



Our Partner

RWTHAACHEN
UNIVERSITY

THE SEMINARS

The following seminars offer a focused insight into the efficient manufacturing and repair of turbomachinery components for the participants along the value chain. Besides imparting basic knowledge, the seminars of the ICTM-Academy stands for the communication of highly recognized experts from industry and science. You can take advantage of the opportunity for advanced training, discussion of actual developments and future trends and the experience exchange with the professional participants coming from different areas of manufacturing and repair for turbomachinery components.

Participation Fee

The participation fee is between 595 € and 895 €, according to the detailed information of each seminar in this leaflet. ICTM - Industry Partners are admissible for booking the seminars with special conditions. Please refer to your membership during registration.

Registration

Use the opportunity to register online on www.ictm-aachen.com/en/academy



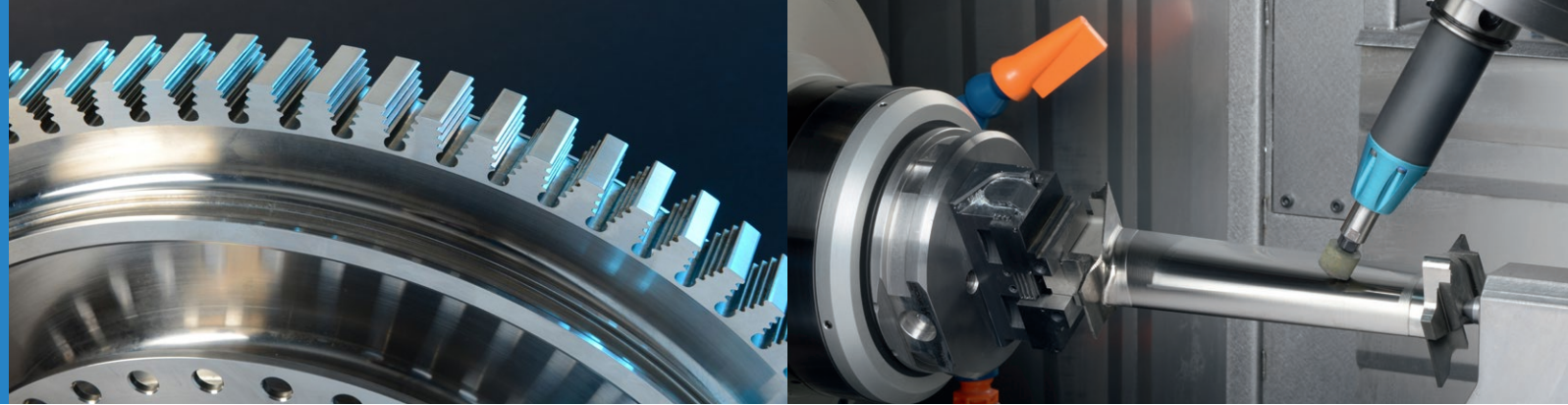
For registration via Email or fax please use the deposited pdf registration sheet on the website.

To make appointments for the seminars "Data Analytics for Production" and "Smart Devices for Production – Smart Glass Experience Days" please send an Email to daniel.heinen@ipt.fraunhofer.de

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Customized Training for Manufacturing and Repair of Turbomachines

The “ICTM Aachen – International Center for Turbomachinery Manufacturing” is an integrated interdisciplinary platform of exchange for R&D institutions and industry along the entire value chain of turbomachinery manufacturing. It conducts high level R&D and offers consolidated access to a wide network of experts, allowing further competencies to be called in when required.

The ICTM Academy provides an advanced training program customized to the needs of turbomachinery manufacturing. It will integrate further experts of Fraunhofer, RWTH Aachen University and industry to offer courses and seminars focusing on state-of-the-art technology and new developments. Additionally the ICTM may conduct tailor made in-house workshops to train individual skills on-site. If you are interested, please contact us using the provided contact data.

Basic Seminar Cutting Technology

March 20 and 21, 2018 or September 12 and 13, 2018

Actual challenges for metal cutting are shorter cycle times and increasing cost pressure with the same quality demands as well as the application of innovative design materials. To react to these challenges, the user needs to understand the potentials of modern tools and technologies and apply them in a professional way. The Basic Seminar Cutting Technology provides a basic understanding of the chip formation process and the process parameters. The optimal choice of tool material, machinability of different material classes and the determination of surface integrity are core topics of the seminar. The basic understanding provided from the seminar is furthermore presented by means of hands-on practices at machine tools and test rigs. The Basic Seminar Cutting Technology is made for technologists that recently started working with cutting of geometrically defined cutting edge or seek to renew or deepen their knowledge. The provided basics are particularly relevant for difficult-to-machine materials of turbomachinery components.

