

German Association for Materials Research and Testing e.V.

LCF10 Tenth International Conference on Low Cycle Fatigue

Announcement and Call for Papers



23 to 25 June 2026 Dresden

Conference Website lcf10.de

Scope

Continuing the successful series of LCF conferences established in 1979, the Tenth International Conference on Low Cycle Fatigue (LCF-10) will be held in Dresden, Germany, from June 23 to 25, 2026. The permanent and even growing interest of the scientific community in low-cycle fatigue, including thermomechanical fatigue addresses on the one hand a broad range of applications, e.g. in energy technology, transportation, civil engineering, and several other topics. On the other hand, many scientific questions on fundamental deformation and damage mechanisms. influence of multiaxial stresses / strains, creep-fatigue and TMF/HCF interaction as well as crack initiation and growth are investigated with increasing experimental and simulative efforts, as well as using data driven approaches.

As a bridge between fundamental research and application in component and structural design, simulation approaches for cyclic plasticity, crack initiation and growth have made impressive and still continuing progress in the recent decades: FEM-based deformation and life assessment models at different scales, from the microstructure to macroscopic structures, are state-of-the art and under further successful development, especially for reliable design of components undergoing complex isothermal and/or thermomechanical loadings. Current research activities show that LCF research keeps being a hot topic in material research and in structural integrity considerations as well.

The development of virtual component and materials design is boosted by the current megatrend in digitization imposing entirely new opportunities, but also challenges, in data storage according to the FAIR principle via eLabBooks and repositories using metdata shemas and ontologies. Based on that, and novel highthrougput characterization, e.g. by automated image analyses and indentation testing, data driven approaches in fatigue research, and design of fatigue resistant structures becomes increasingly viable. Linking 2D, and 3D full-field deformation measurement via digital image correlation with high-fidelity, even multiscale FEM simulation are a further hot topic in this context.

The objective of LCF10 is to provide a worldwide platform for scientific communication and discussion as well as a point of origin for collaboration of scientists and engineers interested in fundamental aspects and practical application as well as novel challenges in the context of digitalization.

Prof. Tilmann Beck Rhineland-Palatinate Technical University (RPTU) Kaiserslautern- Polytechnique de Paris, Landau, Germany

Prof. Fabien Szmytka ENSTA Institut France

Call for Papers in the following **Scientific Topics**

- Isothermal LCF, Thermomechanical Fatigue (TMF) and Multiaxial I CF
- Superimposed LCF/HCF & TMF/HCF Loadings and • **Creep-Fatigue Interaction**
- In-situ Fatigue Testing
- Microstructural Aspects of Cyclic Plasticity, Fatigue • Damage, Crack Initiation and -Growth
- Influence of Surface, Environment and Protective • Coatings
- Advanced Materials and Case Studies •
- Novel Experimental Methods and Standardization
- Deformation & Damage Modelling and Simulation • Based Life Assessment
- Digitization in fatigue research: Data storage and • structures, high-troughput characterization and simulation, data driven fatigue design

Conference language

The conference language is English and will be required for abstracts, papers and oral contributions.

Conference programme

The LCF10 conference schedule including session arrangements and abstracts of the contributions will be published on the conference website LCF10.de.

Proceedings

Citable proceedings will be published online.

Exhibition

An accompanying exhibition of material testing systems and services as well as technical literature is planned. For details see www.lcf10.de.

Social Events

To be announced soon on the conference website.

Timeline

15 September 2025	deadline for submission of abstracts
November 2025	notification of authors about acceptance of contributions
December 2025	start of Early Bird registration
1st March 2026	end of Early Bird registration
	deadline for submission of full papers (6 pages) and registration including payment (mandatory for publication of paper)
15 May 2026	• final programme
	• submission of power point presentations
23 to 25 June 2026	LCF10, Dresden, Germany

Conference Venue

LCF10 will be held in Dresden – Saxony's 'Florence on the Elbe', which is a cultural centre in eastern Germany, famous for its baroque architecture, including the Zwinger Palace and the Frauenkirche. The city offers a vibrant art scene, museums and festivals along the picturesque Elbe. It is a must for history and art lovers. More information on lcf10.de.



Travelling Information

Dresden is located in the heart of Europe, providing convenient domestic and international travel connections by plane, train, and long-distance coach. Fast ICE services call at both of the city's long-distance train stations, Dresden Main Station and Dresden Neustadt. Details see lcf10.de.

Accommodation

Dresden offers a good range of hotel accommodation. Special arrangements for participants can be found at lcf10.de.

Insurance

The conference organiser cannot be made responsible for any personal accident or loss or damage of private property of participants and accompanying persons. Participants have to arrange for their own insurance cover if considered necessary.

Visa

Under German law responsibility for issuing visas lies with the missions of the Federal Republic of Germany, i.e. its embassies and consulates-general. Local responsibility for issuing the visa lies with the mission responsible for the area in which the applicant has his/ her ordinary residence or domicile.

Registration

Registration exclusively online through the registration access on the conference website lcf10.de. Registration for the conference is mandatory for the presentation of a lecture and the publication of the manuscript in the proceedings. A confirmation of the registration will be send to the participant by e-mail / pdf.



Registration Fee

Early Bird Registration up to 1st March 2026.

Member of DVM	1.180 EUR*
Non-Member	1.300 EUR*
Speaker (1 person per contribution)	1.070 EUR*

*Registration after 1st March 2026 will be subject to an extra charge of 100 EUR.

According to § 4, para. 22, German Turnover-Tax Law registration fees are exempt from VAT. For social programmes such as sightseeing fees VAT is not shown according to the § 25 German Turnover-Tax Law (German: UstG).

Payment

All payments have to be made in Euro (€) by credit card or bank transfer. Registration fees have to be paid without deductions. All banking costs have to be paid by the participant. Credit cards (VISA, MasterCard, American Express) will be accepted as well as payment by bank transfer.

Cancellations

All changes or cancellations have to be submitted in writing (e-mail, telefax or airmail). In case of cancellation until 1st April 2026, the conference organiser is allowed to charge 50% of the registration fee plus 25 € service charge. Name substitutions will be accepted at any time at no extra charge. Cancellations received after 1st April 2026 are not refundable. All refunds will be settled after the conference.

Scientific Committee^{**}

- International Advisory Committee^{**}
- Supporting Associations**

** to be announced soon

LCF10 Executive Chairs

Prof. Tilmann Beck Rhineland-Palatinate Technical University (RPTU) Kaiserslautern-Landau, Germany

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