

# Call for Papers

## International Conference on Gears 2019

Submit your  
abstract now!

Hand in your abstract covering related topics such as:

- Design, analysis and simulation of gears and transmissions
- Industrial applications
- Manufacturing
- Possibilities and potential of plastic gears
- Materials and lubrication
- Testing

Deadline for abstract submission:

**November 2<sup>nd</sup>, 2018**  
[www.vdi-gears.eu](http://www.vdi-gears.eu)

+ accompanying conferences

Gear Production 2019

High Performance  
Plastic Gears 2019

+ exhibition

### Associated Organisations



An event organized by VDI Wissensforum

[www.vdi-gears.eu](http://www.vdi-gears.eu)

Phone +49 211 6214-201 • Fax +49 211 6214-154

September 18–20, 2019, Garching (near Munich), Germany

## Purpose

The International Conference on Gears and Transmissions in Garching/Germany is an established platform for manufacturers of and researchers into gears and transmission systems. At the eighth issue of the conference in 2019 you can learn about the latest developments and research results from the powertrain industry and academia.

Gears are the vital core of most powertrains. State-of-the-art gears already transmit power and adjust torque and speed with high efficiency and power density but low noise. But, the overall megatrends – especially, climate change, resource scarcity and technological breakthroughs – continue to challenge the gear and powertrain industry and demand further improvements from their developments. The presentations at the conference will show that there is still room for further improvement and how gears can contribute to increasing energy efficiency, reducing resource consumption and how new technologies will be incorporated in the powertrain.

The exhibition accompanying the conference will offer the opportunity to monitor the state-of-the-art of industrial powertrain applications and to network with your peers. We are looking forward to seeing you in Garching!

With best regards

## Presidency

Conference President:

**Prof. Dr.-Ing. Karsten Stahl**, Full Professor, Institute of Machine Elements, Director, Gear Research Centre (FZG), Technische Universität München (TUM), Garching, Germany

Vice President:

**Dr.-Ing. Bernhard Bouché**, Director of Research and Development Mechanics, Getriebebau NORD GmbH & Co. KG, Bargteheide, Germany

Vice President:

**Prof. i.R. Dr.-Ing. Bernd-Robert Höhn**, TUM emeritus of excellence, Gear Research Centre (FZG), Technische Universität München (TUM), Garching, Germany

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**Dr.-Ing. Burkhard Pinnekamp**, Head of Central Technology, Renk AG, Augsburg

## Call for Submission of Contributions

Are you an expert in one of the areas of our topics? Then we call on you to make an active contribution to the success of the congress with a presentation.

**Please submit a brief abstract of max. one A4 size sheet by November 2<sup>nd</sup>, 2018** summarizing your presentation. You can submit your paper at [www.vdi-gears.eu](http://www.vdi-gears.eu).

## Types of Contribution

Your contribution can take the form of:

1. A full presentation:

If your paper is accepted you will be allowed to speak 20 minutes, with additional 5 minutes for discussion and the opportunity to respond to questions and comments from the audience.

2. A poster presentation:

The posters will be on view for discussion in the exhibition area.

## Submission of Abstracts

- Title of the paper and/or poster
- An abstract summarizing your paper
- Information about the lecturer and co-authors: name, title(s), company address, department, affiliation, e-mail, telephone and fax number
- In which topic area(s) your presentation should be listed
- A statement specifying what is new in your presentation
- A bibliography of your previous publications about this subject
- How you would like to present your paper upon acceptance (full or poster presentation)

Please note that abstracts and final papers will be only accepted if they are uploaded to the conference's website: [www.vdi-gears.eu](http://www.vdi-gears.eu)

All submissions must be either Microsoft WORD (DOC or DOCX) or PDF files.

**Your abstract must be received by November 2<sup>nd</sup>, 2018.**

Based on the abstract, the program committee will decide on the acceptance and order of presentation in the conference program. If you receive notification of acceptance, you will also receive instructions concerning manuscripts and a question form to be returned to the VDI Wissensforum. The accepted papers (full papers and posters) will be printed in the conference proceedings provided to the conference participants.

Submit your  
abstracts now!

