

Invitation - Preface

Invitation

We cordially invite all experts, users, scientists, young researchers and students being active or interested in the field of quantitative thermography to attend the 14th Quantitative Infrared Thermography Conference (QIRT 2018). The conference takes place in the middle of Berlin, close to historical centres belonging to the UNESCO world heritage and within one of Europe's largest regions of science.

This year, the conference is organised by the Federal Institute for Materials Research and Testing (BAM) and the German Society for Non-destructive Testing (DGZfP). The organisers are strongly supported by the Steering Committee of the QIRT community, by the International Scientific Committee and by the Organising Committee. The conference will be complemented by QIRT Short Courses, by an exhibition where the newest infrared thermography equipment will be presented and by a social programme. We are looking forward to your interesting and innovative contributions, which will contribute to scientific and technical presentations, posters and fruitful discussions.

Scope

The biannual Quantitative InfraRed Thermography (QIRT) Conference is a meeting of the scientific and industrial community interested and actively working in research, application and technology related to infrared thermography.

All conference topics are intended to quantitative results comprising temperature values as well as further parameters on the tested materials and structures. The latter ones are usually obtained through active thermography, e. g. by exploiting non-stationary heat transfer processes activated by additional heat sources or by considering wavelength dependent effects.

Passive and active thermography methods and technologies are spread now along a multitude of areas of applications, which all profit from each other.

Topics

- State-of-the-art and evolution in the field of infrared scanners and imaging systems allowing quantitative measurements, and related data acquisition and processing systems.
- Calibration and characterization of infrared cameras and related topics like certification, standardization, validation, emissivity determination, absorption in media, translucent media, spurious radiations, three dimensionality of observed objects.
- Characterization of optical and further heat sources for active thermography
- Analytical and numerical modelling, data reduction and image processing related to infrared thermography.
- Application of infrared thermography to radiometry, thermometry, and physical parameters identification and quantification, in all fields: fluid mechanics, solid mechanics, structures and material sciences, non-destructive evaluations,

electromagnetism, medicine and biomedical sciences, remote sensing, environment monitoring, industrial processes and other.

Christiane Maierhofer, federal Institute for Materials research and testing, Chairperson of QIRT 2018

Matthias Purschke, German Society for Non-destructive Testing