



TERUG

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Vrije Universiteit Brussel

## INSECT 2010, 4-5 November

### International Symposium on Electrochemical Machining Technology

| Thursday, November 4th | Friday, November 5th | Social Event |

#### Thursday, November 4th 2010

8:30 Registration

9:00 Greetings  
Annick Hubin, SURF, Vrije Universiteit Brussel

#### Session 1 - Fundamentals

9:15  
**Zybur M.**, Institute of Advanced Manufacturing Technology, Krakow, Poland  
*Electrochemical Smoothing - Investigations of Surface Layer Properties depending on Various Electrochemical Machining Ways*

9:45  
**Lipiec, P.**, Institute of Production Engineering, Krakow, Poland  
*Hydrodynamic Condition Influence on Electrochemical Machinability and Electrode Polarization*

10:15  
**Mollay, B.**, CEST, Wiener Neustadt, Austria  
*On the Role of the Current Efficiency in Precision ECM Processes: A Statistical Mechanical Approach*

10:45 - 11:15 Coffee break

#### Session 2 - Simulations & Modeling

11:15  
**Deconinck, D.**, SURF, Vrije Universiteit Brussel, Brussels, Belgium  
*On the Role of Electrode Temperature in the ECM Process*

11:45  
**Weyns, G.**, SURF, Vrije Universiteit Brussel, Brussels, Belgium  
*Electrochemical Machining: A Topic for Teaching Multidisciplinary Engineering*

12:15 - 13:15 Lunch break

#### Session 3 - Applications

13:15  
**Schulze, H.-P.**, Otto-von-Guericke-University Magdeburg, Germany  
*Analysis of Current Density vs. Potential Characteristic for Gold-Nickel-Electrodes using  $\mu$ PECM*

13:45  
**Skoczypiec, S.**, Institute of Production Engineering, Krakow, Poland  
*The Micromachining Processes supported by Electrochemical Dissolution*

14:15 - 14:45 Coffee break

14:45  
**Hösel, T.**, Laboratory for Process Technology, IMTEK, University of Freiburg, Germany  
*Sidewall Isolation of Carbon Fibres for Usage in  $\mu$ ECM*

15:15  
**Uhlemann, M.**, Leibniz Institute for Solid State and Materials Research IFW Dresden, Germany  
*Electrochemical Micromachining of Bulk Metallic Glass*

#### Session 4 - Materials

15:30  
**Rataj, K.P.**, Heinrich-Heine-Universität Duesseldorf, Duesseldorf, Germany  
*Electrochemical Machining and Anodic Behaviour of Copper*

16:00 [Alternative visit of Brussels](#)

20:00 Symposium dinner

#### Friday, November 5th 2010

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#### Session 4 - Materials (cont'd)

8:45

**Hoogsteen, W.**, Philips Consumer Lifestyle, High Impact Innovation Center Drachten, Drachten, The Netherlands  
*ECM Experiments on Stainless Steels*

9:15

**Schneider, M.**, Fraunhofer IKTS, Dresden, Germany  
*In-Situ Investigation of the Influence of the Crystallographic Grain Orientation on the Anodic Dissolution of Copper under near-ECM Conditions*

9:45

**Schroth, S.**, Fraunhofer IKTS, Dresden, Germany  
*Investigation of the Anodic Dissolution on Cemented Carbides under near ECM Conditions*

10:15

**Münninghoff, T. R.**, Heinrich-Heine-Universitaet Duesseldorf, Düsseldorf, Germany  
*Electrochemical Machining of Intermetallic Phases*

10:45 - 11:15 Coffee break

#### Session 5 - Applications

11:15

**Misra, J.P.**, Mechanical & Industrial Engineering Department, Indian Institute of Technology Roorkee, India  
*Precision Finishing of Spur Gears by Electrochemical Honing Process under Pulse Current Condition*

11:45

**Skrabalak, G.**, Institute of Advanced Manufacturing Technology, Krakow, Poland  
*Electrochemical Arc Machining with Rotating Tool-Electrode*

12:15

**Hackert, M.**, Chair Micromanufacturing Technology, Faculty of Mechanical Engineering, Chemnitz, Germany  
*Micro Turning with Closed Electrolytic Free Jet*

12:45

**Fransens, J.R.**, Irmato Industrial Solutions, Drachten, The Netherlands  
*PECM of Small Parts with Micrometer Accuracy*

13:15 - 15:00 Lunch break

15:00 End of symposium

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#### ■ Social Event



We are guided in Brussels by [brukselbinnenstebuiten](#) (dutch site) who will provide us a global and original view of many facets of the city.

At 16 u we take the bus at ICAB and go to the centre of the city in the form of a guided tour along typical green spaces as well as office developments, architecture as well as community work, Europe as well as fast trains. This will take about one hour.

We leave the bus in the centre of the city and continue the visit of the heart of the city by walking: the Grand Place, Boterstraat, St.-Hubertusgalerijen, Europakruispunt, Agoraplein, Zuidstraat, Beurs, Muntplein en Centrale Boulevards.

The visit includes a short break in a typical café.

At 20 h we have dinner

We did not foresee a break enabling to go to the hotel between the presentations and the evening event.

Please consider appropriated shoes and cloths. We are a small community and formal dressing is not required.

We hope you will enjoy this unconventional look on the city.

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