## Topics

### 1. Industrial applications

- 1.1 Transmissions for energy systems, e.g. power plants, wind turbines, water turbines etc.
- 1.2 Transmissions for mobility systems, e.g. gear boxes in the marine, aircraft, railway and automotive sectors
- 1.3 Transmissions for production machinery, e.g. transportation in manufacturing lines
- 1.4 Application of gears in the context of digitalization
- 1.5 Transmissions for new applications, e.g. medical technology, electric bicycles (pedelecs) and robots

### 2. Design, analysis and simulation of gears and transmissions

- 2.1 Gears (cylindrical, bevel and worm gears, beveloids) with optimized endurance, efficiency and/or NVH behavior
- 2.2 Optimized tooth profiles (e.g. asymmetric, cycloid gears, W/N-gears)
- 2.3 New materials, material properties from heat treatment, lubrication and coatings for improved properties (e.g. endurance, NVH, efficiency)
- 2.4 Tailored materials, graded materials, composite materials
- 2.5 Improved methods and/or simulation tools for lifetime prediction, NVH and efficiency

### 3. Manufacturing

- 3.1 Productivity increase by new concepts for machine and manufacturing processes
- 3.2 Main time or throughput time – balancing of productivity and flexibility
- 3.3 Alternative, resource-efficient gear manufacturing chains (e.g. additive manufacturing, powder metallurgy, moulding)
- 3.4 Gear Manufacturing in context of digitalization and industry 4.0
- 3.5 New manufacturing methods for optimized gear and gearbox performance
- 3.6 New materials and heat treatment processes
- 3.7 Simulation of manufacturing processes
- 3.8 Innovative Methods and Measurement Principles for Quality Inspection of Gears

### 4. Testing

- 4.1 New test methods and/or procedures for endurance, efficiency and NVH behavior
- 4.2 Correlation of system and component tests
- 4.3 Time-scaling strategies for fatigue tests (e.g. wind turbine transmissions)
- 4.4 Condition monitoring and predictive maintenance

### 5. Possibilities and potential of plastic gears

- 5.1 New materials for plastic gears
- 5.2 Innovative plastic gear design
- 5.3 Testing of plastic gears
- 5.4 Calculation methods for plastic gears (life time, wear, temperature, TEHL, deflections)
- 5.5 Lubrication of plastic gears

Submit abstracts for the accompanying conferences to [www.vdi-gears.eu](http://www.vdi-gears.eu) as well:

- Gear Production 2019
- High Performance Plastic Gears 2019

Participants can visit the accompanying conferences free of charge!

Find more details here:

[www.vdi-wissensforum.de/gearproduction](http://www.vdi-wissensforum.de/gearproduction)

[www.vdi-wissensforum.de/plasticgears](http://www.vdi-wissensforum.de/plasticgears)

## Possibility to publish research results in a scientific journal

Would you like to submit your report to a peer review and, after meeting any revisions, publish it in the scientific journal *Forschung im Ingenieurwesen* (Research in Engineering, Impact Factor 0.667)?

Then submit your contribution in addition to the following link:

<http://www.springer.com/journal/10010>

If your paper fulfills the formal requirements of the journal, independent experts will then review the article, after a preliminary review by the publisher, in a double-blind procedure.

**Manuscripts for peer review have to be submitted by March 29<sup>th</sup>, 2019 the latest.**

## Conference Fee

Speakers (one person per paper) will receive a 30 % discount on the regular conference fee. Discounts cannot be accumulated. Travel expenses will not be paid. Participants can visit the accompanying conferences free of charge.

## Schedule

- Deadline for submission of abstracts: **November 2<sup>nd</sup>, 2018**
- Notification of acceptance: **End of February 2019**
- Final program available in: **May 2019**
- Deadline for submission of manuscripts: **June 7<sup>th</sup>, 2019**
- Deadline for submission of manuscripts for peer review and publication in the journal *Forschung im Ingenieurwesen*: **March 29<sup>th</sup>, 2019** (<http://www.springer.com/journal/10010>)

## Contact

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## Date and Venue

**September 18–20, 2019**

Technische Universität München  
(Technical University of Munich)  
Institute of Machine Elements  
Gear Research Centre (FZG)  
Boltzmannstr. 15  
85748 Garching  
Germany



Source: Uli Benz/TUM

## Program Committee

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### Extend your visit to the famous city of Munich and its surroundings for a couple of days!

