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Host

The conference is hosted by
VERBAND DER DEUTSCHEN FEDERNINDUSTRIE e.V.

Address:	Goldene Pforte 1
Zip code:	58093
City:	Hagen
Managing director:	Wolfgang Hermann

Contact

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Venue:

InterContinental Düsseldorf, Düsseldorf, Germany
Address: Königsallee 59
Zip code: 40215
City: Düsseldorf
E-Mail: duesseldorf@ihg.com
Website: www.duesseldorf.intercontinental.com

Registration

Anyone who is interested in attending the Conference can register now!

Visit the conference Homepage www.icst2020-germany.de there you can download the registration form and send the completed form to weinrich@federnverband.de. After registration you will receive an invoice with our bank details.

Please consider the transfer fee for foreign countries for the payment and that we are not able to accept payment with credit card.

The cancellation conditions that will apply completing your registration are:

- Before March 11th, 2020: 30 % refundable.
- After March 11th, 2020: not refundable.

Fees (all prices including vat.)

	standard registration	compact registration
Includes	reception evening, oral & poster sessions, includes banquet, technical tour	reception evening, oral & poster sessions, includes banquet
Students and speakers	470 Euro	380 Euro
other participants	550 Euro	450 Euro

The fee in the standard registration includes the reception evening on Monday (14th Sept. 2020), participation on the conference, proceedings, coffee breaks, lunch and banquet on Tuesday (15th Sept. 2020) and the technical tour with transportation, guided English tour in the [ZOLLVEREIN UNESCO WORLDHERITAGE SITE](https://www.zollverein-unesco.de/).

Exhibition and sponsoring

We also offer you the opportunity to take part as an exhibitor or to sponsor this event. Three options are available:

	exhibitor package	gold package	silver package
one registration (1 person)	standard registration	compact registration	no registration
display of company logo in the main session hall in the conference banner	✓	✓	✓
acknowledgement in conference proceedings	✓	✓	✓
placement of company logo with link on the conference website	✓	✓	✓
full page color advertisement in the proceedings	✓	✓	✗
your own stand with table and chair for exhibition	✓	✗	✗
Costs	1.428,00* € (incl. 228,00 € VAT)	892,00* € (incl. 142,50 € VAT)	595,00* € (incl. 95,00€ VAT)

You will find the relevant information the conference [homepage](http://www.icst2020-germany.de) or in our sponsoring flyer. Please do not hesitate to contact us for further questions!



The 2nd International Conference on Spring Technologies

14th - 16th September 2020
Düsseldorf, Germany

invitation



Hosted by:



Schedule

Monday, 14th September

16:00 – 17:00 Registration
17:00 – 19:00 Reception evening

Tuesday, 15th September

08:00 – 09:00 Registration
09:00 – 09:15 Opening
09:15 – 10:00 Keynote Speech
10:00 – 11:20 Session 1
11:20 – 11:40 Coffee Break (Poster & Exhibition)
11:40 – 13:00 Session 2
13:00 – 14:15 Lunch
14:15 – 15:15 Session 3
15:15 – 15:45 Coffee Break Poster and Exhibition
15:45 – 17:30 Session 4
17:30 – 18:00 Registration to Banquet
18:00 – 20:00 Banquet / Dinner

Wednesday, 16th September

10:00 – 15:00 Optional technical excursion
The technical tour includes a visit to Zollverein in Essen. The Zollverein is a former coal mine and former coking plant.

Session Program

Tuesday, 15th September

09: 00 Opening
Mr. Wolfgang Hermann,
Conference Chair

09: 05 Welcome speech
Mr. Paul-Bernd Vogtland,
President of VDFI

Keynote Speech

09:15 Fiber Composite Springs,
Dr.-Ing. Dr.-Ing. E. h. Thomas Muhr,
Muhr und Bender KG

10:00 Session 1 - Materials

Chair: Prof. E. Müller

Research on spring forming principle of multi-station spring forming machine,
L. Fan, P. Cheng and D. Wang,
China Productivity Center for Machinery, China

Design and Analysis of Composite Structures for Automotive Applications. Chassis and Drivetrain,
V. Kobelev,
University of Siegen, Germany

Characterization of variable circular cross-section conical coil spring,
A. Gatto, F. Gatto and L. Iuliano
University of Modena and Reggio Emilia and Polytechnic of Turin, Italy

Development of fatigue strength diagrams for helical compression springs made of spring steel wire,
M. Petrich and U. Kletzin,
Technical University Ilmenau, Germany

11:20 Coffee Break (Poster & Exhibition)

11:40 Session 2 - Corrosion and residual stress

Chair: Prof. R. Brandt

Research on corrosion fatigue Resistance of High strength Spring Steel 39SiCrVTiA,
T. Shirun and B. Zhang,
Zhejiang Meili Technology Co., Ltd., China

Maintaining the functionality of springs using a high-performing micro corrosion layer,
T. Schmitz,
Dörken MKS-Systeme GmbH & Co. KG, Germany

Residual stress measurement by hard X-Ray diffraction,
D. Maestrini, G.P. Marconi and A. Benedetti,
2EFFE ENGINEERING, SOIANO DEL LAGO (BS), Italy

Reduction of the compressive residual stresses induced by shot peening in dependence of the temperature,
E. Müller,
Bochum University of Applied Sciences, Germany

13:00 Lunch (Poster & Exhibition)

14:15 Session 3 - Calculation

Chair: Prof. U. Kletzin

A Novel Algorithm for the Determination of Stress States in Loaded Disc Springs,
M. B. Geilen, M. Klein and M. Oechsner
Technical University Darmstadt, Germany

FE Simulation of Power Springs,
T. Rausch,
SCHERDEL siment GmbH, Germany

Stress Intensity Factors for Surface Cracks in Compression and Tension Coil Springs,
Y. Nakasone,
Tokyo University of Science, Japan

The Application of a Stainless Martensitic Precipitation Hardening Steel to an Elastic Connecting Element,
R. Brandt, A. Elvenkemper and M. Lindner
University of Siegen, Germany

15:15 Coffee Break (Poster & Exhibition)

15:45 Session 4 - Fatigue

Chair: Prof. R. Brandt

Fatigue Life Assessment of Automotive Stabilizer Bars,
E. Giannakis and G. Savaidis,
Aristotle University of Thessaloniki, Greece

A new test bench for rotating bending fatigue test of tempered steel wires,
F. Ballo, M. Carboni, G. Mastinu and G. Prevati
Politecnico di Milano, Italy

Investigation in the characteristic, formation mechanism and its effect on fatigue life of overlap and butterfly generated by shot peening,
J. Zhang,
China Spring Corporation Limited, China

A Method for predicting fatigue lives of spring based on multi-axis fatigue theory,
C. Shao, D. Wang and P. Cheng
China Academy of Machinery Science & Technology, China

17:30 Closing