

**INSTITUTE FOR CHEMICAL TECHNOLOGY
OF INORGANIC MATERIALS**

JOHANNES KEPLER UNIVERSITY LINZ

12 - 13 November 2015 Linz / Austria



**11TH INTERNATIONAL
SYMPOSIUM ON
ELECTROCHEMICAL
MACHINING TECHNOLOGY**

PROGRAMME

JKU
JOHANNES KEPLER
UNIVERSITÄT LINZ

ICIAS

CEST
competence center



Dear Ladies and Gentlemen,
Dear colleagues,

It is our great pleasure to welcome you to the 11th International Symposium on Electrochemical Machining Technology INSECT at the Johannes Kepler University Linz in Austria.

This Symposium is the 11th in a series and it was previously held in Düsseldorf (2004), Freiburg (2005), Dresden (2006), Chemnitz (2007), Dresden (2009), Brussels (2010), Vienna (2011), Crakow (2012), Chemnitz (2013) and Saarbrücken (2014).

With its focused topic this symposium aims at spanning a bridge from fundamental research over engineering aspects to industrial applications to finally allow for a mutual stimulation and inspiration of those working in this field.

We hope you enjoy the scientific presentations as well as the social programme.

Prof. Achim Walter Hassel

Johannes Kepler University Linz



THURSDAY, 12 NOVEMBER 2015

Chair: M. Schneider, Fraunhofer IKTS, Germany

- 8:00 Registration
- 9:00 **Welcome and Introduction**
A. W. Hassel
Johannes Kepler University Linz, Austria
- 9:05 **Optimized Design of Electrochemical Machining Processes by a Combination of 3D Simulation and Rapid Prototyping of Cathodes**
A. Spille-Kohoff¹, R. Schulze², G. Meichsner³, M. Hackert-Oschätzchen⁴, S. Busan⁵
¹ CFX Berlin Software GmbH, Germany
² SITEC Industrietechnologie GmbH, Germany
³ Fraunhofer IWU, Germany
⁴ Technische Universität Chemnitz, Germany
⁵ alphacam GmbH, Germany
- 9:30 **Observation of Bubbles Generation and Growth in ECM Gap**
F. Chu, M. Kunieda
The University of Tokyo, Japan



THURSDAY, 12 NOVEMBER 2015

Chair: C. C. Mardare, CD Laboratory for Combinatorial Oxide Chemistry, Austria

9:55 Coffee break

10:30 **ECM of SiC-Based Ceramic**

M. Schneider¹, E. Safonov¹, N. Schubert², A. Michaelis^{1,2}

¹ Fraunhofer IKTS, Germany

² Technische Universität Dresden, Germany

10:55 **Basic Research on Electrochemical Machining of Particle Reinforced Aluminium Matrix Composites**

M. Hackert-Oschätzchen¹, R. Morgenstern¹, N. Lehnert¹, A. Martin¹, T. Lampke¹, A. Schubert^{1,2}

¹ Technische Universität Chemnitz, Germany

² Fraunhofer IWU, Germany

11:20 **Influence of Material Microstructure on the Electrochemical Machinability of Steel 42CrMo4 and Inconel 718**

F. Klocke, S. Harst, L. Ehle, M. Zeis, A. Klink
RWTH Aachen University, Germany

11:45 **Localized Anodisation as a Tool for Electrochemical Machining**

C. M. Siket¹, G. Schimo², M. Kaltenbrunner¹, A. I. Mardare¹, S. Bauer¹, A. W. Hassel¹

¹ Johannes Kepler University Linz, Austria

² CEST GmbH, Austria



THURSDAY, 12 NOVEMBER 2015

Chair: M. Hackert-Oschätzchen, Technische Universität Chemnitz, Germany

12:10 Lunch

13:30 **Minimization of Short-Circuit Damage to Expensive (P)ECM Electrodes and Work-Piece in High-Current (P)ECM Applications**

P. La Maire

Munk Netherland B. V., The Netherlands

13:55 **ECM Operation with a Combined Direct Current / Puls Current Process for Precision Serial Parts Used in Injection Systems**