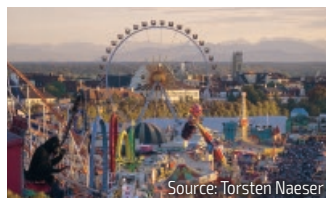
Munich offers a lot of places of interest such as the Marienplatz in the city center, Old and New Town Hall, Frauenkirche, Viktualienmarkt and Odeonsplatz. Other attractions include the English Garden, the Deutsches Museum, the Königsplatz, the Pinakothek I, II and III and the site of the 1972 Olympics. Visitors should not miss a trip to the points of interest outside of Munich such as the Castle Neuschwanstein, Castle Linderhof, Lake Starnberg, Lake Ammersee, Lake Chiemsee and the Isar Valley.



Source: Fiedrich Zenf

### The Munich Oktoberfest from September 21<sup>st</sup> to October 6<sup>th</sup>, 2019!

Each year, the largest public festival in the world, the Oktoberfest, takes place in Munich. Submit your paper now, visit the Oktoberfest after the conference and make your trip to Munich unforgettable!



Source: Torsten Naeser



Source: Christl Reiter

### VDI Society for Product and Process Design Location

The VDI Society Product and Process Design (VDI-GPP) and its technical divisions provide all sectors with verified knowledge on the design of products and processes and their optimization in terms of quality and the time- and cost-benefit ratio.

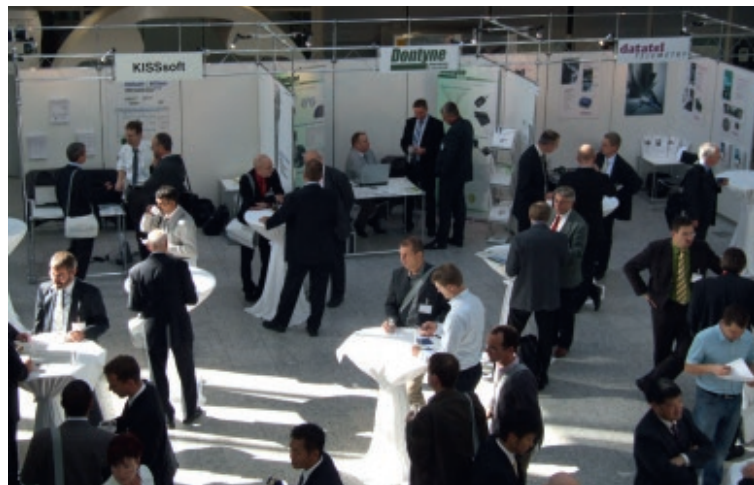
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Would you like to get face to face with the high-powered delegates attending this VDI congress and present your products and services to a specialist sector of your market? For an optimum presentation of your company, make use of the exhibition held in parallel with the conference. Here you can meet industry decisionmakers – make your target contacts neatly and without a great deal of organisational outlay. Secure your stand space right at the heart of this industry rendezvous and/or use a sponsorship package specially tailored to your requirements to enable you to stand out more clearly and effectively from your competitors. We can supply you with exclusive communication possibilities before, during and after the event.

Exhibitor and sponsor inquiries should be addressed to:

- Christoph Brockerhoff
- VDI Wissensforum GmbH
- VDI-Platz 1
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- Phone: +49 211 6214-228
- Fax: +49 211 6214-97228
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Would you like to take  
part as participant? -  
Register now as an  
early bird!

✓ Please register for (Price per Person plus VAT):

International Conference on Gears 2019 September 18–20, 2019, Garching near Munich, Germany (02TA210019)		
<input type="checkbox"/> Early Bird until May 1 <sup>st</sup> , 2019	<input type="checkbox"/> From May 2 <sup>nd</sup> to June 10 <sup>th</sup> , 2019	<input type="checkbox"/> From June 11 <sup>th</sup> , 2019
EUR 1.390,-	EUR 1.490,-	EUR 1.590,-

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\* For the price category 2, please state your VDI membership number

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[www.vdi-wissensforum.de/de/agb/](http://www.vdi-wissensforum.de/de/agb/)

**Conference Venue:**  
Gear Research Centre, Chair of Machine Elements, Technische Universität München, Boltzmannstr. 15, 85748 Garching, Germany, [www.fzg.mw.tum.de](http://www.fzg.mw.tum.de)

**Hotel Reservation** Hotels close to the conference venue may be found via our HRS service  
[www.vdi-wissensforum.de/hrs](http://www.vdi-wissensforum.de/hrs)



**Services:** The price includes beverages during breaks, lunch as well as the evening function. Participants will have online access to the congress documents. They can be provided in a printed version upon request.

**Exclusive offer:** All participants at this event are entitled to a free three-month trial VDI membership. (Offer applies exclusively to new members.)

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