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2025 GENERAL ASSEMBLY

Stockholm - Sweden

CIRP-2025-G-3

**SCIENTIFIC TECHNICAL COMMITTEE "G"
(ABRASIVE PROCESS)**

Meeting to be held on Thursday, August 21, 2025
8.30 - 12.30

You are kindly invited to participate in the next ABRASIVE PROCESS Scientific Technical Committee meeting to be held in Stockholm.

Draft Agenda

- 1 Opening, welcome, introduction of invited guests, approval of agenda
- 2 Minutes of last meeting, matters arising
- 3 Report from Corporate Members Advisory Group (CMAG)
- 4 Technical contributions
 - 4.1 *“Novel perspectives concerning gear grinding performance through integrated process and tool development”*
E. Uhlmann (Technische Universität Berlin / Fraunhofer-Institute for Production Systems and Design Technology IPK, Germany)
 - 4.2 *“Investigations on the effect of fluid jet to wheel speed ratio on specific grinding energy”*
A. Njie, N. Guba, T. Hüsemann (University of Bremen / Leibniz Institute for Materials Engineering IWT, Germany), C. Heinzl
 - 4.3 *“Study of specific energy and tool wear in single-point diamond dressing”*
R. Dražumerič, D. K. Santhosh, P. Krajnik, F. Pušavec (University of Ljubljana, Slovenia)
 - 4.4 *“Data-driven identification of tool-related batch variation during grinding of hardened steel”*
T. Bergs, S. Prinz (RWTH Aachen University / Manufacturing Technology Institute MTI, Germany)
 - 4.5 *“Smooth Particle Galerkin (SPG) method for modeling of the diamond scribing of SiC fiber in SiC composite and single crystal silicon”*
A. Shih (University of Michigan, USA)
 - 4.6 *“Modelling of micro-grinding forces considering gradual wear of abrasive grains”*
A. Beaucamp, A. Pratap (IIITDM Kurnool, India)
 - 4.7 *“Development of magnetic abrasive tool for dry polishing”*
E. J. da Silva (University of São Paulo, Brazil)

5. Keynote papers

5.1 2025 keynote paper

“Advances in magnetic field-assisted finishing”

H. Yamaguchi, F. Hashimoto, E. da Silva, C.F. Cheung

5.2 2026 keynote paper update

“*Abrasive finishing of precision components produced by additive manufacturing*”

J. C. Aurich, P. Krajnik, H. Yamaguchi, E. da Silva, J. Platz

5.3 2027 keynote paper update

“*AI-enabled smart abrasive machining*”

Y. Guo, C. Guo, P. Krajnik, B. Linke, J. Yan

5.4 2028 keynote paper update

“*Abrasive processes towards manufacturing for sustainability - progress and challenges*”

E. da Silva

5.5 Proposals for future keynote papers (2029ff)

“*Abrasive machining for advanced semiconductor components*”

T. Bergs

“*Progress in abrasive process for advanced functional ceramics*”

W. Zhu

6. CIRP Novel Topics in Production Engineering (CNTPE)

6.1 CNTPE STC-G essay update

“*Advanced polishing technologies for microstructured surfaces*”

J. Guo, C. F. Cheung

6.2 CNTPE STC-G essay update

“*Efficiency increase in grinding through integrated sensor technology*”

M. Dix, R. Wertheim, C. Hochmuth, R. Krage, K. Schöniger

6.3 CNTPE STC-G essay update

“*Hybrid grinding and polishing*”

A. Pratap, W. Zhu, P. Krajnik, A. Beaucamp

7. Technical contributions for the next STC-G meeting

8. Miscellaneous

8.1 CIRP conferences, CIRP-sponsored conferences

8.2 Any other business

9. Closure