H. Konietzki

stoba Sondermaschinen GmbH, Germany

14:20 Coffee break



THURSDAY, 12 NOVEMBER 2015

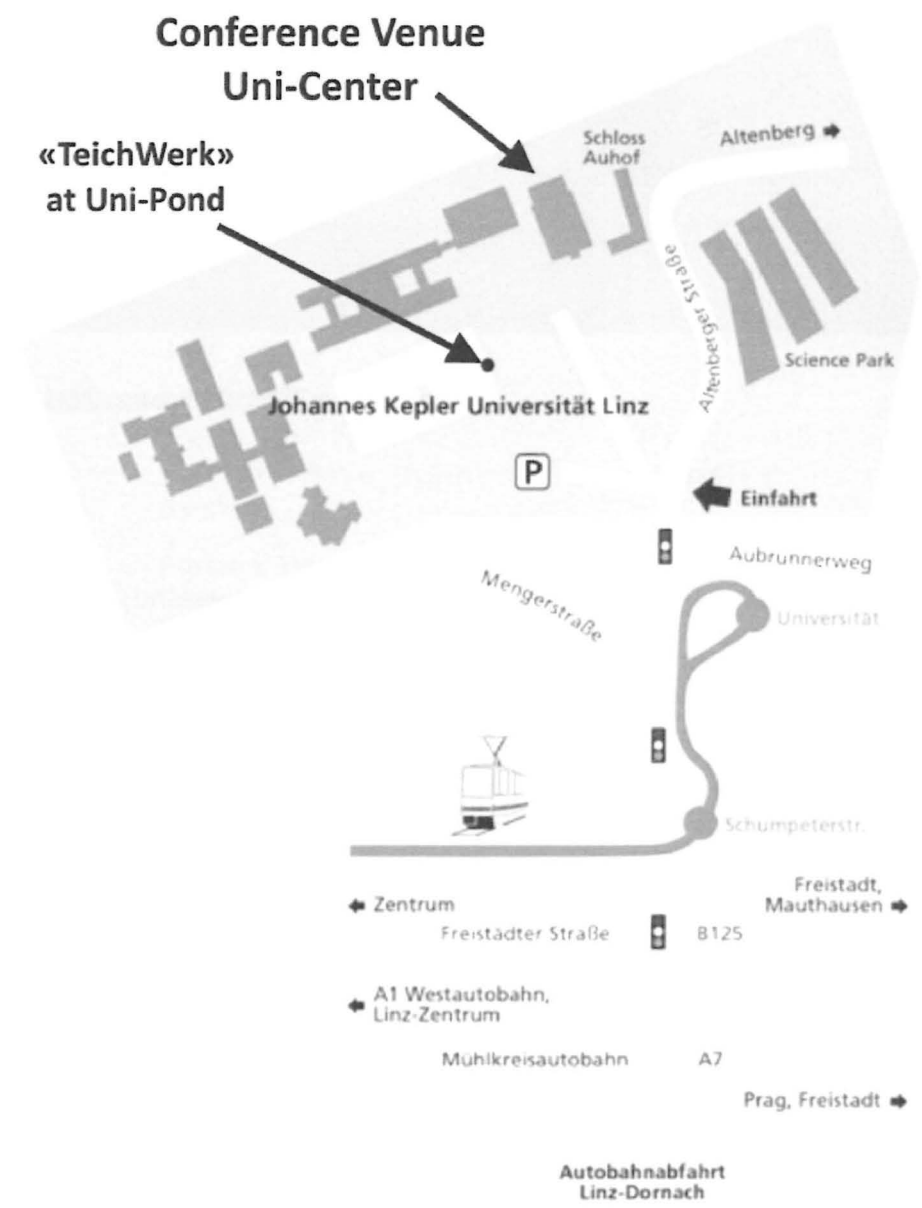
Chair: A. I. Mardare, Johannes Kepler University Linz, Austria

- 15:00 **Plasma Electrolytic Polishing of Copper and Copper Alloys**
 K. Nestler¹, W. Adamitzki¹, G. Glowa¹, F. Böttger-Hiller¹, H. Zeidler^{1,2}
¹ Beckmann-Institut für Technologieentwicklung e. V., Germany
² Technische Universität Chemnitz, Germany
- 15:25 **Online Monitoring of Metal Dissolution During Anodisation**
 J. P. Kollender¹, A. W. Hassel^{1,2}
¹ Johannes Kepler University Linz, Austria
² CD Laboratory for Combinatorial Oxide Chemistry
- 15:50 Information and Announcements
- 16:30 Tram Transfer from Station «Universität» to «Rudolfstraße»
- 17:00 Guided Tour through «Ars Electronica Center» Linz
- 19:00 Conference Dinner
 Restaurant «Klosterhof» in Linz



FRIDAY, 13 NOVEMBER 2015

- 9:15 Get-together at «TeichWerk»
 (Campus Johannes Kepler University Linz at Uni-Pond)
- 10:00 Laboratory Tour:
 ▪ Institute for Chemical Technology of Inorganic Materials
 ▪ Christian Doppler Laboratory for Combinatorial Oxide Chemistry
- 11:45 Lunch
- 12:30 Adjourn



Conference Venue

Johannes Kepler University Linz
 Altenberger Strae 69
 4040 Linz, Austria

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