbH, Esslingen, Germany

14:40 **Wafer Based Mask Characterization for Double Patterning Lithography**
R. de Kruif, P. de Haas, E. van der Haijden, ASML Netherlands B.V., Veldhoven, Netherlands; K. Bubke, E. Cotte, J. H. Peters, Advanced Mask Technology Center GmbH & Co. KG; J. Fohler, B. Connolly, Toppan Photomasks Inc., Dresden, Germany; M. Dusa, ASML US Inc., Santa Clara, USA

15:00 **Topological and Model Based approach to Pitch decomposition for Double Patterning**
P. Nikolsky, N. Davydova, ASML Netherlands B.V.; R. Goossens, Brion Technologies

15:20 **Coffee Break**

Session 4 Simulation

Session Chairs:
Christian Kalus, Synopsys, Aschheim, Germany;
Wilhelm Maurer, Infineon Technologies, Munich, Germany

15:50 **Fast rigorous simulation of mask diffraction using the waveguide method with parallelized decomposition technique**
F. Shao, P. Evanschitzky, A. Erdmann, Fraunhofer IISB, Erlangen, Germany

16:10 **3 Dimensional Mask Effects in OPC Process Model Development From First Principles Simulation**
L. S. Melvin III, J. Li, Synopsys, Inc., Hillsboro, USA; T. Schmoeller, Synopsys, Munich, Germany

Session 5 Mask Business & Mask Data Prep

Session Chairs:
Hermann Wolf, Photronics, Dresden, Germany;
Michael Tissier, Toppan Photomasks, Rousset, France

16:30 **Key Improvement Schemes of Accuracies in EB Mask Writing for Double Patterning Lithography**
H. Sunaoshi, T. Kamikubo, R. Nishimura, K. Tsuruta, T. Katsumata, T. Ohnishi, H. Anze, J. Takamatsu, S. Yoshitake, S. Tamamushi, NuFlare Technology Inc., Yokohama, Japan

16:50 **Mask Data Rank (MDR) and its Application**
K. Kato, M. Endo, T. Inoue, M. Yamabe, ASET, Tokyo, Japan

17:10 **MEDEA+ project 2T302 MUSCLE "Masks through user's supply chain: leadership by excellence"**
A. Torsy, Altis Semiconductor, Corbeil Essonnes, France

17:30 **Printing of sub resolution shots in electron beam direct write with variable shaped beam machines**
F. Thrum, J.Kretz, C. Hohle, K.-H. Choi, Qimonda Dresden GmbH & Co. OHG; Germany; K. Keil, Fraunhofer CNT, Dresden, Germany

17:50 **Post 45nm Tool Technology and its Interaction with Mask Technology**
M. McCallum, Nikon Precision Europe GmbH, Livingston, UK;
M. Kameyama, Nilon Corp., Saitama, Japan

18:10 **End of presentation**

18:50 **Departure to the Sophien Keller for Dinner**

Wednesday, January 23rd, 2008

Session 6 Mask Cleaning / Haze

Session Chairs:
Brian Grenon, Grenon Consulting, Colchester,VT, USA;
Nayoa Hayashi, DNP, Saitama, Japan

09:20 **Assessment of molecular contamination in mask pod**
J. M. Foray, M. Davenet, A. Favre, Alcatel Vacuum, Annecy; P. Dejaune, P. Sergent, Toppan Photomasks, Corbeil; S. Gough, P. Descamps, X. Gerard, STM, Crolles; D. Cheung, Entegris Cleaning Process, Montpellier; M. Tissier, Toppan Photomasks, Rousset; H. Fontaine, 6CEA-LETI-MINATEC, Grenoble, France; K. Avary, I. Hollein, Advanced Mask Technology Center, Dresden, Germany

09:40 **Photomask cleaning process improvement to minimize ArF haze**
M. Graham, A. McDonald, Photronics (UK) Ltd, Manchester, UK

10:00 **Theoretical Study on Mask Haze Formation**
B. Wu, A. Kumar, Applied Materials, Inc., Sunnyvale, USA

