

8th WZL Gear Conference USA



Westminster, Colorado
USA
July 23 & 24, 2019

Hosted by



KAPP NILES

Tuesday, July 23, 2019

- 09:00 a.m. Welcome Reception and Registration
- 09:30 a.m. Welcoming Remarks
Prof. Dr.-Ing. Christian Brecher
Michael Kapp, KAPP NILES

Keynote Session

- 09:40 a.m. Today's Requirements for Hard Finishing of Gears
Friedrich Woelfel, KAPP NILES
- 10:10 a.m. Digital Twin in Gear Manufacturing Processes
Prof. Dr.-Ing. Thomas Bergs
- 10:40 a.m. *Coffee Break*

Session 1: Gear Optimization

- Chairman: Prof. Dr.-Ing. Christian Brecher
- 11:00 a.m. Validation of the Power Density Potential through
Production-Oriented Tooth Root Optimization
Jonas Pollaschek
- 11:30 a.m. Superfinishing of Flank Surfaces
Patrick Duhre / Friedrich Woelfel, KAPP NILES

Session 2: Trends in Gear Production

- Chairman: Prof. Dr.-Ing. Christian Brecher
- 12:00 p.m. Internet of Production
Prof. Dr.-Ing. Christian Brecher

Tuesday July 23, 2019

- 12:30 p.m. *Lunch*
- 02:00 p.m. Characteristic Value-Based Process Design of
Gear Hobbing Processes with Radial Infeed
Nico Troß
- 02:30 p.m. Scattered Gear Modifications –
A New Era in Gear Technology?
Dr.-Ing. Christoph Löpenhaus
- 03:00 p.m. Gear Metrology - Quality Control with adapted
Solutions
Gerhard Mohr, KAPP NILES Metrology
- 03:30 p.m. Closing Remarks
Prof. Dr.-Ing. Christian Brecher
Michael Kapp, KAPP NILES

Workshop Tour

- 03:40 p.m. Transfer to KAPP Technologies L.P., Boulder,
and Workshop Tour
- 07:00 p.m. Evening Reception
The guests are kindly invited by KAPP NILES
Further information will follow

During Lunch and Coffee Breaks:

Opportunity to visit WZL Gear Software Demonstration Desk

Wednesday July 24, 2019

- 09:00 a.m. Welcoming Remarks
Prof. Dr.-Ing. Thomas Bergs
Michael Kapp, KAPP NILES
- Session 3: Gear Grinding**
Chairman: Prof. Dr.-Ing. Thomas Bergs
- 09:10 a.m. Generating Grinding with small Tools
Patrick Duhre, KAPP NILES
- 09:40 a.m. Potentials for Process Monitoring in Bevel Gear Grinding
Mareike Solf
- 10:10 a.m. Profile Grinding – customized Technology for challenging Applications
Shane Hollingsworth, KAPP Technologies L.P.
- 10:40 a.m. Coffee Break
- Session 4: Operational Behavior**
Chairman: Prof. Dr.-Ing. Thomas Bergs
- 11:00 a.m. Simulative and Experimental Determination of the Tooth Flank Fracture Load Capacity of Large Modulus Gears
Fabian Goergen
- 11:30 a.m. Consideration of Dynamic Excitation Effects in the Gear Design Process of Two-Stage Gearboxes for E-Mobility
Marius Schroers
- 12:00 p.m. Influence of Misalignments on the Operational Behavior in Planetary Gear Stages
Julian Theling
- 12:30 p.m. Closing Remarks
Prof. Dr.-Ing. Thomas Bergs
Michael Kapp, KAPP NILES
- 12:45 p.m. Lunch



The WZL Gear Conference

For more than 50 years the annual WZL Gear Conference in Aachen, Germany, has been fostering technical collaboration and communication among the members of the WZL Gear Research Circle. The two-day conference is devoted exclusively to the presentation of the latest research in gear design, manufacturing and testing. Additionally, the software resources of the WZL Gear Research Circle are available for examination, including solutions for gear design and manufacturing process development. Participants of the conference are encouraged to tour the WZL laboratory with its shop floor and test rigs. Within this environment associations are formed and the exchange of knowledge among the members of the technical community is promoted. With up to 300 participants from Europe and overseas, the WZL Gear Conference is one of the largest annual events dedicated to gear technology in Europe.

The WZL Gear Conference in the USA

Thirteen years ago exclusive contents of the Aachen gear conference were first presented in the USA. The Eighth WZL Gear Conference - USA is being hosted by KAPP Technologies L.P. and will provide the opportunity for North American companies to connect with WZL and learn about current research activities.

For questions about the WZL Gear Research Circle, please contact:

gears@wzl.rwth-aachen.de and visit <http://www.wzl.rwth-aachen.de> and <http://www.getriebekreis.de>



To register for the conference, please contact
KAPP Technologies L.P., Boulder, Colorado
gearconference@kapp-niles.com
The conference fee is \$270 per attendee.