



Conference

# Lifetime – Simulation

September 26–27, 2019

Deutsches Institut für Kautschuktechnologie e. V.  
Hannover

[www.dikautschuk.de](http://www.dikautschuk.de)

## Organizer

Deutsches Institut für Kautschuktechnologie e. V.  
Prof. Dr. Ulrich Giese (Managing Director)  
Eupener Str. 33, 30519 Hannover, Germany

## Contact person

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## Head of the Seminar

Dr. Nils Hendrik Kröger  
Deutsches Institut für Kautschuktechnologie e. V.

## Participation Fee

Members of DIK	€980
Nonmembers	€1,200
Three or more employees from same nonmember	€1,120
Students	€350

For booking until three months before the start of the conference you will receive a 10 % discount on the participation fee (not for students). The fee includes the conference proceedings, refreshment during the official coffee breaks, lunches and the social evening.

## Target Group

The seminar focuses on experts as well as trainees in the fields of research, development and application of elastomer materials.

## Registration

For your convenience, a course registration form is available at our website. The number of participants is limited, so it is advisable to register early. Registration deadline is two weeks before the start of the conference.

[www.dikautschuk.de](http://www.dikautschuk.de)

## Cancellation

Cancellations must be in writing. A fee of €100 is withheld for cancellation up to fifteen days prior to the beginning of the seminar. In the event of cancellation less than fifteen days prior to the beginning of the seminar, the full participation fee is due. It is, however, possible to name a substitute participant.

## Hotel Recommendations

Accommodation is not included in the fee. Please book your room yourself. On our homepage you will find a link which will forward you to the hotel reservation system (HRS).

## Conference Venue

Deutsches Institut für Kautschuktechnologie e. V.  
Eupener Str. 33, 30519 Hannover

# Lifetime – Simulation

The service life of technical rubber materials is dependent on multiple often interlinked influencing factors. An essential part of this seminar deals with the effects of chemical and thermal aging and the complexity of the fatigue properties of elastomers under arbitrary loading conditions. These are viewed in conjunction with approaches to and the application of service life predictions. Computer-aided simulation of the load processes of elastomer parts as the starting point for the optimized design of such parts is a topic of current relevance and thus also covered in the conference.

## Contents

- **Static and dynamic behaviour of rubber: Modelling, calibration & simulation**
- **Advanced material models**
- **Fatigue behaviour and crack properties**
- **Modelling of fracture in elastomers**
- **Wöhler's lifetime concept & influences of imperfections**
- **Prediction of lifetime via FEM based on Wöhler's concept**
- **Reinforcement mechanisms of elastomers**
- **Thermo-oxidative aging**
- **Lifetime prediction in industry environment**

Demonstration of various fatigue tests.

The organizer reserves the right to change the program.