10:20 **Coffee Break**

Session 7 Inspection & Repair

Session Chairs:
Michael Archuletta, LLC Nanomechaning, Delry Bea, Fl. USA;
Gerd Unger, Qimonda, Dresden,Germany

10:50 **EUV Blank Inspection**
J.H. Peters, C. Tonk, Advanced Mask Technology Center, Dresden, Germany, D. Spriegel, Siemens AG, München, Germany; H.-S. Han, W. Cho, SEMATECH, Albany; S. Wurm, SEMATECH, Austin, USA

11:10 **Introduction of new Database reflected tritone algorithm for application in mask production**
T. Schulmeyer, J. Heumann, Advanced Mask Technology Center Inc.; H. Schmalfuss, M. Lang, KLA-Tencor GmbH, Dresden, Germany

11:30 **Phase-shifting photomask repair and repair validation procedure for transparent & opaque defects relevant for 45nm node and beyond**
C. Ehrlich, Carl Zeiss SMS GmbH, Jena, Germany

11:50 **Inspection results of advanced (sub-50nm design rule) reticles using the TeraScanHR**
J.-P. Sier, W. Broadbent, P. Yu, KLA-Tencor Corp., San Jose, USA

Session 8 Resist

Session Chairs:
Freimuth Reuther, micro resist technology, Berlin, Germany;
Hella Scheer, University of Wuppertal, Wuppertal, Germany

12:10 **Organic-Inorganic Hybrid Resists Based on Methoxysilane Cross-Linker for Deep UV lithography**
J. Y. Park, J.-B. Kim, KAIST, Daejeon, Korea

12:30 **Alternative Approach to Transparent Stamps for UV-based Nanoimprint Lithography – Techniques and Materials**
A. Klikowska, M. Vogler, A. Kolander, F. Reuther, G. Grützner, micro resist technology GmbH, Berlin, Germany; M. Mühlberger, I. Bergmair, R. Schöftner, Profactor Produktionsforschungs GmbH, Steyr-Gleink, Austria

12:50 **Lunch break**

Session 9 Metrology

Session Chairs:
John Whittey, Vistec Semiconductor Systems, Oakdale, CA, USA;
Carola Blaesing, Carl Zeiss SMS GmbH, Jena, Germany

14:20 **Characterizing the imaging performance of Flash Memory masks using AIMSTM**
E. van Stetten, K. Grim, J. Finders, ASML Netherlands B.V., Veldhoven, Netherlands; M. Dusa, ASML TDC, Santa Clara, USA; R. Birkner, R. Richter, T. Scherübl, U. Buttgereit, S. Perlitz, Carl Zeiss SMS GmbH, Jena, Germany

14:40 **CDO budgeting**
P. Nesladek, B. Sass, S. Mauermann, A. Wiswesser, Advanced Mask Technology Center, Dresden, German

15:00 **High-resolution and high-precision pattern placement metrology for the 45 nm node and beyond**
G. Klose, M. Arnz, Carl Zeiss SMT AG, Oberkochen, Germany; U. Buttgereit, N. Rosenkranz, Carl Zeiss SMS GmbH, Jena, Germany

15:20 **Mask CD measurement approach by diffraction intensity for lithography equivalent**
T. Nagai, T. Sutou, Y. Inazuki, H. Hashimoto, T. Yokoyama, N. Toyama, Y. Morikawa, H. Mohri, N. Hayashi, Dai Nippon Printing Co., Ltd., Saitama, Japan

15:40 **Influences on accuracy of SEM based CD mask metrology with a view on the 32 nm node**
W. Häßler-Grohne, C. G. Frase, D. Gnieser, H. Bosse, PTB, Braunschweig, Germany; J. Richter, A. Wiswesser, AMTC, Dresden, Germany

16:00 **Comparative scatterometric CD and edge profile measurements on a MoSi mask using different scatterometers**
M. Wurm, A. Diener, B. Bodermann, J. Richter, Physikalisch-Technische Bundesanstalt, Braunschweig, Germany

