

# INSECT 2016 Programme

Thursday, November 17th 2016

8:30 Registration

9:00 Greetings

Johan Deconinck, SURF, Vrije Universiteit Brussel

## Session 1 – Processing of ECM

Chairman: Bähre, D.

9:15

*Rebschläger, A., Heil, B., Forcher, B., Wengerek, S.*

Process monitoring and deviation handling at the example of ECM

9:45

*Schulze H.-P., Kröning O., Herzig M.*

Differentiation of process energy sources (PES) in pulsed electrochemical machining based on their controllability

10:15

*Klocke F., Herrig T., Zeis M., Klink A.*

Investigation of a new flushing principle for wire electrochemical machining (WECM)

10:45 - 11:15 Coffee break

## Session 2 - Applications of ECM

Chairman: Brussee M.

11:15

*Martin A., Kuhn D., Hackert-Oschätzchen M., Schubert A.*

Design and Realisation of a Specific Device for Jet Electrochemical Machining of Rotating Work Pieces

11:45

*Wei Han, Masanori Kunieda*

Fabrication of micro-rods with electrostatic induction feeding ECM

12:15 - 13:15 Lunch break

### Session 3 – Materials

Chairman: Deconinck J.

13:15

*Klocke F., Vollertsen F., Harst S., Eckert S., Zeis M., Klink A., Mehrafsun S.*

Comparison of Material Modifications occurring in Laserchemical and Electrochemical Machining

13:45

*Hackert-Oschätzchen M., Lehnert N., Meichsner G., Scherf C., Martin A., Schubert A.*

Experimental Derivation of Processing Strategies for Electrochemical Precision Machining of Aluminium Matrix Composites

14:15 - 14:45 Coffee break

14:45

*Meichsner G., Hackert-Oschätzchen M., Petzold T., Krönert M., Edelmann J., Schubert A., Putz M.*

Removal Characteristic of Stainless Steel in Pulsed Electrochemical Machining

15:15

*Ernst A., Heib T., Bähre, D.*

Experimental Study on Fundamental Pulse Electrochemical Machining (PECM) Characteristic of Gamma Titanium Aluminide with Sodium Chloride Electrolyte

15:30

*Schneider M., Junker N., Schrötke E., Michaelis A.*

ECM of a SiC-based ceramic – Passivation and Dissolution

17:00 Guided visit of Mechelen

20:00 Symposium dinner

## Friday, November 18th 2016

### Session 4 – Fundamentals and simulations

Chairman: Hackert-Oschätzchen M.

9:00

*Hoogsteen W., Saliou K.*

11 Flow-channel cell experiments of X32Cr14 stainless steel in sodium nitrate electrolyte

9:30

*Schneider M., Schubert N., Michaelis A.*

12 The dissolution mechanism of tungsten carbide under ECM conditions

10:00

*Van Laethem D., Köhn C., Deconinck J.*

13 On the role of steric effects in ECM - a theoretical study

10:30 - 11:00 Coffee break

11:00

*Spille-Kohoff A.*

14 3D CFD simulation of electrochemical machining based on dissolving characteristics within the SIREKA joint research project

### Session 5 – New ECM methods

Chairman: Schneider M.

11:30

*Zeidler H., Klaus Nestler K., Böttger-Hiller F., Schubert A., Previtali B., Gökhan Demir A.*

15 Plasma-electrolytic polishing of laser-machined coronary stents

12:00

*Guo C., Qian J., Reynaerts D.*

16 Pit formation by the scanning micro electrochemical flow cell

12:30 Closing of symposium

Johan Deconinck, SURF, Vrije Universiteit Brussel

12:45 - 14:00 Lunch break

14:00 End of symposium