

# 10<sup>th</sup> WZL Gear Conference USA



Rochester, New York  
USA  
July 17 & 18, 2024

Hosted by

# Gleason

## Tuesday, July 16, 2024

03:00 p.m. Welcome Reception and Registration

## Wednesday, July 17, 2024

08:45 a.m. Technology demonstrations – Gleason manufacturing floor

12:00 p.m. Lunch

01:00 p.m. Welcoming Remarks  
Prof. Dr.-Ing. Thomas Bergs  
Prof. Dr.-Ing. Hermann J. Stadtfeld,  
Gleason Corporation

01:10 p.m. Gear research activities at WZL, RWTH Aachen University  
Christian Westphal M.Sc.

01:30 p.m. Manufacturing for a circular economy  
Prof. Dr.-Ing. Thomas Bergs

### Session I: Gear manufacturing

02:00 p.m. Coniflex® Pro - New process for e-drive differentials  
Prof. Dr.-Ing. Hermann J. Stadtfeld,  
Gleason Corporation

02:30 p.m. Research of manufacturing possibilities for topological modifications using adapted kinematics for gear skiving  
Christopher Janßen M.Sc.

03:00 p.m. Coffee Break

03:30 p.m. Not just gears – added value through additional process integration  
Dr.-Ing. Markus Krömer, Gleason Switzerland AG

04:00 p.m. Investigation of the tool wear behavior and the cutting force on gear skiving  
Charalampos Alexopoulos M.Sc.

## Wednesday, July 17, 2024

04:30 p.m. Challenges and solutions in hard fine finishing of modern e-drive gears  
Dr.-Ing. Antoine Türich, Gleason Corporation

05:00 p.m. Closing remarks  
Prof. Dr.-Ing. Thomas Bergs

07:00 p.m. Evening reception  
The guests are kindly invited by Gleason Corporation - Further information will follow

## Thursday, July 18, 2024

09:00 a.m. Technology demonstrations – Gleason manufacturing floor

12:00 p.m. Lunch

01:00 p.m. Sustainability in production lines  
Prof. Dr.-Ing. Christian Brecher

### Session II: Gear design and acoustics

01:30 p.m. Investigation of the excitation and displacement behavior of stepped planetary gear stages with axis misalignments  
Christian Westphal M.Sc.

02:00 p.m. Psychoacoustic flank form modifications  
Prof. Dr.-Ing. Hermann J. Stadtfeld,  
Gleason Corporation

02:30 p.m. Virtual end of line test – Influence of waviness on the excitation behavior of gears  
Marius Willecke M.Sc.

03:00 p.m. Coffee Break

03:30 p.m. Calculation of plastic gears – Simulating the nonlinear stiffness behavior using influence coefficients  
Christian Namhoff M.Sc.

Thursday, July 18, 2024

**Session III: Gear operation**

04:00 p.m. Anticipating the impact of manufacturing deviations during the gear design phase  
Dr. rer-nat Stefan Beermann, KISSsoft AG

04:30 p.m. Investigation of the VHCF tooth root load capacity  
Johannes Lövenich M.Sc.

05:00 p.m. Application behavior and wear in dry and solid-lubricated rolling sliding contact  
Sebastian Sklenak M.Eng.

05:30 p.m. Closing Remarks  
Prof. Dr.-Ing. Christian Brecher  
Prof. Dr.-Ing. Hermann J. Stadtfeld,  
Gleason Corporation

**During Lunch and Coffee Breaks:**

Opportunity to visit WZL Gear Software demonstration desk



**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**

Eighteen years ago exclusive contents of the Aachen gear conference were first presented in the USA. The tenth WZL Gear Conference - USA is being hosted by Gleason Corporation and will provide the opportunity for 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**  
Gleason Corporation, Rochester, New York  
<https://www.gleason.com/wzl2024>