16:20 **Coffee Break**

Session 10 Poster Reception

Session Chairs:
Chris Gale, Applied Materials, Dresden, Germany;
Uwe Behringer, UBC Microelectronics, Ammerbuch, Germany

17:00 **Start of Poster Reception**

Mask Protection from a haze while shipping and storage
T. Umeda, Adhand Inc.; H. Kawashima, Hakuto Co., Ltd.; T. Miho, Miraial Co., Ltd.; K. Moriya, Nippon Puretec Co., Ltd., Tokyo, Japan

Top surface imaging study by selective chemisorption of poly(dimethyl siloxane) on diazoketo-functionalized polymeric surface
R. Ganesan, S. K. Youn, J.-M Yun, J.-B. Kim, KAIST, Daejeon, Republic of Korea

Optical Proximity Correction for 0.13µm SiGe:C BiCMOS
S. Geisler, J. Bauer, U. Haak, K. Schulz, E. Matthus, B. Kuck, IHP, Frankfurt/Oder; D. Stolarek, H. Beyer, Technische Fachhochschule Wildau; H. Wolf, Photronics, Dresden; W. Meier, Nikon Precision Europe GmbH, Langen; M. Trojahn, Esslingen, Germany

Chemically Amplified Molecular Resists for E-Beam Lithography
J. Manyam, F. P. Gibbons, R. E. Palmer, A. P. G. Robinson, S. Diegoli, M. Manickam, J. A. Preece, The University of Birmingham, UK

New alignment marks for improved measurement maturity
U. Weidenmüller, H. Alves, B. Schnabel, Vistec Electron Beam GmbH, Jena, Germany; B. Icard, L. Pain, J. Pradelles, CEA-LETI, MINATEC, Grenoble; J.-C. Le-Denmat, S. Manakali, STMicroelectronics, Crolles, France

Measuring Contact Hole Corner Rounding Uniformity Using Optical Uniformity Using Optical Scatterometry
J. C. Lam, S. Chen, n&k Technology, Inc., Santa Clara; A. Gray, University of California, USA; J. Richter, Advanced Mask Technology Center GmbH & Co. KG, Dresden Germany

Very High Sensitivity Mask DUV Transmittance Mapping and Measurements Based on Non Imaging Optics
G. Ben-Zvi, V. Dmitriev, E. Graitzer, E. Zait, O. Sharoni, Pixer Technology, Israel

A new UV sensitive positive resist for X-ray masks manufacture
A. Voigt, M. Heinrich, G. Gruetzner, micro resist technology GmbH, Berlin, Germany; J. Kouba, H.-J. Scheunemann, I. Rudolph, Berlin, Germany

New Results from DUV Water Immersion Microscopy Using the CD Metrology System LWM500 WI with a High NA Condenser
F. Hillmann, G. Scheuring, H.-J. Brück, MueTec GmbH, Munich, Germany

High Resolution Patterning and Simulation on Mo/Si Multilayer for EUV Masks
N. Tsikrikas, G. P. Patsis, I. Raptis, Institute of Microelectronics, NCSR 'Demokritos', Athens, Greece; A. Gerardino, Istituto di Fotonica e Nanotecnologie (IFN), CNR, Roma, Italy

Phame® - high resolution off-axis phase shift measurements on 45nm node features
Ute Buttgereit, Sascha Perlitz, Dirk Seidel, Carl Zeiss SMS GmbH, Jena, Germany

19:00 End of Poster Reception

19:15 Dinner at the Hilton

Thursday, January 24th, 2008

Session 11 RET

Session Chairs:
Rik Jonckheere, IMEC, Leuven, Belgium;
Ines Stolberg, Vistec E-Beam GmbH, Jena, Germany

09:00 **Assessment and application of focus drilling for DRAM contact hole fabrication**
C. Noelscher, F. Jauzion-Graverolle, T. Henkel, Qimonda Dresden GmbH & Co. OHG, Dresden, Germany