Participation Fee: 895 € (ICTM-Industry Partners: 795 €)

Location: WZL RWTH Aachen

Seminar language: German (English on demand)

Basic Seminar Grinding

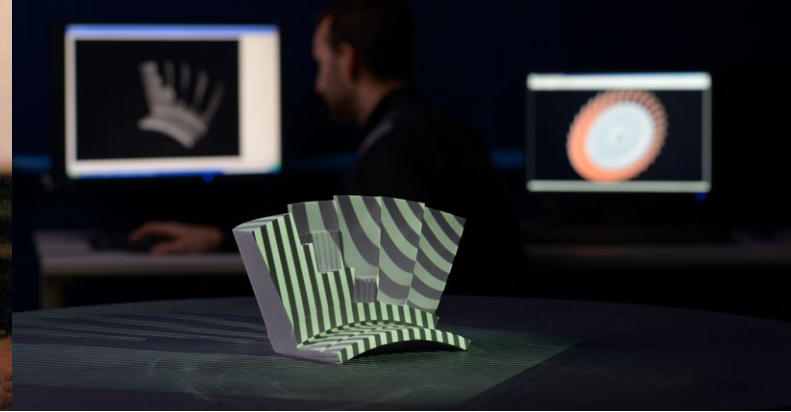
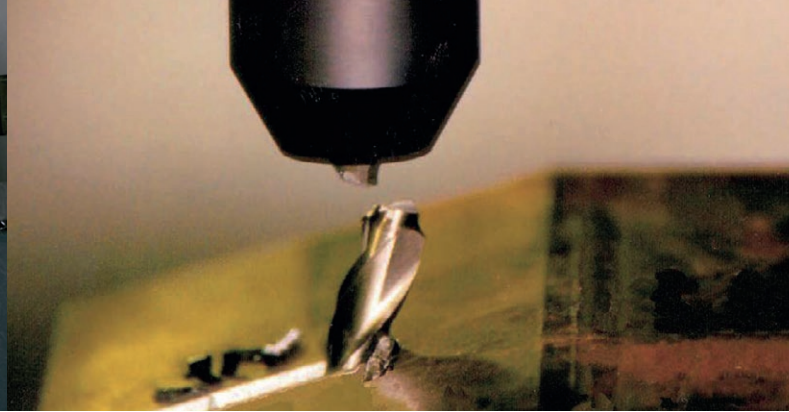
April 25 and 26, 2018 or September 26 and 27, 2018

Continuously developments in the field of difficult to machine materials, like they are used in the aerospace industry for example for turbomachinery components, represent major challenges for the grinding technology. In order to meet these challenges, it is necessary to obtain basic knowledge about grinding methods, tools, use of coolant lubricant, sensor technology as well as modern measurement devices. The basic seminar grinding technology provides theoretical and practical training for operators of grinding technology, machine operators, foreman’s as well as workshop and department managers from the fields of work preparation, manufacturing, service and marketing. In addition to the basic knowledge taught, practical demonstrations on grinding machines and tools are conducted to deepen the acquired knowledge of the seminar participants.

Participation Fee: 895 € (ICTM-Industry Partners: 795 €)

Location: WZL RWTH Aachen

Seminar language: German (English on demand)



Turbomachinery Manufacturing

September 27, 2018

Higher efficiency and lower emissions – these are the key objectives in the development of modern turbomachinery. Heat-resistant materials, complex geometries and integral components are but a few of the features of turbomachines. The manufacturing of such components requires maximum part qualities with increasing requirements for productivity and economics. Future approaches can only be realized when applying new manufacturing technologies and alternative process chains. For transition of the required complex manufacturing processes to an industrial scale, an integrative-interdisciplinary approach is sufficient. The objective of this seminar is to provide applied knowledge about the manufacturing of turbomachinery components. An overview of actual available manufacturing technologies, the design of process chains, and the process validation and assessment is given. The topics are presented by experts from science and industry.

Participation Fee: 595 € (ICTM-Industry Partners: 495 €)

Location: WZL RWTH Aachen

Seminar language: German or English

Process and Condition Monitoring

November 13 and 14, 2018

Modern machine tools are subject to increasing requirements for productivity and economy. At the same time, high-tech branches like turbomachinery manufacturing require ever increasing product qualities. For solving these contrary objectives, machine tools constantly need to be operated at the best possible rate. Monitoring of the production process can be applied for optimal use of tools according to their lifetime, use of stop times and to prevent scrap parts. Additionally, manufacturing induced damages of the parts can be detected and appropriate measures are taken upfront. This is of significant meaning, particularly for the production of safety critical parts on turbomachinery manufacturing. The objective of the seminar is to provide an insight into actual process and condition monitoring. An overview of actual process monitoring and machine condition monitoring solutions and technologies is presented. Topics include future concepts of monitoring and control and specific challenges for turbomachinery manufacturing. The topics are presented by experts from science and industry.

Participation Fee: 895 € (ICTM-Industry Partners: 795 €)

Location: WZL RWTH Aachen

Seminar language: German

Metrology and Quality Management for Manufacturing and Repair of Turbomachinery Components

November 20, 2018

Turbomachinery components often inhere complex geometries which challenge the manufacturing technology and, in particular, the metrology and quality management. Parts like turbine blades, Blisks or impellers have a high number of features which are difficult to measure. Additionally, free form surfaces and undercuts yield difficulties for the design of the measurement strategy. Furthermore, the high diversity of variants and the requirement of being able to detect damages of the parts, show the need for a flexible metrology. For the measurement, a variety of tactile and optical measurement technologies is available. Also, specific software tools for the analysis of the measurement data is available which are partly customized for the need of turbomachinery manufacturing. The objective of this seminar is to provide an overview of the basic measurement principles for quality management of manufacturing and repair of turbomachinery components. Furthermore, the possibilities for data analysis are presented and demonstrated hands-on. The topics are presented by experts from science and industry.

Participation Fee: 595 € (ICTM-Industry Partners: 495 €)

Location: Fraunhofer IPT

Seminar language: German