09:20 **Design of pattern-specific mask grating for giving the effect of an off-axis illumination**
Y.-S. Kim, B.-H. O, S.-G. Park, E.-H. Lee, S. G. Lee, MicroPhotonics Advanced Research Center, Incheon; S. H. Song, Hanyang University, Seoul; S. H. Oh, Y. K. Choi, M. Kim, Semiconductor Inc. Chungbuk, Korea

09:40 **Overcoming Mask Etch Challenges for 45 nm & Beyond**
M. Chandrachood, T Y B Leung, K. Yu, M.Grimbergen, S. Panayil, I. Ibrahim, A. Sabharwal, A.Kumar, Applied Materials Inc., Mask Etch Product Group, Sunnyvale, USA

Session 12 EUV I

Session Chairs:
Kurt Kimmel, AMTC, Dresden, Germany;
Roxann Engelstad, University of Wisconsin, Madison, WI, USA;

10:00 **Desired IP Control methodology for EUV Mask in Current Mask Process**
S. Yoshitake, H. Sunaoshi, S. Tamamushi, NuFlare Technology Inc., Yokohama; M. Ogasawara, Toshiba Corp., Kasawaki, Japan

10:20 **Use of EUV scatterometry for the characterization of line profiles and line roughness on photomasks**
F. Scholze, C. Laubis, Physikalisch-Technische Bundesanstalt, Berlin, Germany

10:40 **Coffee Break**

Session 13 NIL

Session Chairs:
Hella Scheer, University of Wuppertal, Germany;
Douglas Resnick, Molecular Imprints, Austin,TX, USA

11:10 **Strategies for hybrid techniques of UV lithography and thermal nanoimprint**
M. Wissen, N. Bogdanski, S. Möllenbeck, H.-C. Scheer, University of Wuppertal, Germany

11:30 **Controlling Linewidth Roughness in Step and Flash Imprint Lithography**
D. J. Resnick, N. Khusnatdinov, G. M. Schmid, D. LaBrake, Molecular Imprints Inc. Austin, USA

Session 14 EUV II

Session Chairs:
Serge Tedesco, CEA/LETI, Grenoble, France
Ben Eynon, SEMATECH-Samsung, Albany, NY, USA

11:50 **Status of EUVL Reticle Chucking**
R. L. Engelstad, K. T. Turner, J. Sohn, J. R. Zeuske, V. Ramaswamy, A. R. Mikkelson, University of Wisconsin-Madison, USA

12:10 **Characterization of Electrostatic Chucks for Extreme Ultraviolet Lithography**
K. T. Turner, R. L. Engstad, T. Mulholland, S. Veeraraghavan, J. R. Zeuske, University of Wisconsin-Madison, USA

12:30 **45nm node registration metrology on LTEM EUV reticles**
F. Laske, S. Czerkas, K.-H. Schmidt, D. Adam, K.-D. Roeth, Vistec Semiconductor Systems GmbH, Weilburg, Germany; H. Kinoshita, N. Nishida, D. Kenmochi, Hoya Corp.; H. Ota, Y. Tanioka, Dainippon Screen Ltd., Tokyo, Japan

12:50	**Farewell**
13:00	**Lunch Break**
14:10	**Bus leaves for Qimonda from the Hilton Hotel**
14:30 - 16:30	**Window Tour at Qimonda (grey room)**
17:00	**Bus will be back at the Hilton Hotel**

CONFERENCE INFORMATION

CONFERENCE HOURS

Tuesday, January 22rd, 2008	9:00 h to 18:10 h
Wednesday, January 23rd, 2008	9:20 h to 19:00 h
Thursday, January 24th, 2008	9:00 h to 13:00 h

REGISTRATION HOURS

Monday, January 21st, 2008	18:00 h to 19:30 h
Tuesday, January 22nd , 2008	08:00 h to 17:30 h
Wednesday, January 23rd, 2008	08:00 h to 17:00 h
Thursday, January 24th, 2008	08:00 h to 12:00 h

TECHNICAL EXHIBITION

Parallel to the conference presentations on Tuesday and Wednesday there will be a technical exhibition. There is space for about 25 exhibitors. Presentation tables and pin boards will be available. Exhibitors are allowed to set up their booth starting on Monday, January 21, at 16:00 h

If you like to participate in the technical exhibition as an exhibitor please contact the chairperson as soon as possible, because the exhibition area is limited (please use the enclosed registration form).

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INFORMATION FOR AUTHORS

YOUR PRESENTATION AND CV

The most convenient way for you and the organizers is to bring your slides in MS-Powerpoint format (ppt) on a USB-stick. As early as possible, but latest during the break before your session, you should download and test them on the presentation computer. Your Session Chair will surely be glad to assist you. You may also use your own laptop computer, but experience suggests to avoid that hassle.

Please send in - if not yet done - your short CV to the Conference Chairs and to your Session Chair, so that he may introduce you appropriately to the audience.

MANUSCRIPTS AND PROCEEDINGS

Manuscripts should be sent **as soon as possible (deadline: January 14th 2008)** to the Program- and the Conference Chairpersons:
Dr. Uwe Behringer: uwe.behringer.ubc@t-online.de,
Dr. Wilhelm Maurer,: wilhelm.maurer@infineon.com,
Mr. Jacques Waelpoel,: jacques.waelpoel@asml.nl.
Since the manuscripts will be directly reproduced in the proceedings, please send them as a pdf-file by e-mail. The manuscripts should be between 6 and 12 pages (figures included). Please follow the formatting and further guidelines provided in the sample manuscript at:
www.emlc2008.com

Your last option to deliver the manuscript will be the first day of the conference, Tuesday 22, 2008. **Manuscripts not received until the first day of the conference will not be published in the combined SPIE/VDE volume and will not be a part of the SPIE Digital Library.**

Each attendee of the conference will receive one copy of the proceedings as a CD which will be sent after the event.

BEST PAPER BEST POSTER AWARD

All conference attendees will elect the best paper and the best poster of the EMLC 2008. Manuscripts not received until the first day of the conference can not be elected for best paper resp. best poster.

POSTER SESSION

Poster size shall not exceed 120 cm (48") in width and 150cm (59") in height. The international paper format A0 fits perfectly. Please use text and figures of appropriate size (recommended text size >30 points) to make your poster readable from at least 1m / 1 yard distance. The use of color and extensive graphics is especially encouraged. Just a print out of the manuscript does not serve the purpose of a poster presentation.

Please mount your poster onto the provided stands already on Tuesday morning, and dis-mount it not before Thursday noon. This will enable the conference participants to view the posters before and after the poster session (Wednesday late afternoon), and will get you more feedback to your work. The conference organisation will provide appropriate mounting material.

For further questions, please do not hesitate to contact the Poster Session Chairs: Chris_Gale@amat.com and Uwe.Behringer.ubc@t-online.de

EXCURSION TO QIMONDA

Qimonda and EMLC have organized an informational tour of the Qimonda Memory Fab in Dresden. The excursion will start with short presentations by Qimonda's lithography & mask experts, and peak in a guided tour of the fab grey-area, providing a glimpse of the insides of a 300mm state-of-the-art memory manufacturing area.

A bus will leave the Dresden Hilton at 2:10 pm on Thursday, January 24. The bus will return around 5:00pm.

Please sign in for this surely exceptional tour at on site registration. We ask for your understanding, that the number of participants has to be limited, and that participation will be on a first-come first-served basis.

SPOUSE PROGRAM

We would like to offer a city walk tour with an excellent city guide. To sign up, please stop at the registration desk. (Minimum persons 5).

GENERAL INFORMATION

EMLC 2008 SECRETARIAT

For detailed Information please contact:

VDE/VDI-Society Microelectronics, Micro- and Precision Engineering (GMM), Dr. Ronald Schnabel
Stresemannallee 15, D-60596 Frankfurt am Main
Tel: ++49 (0)69-6308-330
Fax: ++49 (0)69-6308-9828
E-Mail: gmm@vde.com

During the conference:
Tel: ++49 171 4695 118

CONFERENCE FEES

	until Dec. 17th, 2007	after Dec. 17th, 2007
Non-Members	€ 680.00	€ 730,00
VDE,VDI,SEMI-Members*	€ 630,00	€ 680,00
Lecturer	€ 630,00	€ 680,00
Non-Member-Students**	€ 80,00	€ 100,00
Student Members**	€ 40,00	€ 60,00
Spouse Program	€ 75,00	€ 75,00

* Participants applying for the membership fee must include a copy of their membership card to the registration form.
** A photocopy of the student card must be included.

The conference fee includes admission to all sessions as well as to the daily coffee-breaks, one copy of the CD-ROM-proceedings, lunches, dinners and excursion to Qimonda.

CONFERENCE REGISTRATION

To register for EMLC 2008 please fill in the registration form attached to this program and return to VDE Conference Services, Stresemannallee 15, 60596 Frankfurt, Germany. To enjoy the “early-bird-discount”, VDE Conference Services must receive the form before Dec. 17, 2007. Full payment or credit card information must accompany all registrations in order to be accepted. Completed forms may be sent by fax (++49 (0)69 96 31 5213) surface mail or e-mail (vde-conferences@vde.com). A confirmation of the registration will be sent upon receipt of full payment.

ONLINE REGISTRATION

Registrations for the conference and payment by credit card may be done online on the conference homepage www.EMLC2008.com

PAYMENT OF CONFERENCE FEE

Payment for registration, including bank charges and processing fees, must be made in Euro.

The conference fee has to be fully paid in advance. Confirmation of registration will be sent after full payment has been received at the VDE-Conference Services.

The following methods of payment are accepted:

- By credit card authorisation as per registration form. The 16 digit card number, expiry date, security No. (last 3 digits on rear side of credit card) and holder's name must be indicated on the registration form. Signature of the card holder is mandatory.
- Cash payment on-site in EURO (€)

CANCELLATION

In case of cancellation, provided that written notice is received at the VDE-Conference Services before Dec. 17, 2007, the registration fee will be fully refunded less a handling fee of EURO 60,00. After Dec. 17, 2007 no refund will be made. Proceedings and CD-ROM will then be sent to the registrant after the conference.

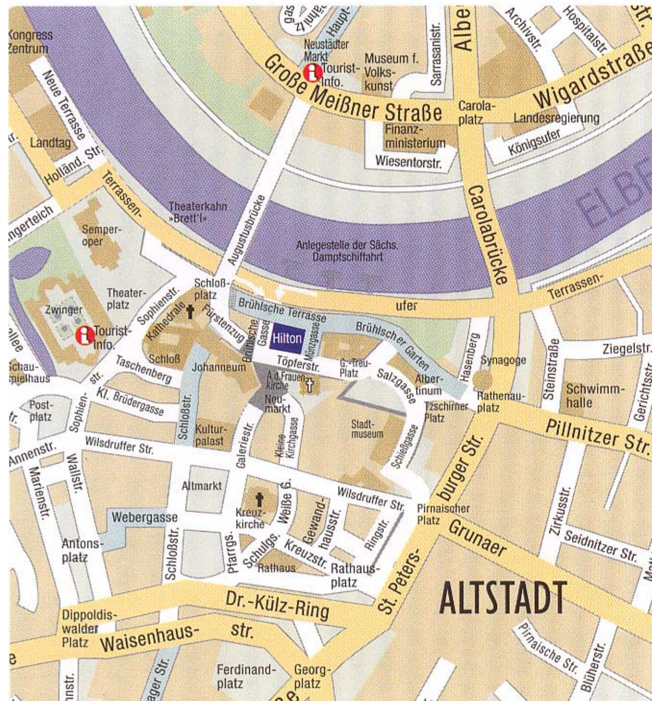
PROCEEDINGS

All papers accepted for presentation at the conference will be published with the proceedings CD-ROM. The proceedings will be sent after the conference to all delegates attending the event.

CONFERENCE VENUE

Hilton Dresden, An der Frauenkirche 5, 01069 Dresden, Germany, Phone: +49 (0)351/86420,
Fax: +49 (0)351/8642-725, http://www.hilton.com/

Hilton Dresden, located in the heart of the old town, next to the Frauenkirche, is situated on Bruehl's Terrace. The Semper Opera House and the world-renowned "Zwinger" are within walking distance. The piers of the world's largest and oldest paddle steamer fleet are next to the hotel.



TRANSPORT

By Air

Dresden Airport

From Dresden Klotzsche Airport, follow signs to city centre. After passing the Elbe Bridge, turn right onto Terrassenufer. From here, follow signs to the Hilton Dresden hotel. The 5-mile journey normally takes around 20 minutes from the airport to the hotel forecourt.

Getting to and from Dresden airport:
Bus Service, typical minimum charge is EURO 8,00
Limousine, typical minimum charge is EURO 70,00
Taxi, typical minimum is EURO 25,00

By train

from Frankfurt in 5 hours
from Berlin in 3 hours

By car

From the A14/A4 (coming from Chemnitz/Leipzig), take exit 78 towards Dresden Altstadt. Follow the B6 signs in direction of Zentrum. At the Bremer/Hamburger Strasse junction, turn left into Bremer Strasse. Drive along the Elbe

riverbank until you see signs for the Hilton Dresden hotel on your right. The 4-mile journey normally takes around 10 minutes from exit 78 to the hotel forecourt.

PARKING

The hotel car park has 150 spaces. Parking costs EURO 19,00 per day. There is a valet service at no extra charge. Please book your parking space when booking your room at the hotel.

HOTEL RESERVATION

A block of rooms has been reserved for the EMLC 2008 participants at the Hilton Hotel Dresden.

The special hotel room rates are:

EURO 114,- (single room classic)
EURO 139,- (double room classic)

EURO 139,- (single room deluxe)
EURO 164,- (dooble room deluxe)

EURO 169,- (single room executive)
EURO 194,- (Double room executive)

per night, including breakfast.

Accomodation is NOT included in the conference fee.

Please contact the Hilton Hotel, for reservation

Hilton Dresden, An der Frauenkirche 5, 01069 Dresden, Germany,
Phone: +49 (0)351/86420, Fax: +49 (0)351/8642-725,
E-Mail: info.dresden@hilton.com
http://www.hilton.com/

You should reserve your room by **January 2nd, 2008** or our block of rooms may be released by the hotel for general sale. Please use the following code for booking: "EMLC 2008".

All payments related to accommodation have to be made directly on departure in the hotel.

INTERNET ACCESS

The Hilton Hotel provides an Internet access for € 17,- per 24 hours, which doesn't mean a day but 24 hours. If you stop using the internet the clock will stop. You can use this internet access in the whole Hilton hotel and as we were informed in most Hilton Hotels world wide.

INSURANCE

The organisers may not be held responsible for any injury to participants or damage, theft and loss of personal belongings.

PASSPORT AND VISA REQUIREMENTS

Foreign visitors entering Germany have to present a valid Identity Card or Passport. Delegates who need a visa should contact the German consular offices or embassies in their home countries. Please note that neither the VDE-Conference Services nor the VDE/VDI-Society Microelectronics, Micro- and Precision Engineering (GMM) or the supporting bodies are able to extend any "Invitation" for application of visa.

ABOUT DRESDEN

The Elbe and the gently rolling landscape between Saxon Switzerland and Meissen determine the nature in which the city on the river is embedded. The climate is equally beneficial for the development of the arts and for viniculture. The inhabitants are known for their own special charm, Saxon hospitality is proverbial.

At the same time Dresden is a modern city with the flair of the former Saxon residence – simply a place with life style. Many million guests visit Dresden every year.

More information you can find at: http://www.dresden.de

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