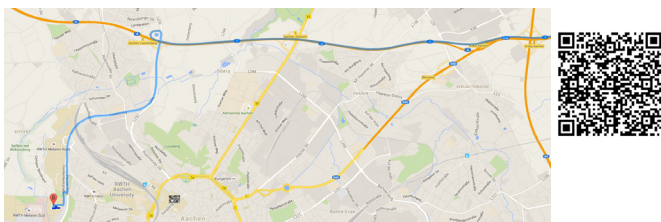


Venue

Arriving by car:

At „Aachener Kreuz“ take A4 towards Antwerpen/Heerlen. Leave the freeway at exit „Aachen-Laurensberg“ [Roermonder Str.]. Directly after the exit turn right towards Aachen. Follow the highway to the right (follow signs „Uniklinik“ [Toledoring / Pariser Ring]) until you reach the exit „RWTH Melaten“. You can park in the parking garage [Forkenbeckstr.] to your left if you have a parking permit.



Arriving by train:

With most train connections one will have to change trains in Cologne. From there one will reach Aachen with regional trains line 1 and 9 (twice an hour).

From the bus stop „Aachen Hauptbahnhof“ (main station), take the bus line 3B towards „Uniklinik“ and get off at the bus stop „Uniklinik“. Facing the „Uniklinik“ (factory-like hospital) turn to the right and walk about 200 m following the street. Then turn left to the building „Sammelbau Chemie“.

Another possibility is take the train from the station „Aachen Hauptbahnhof“ (main station) to the station „Aachen West“. On the left from the station's exit find the bus stop of lines 3A, 33 or 73 towards „Uniklinik“ or „Vaals (NL)“ and get off at „Wendingweg“, directly in front of the institute.

Lecture hall:

Lectures will be held in „Asingerzentrum“ and Lecture hall A3 of Sammelbau Chemie at Worringerweg 2, 52074 Aachen.

Registration

Please use the following form to register:

Name:

Family name:

Affiliation:

Title of Poster:

e-mail address:

participation: Tuesday Wednesday

car park permission: yes no

fax this form to: +49 241 8022185

or send e-mail to: conference.mc@itmc.rwth-aachen.de
until December 1st 2015

RWTH Aachen

ITMC.MC

52056 Aachen

Tel.: +49 241 80-26421 / Fax: +49 241 80-22185

PRO²NMR

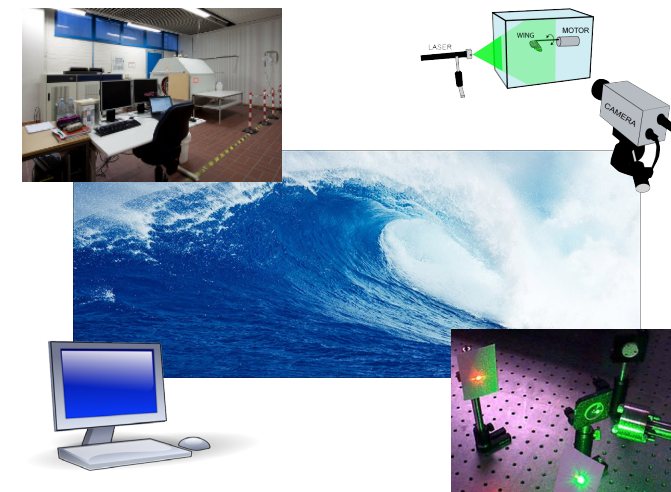
Autumn School on Products & Processes

Concepts of measuring and understanding
flow phenomena and materials in the
applied sciences.

December 8th-9th 2015

ITMC, RWTH Aachen University

Worringerweg 2, 52074 Aachen



PRO²NMR

Pro²NMR is a joint resource of the Institut für Technische und Makromolekulare Chemie (ITMC) of RWTH Aachen University with its Magnetic Resonance Centre (MARC) and the Karlsruhe Institut für Technologie (KIT).

The common aim for the Pro²NMR Centre is networking, focusing existing competences and advancing NMR activities in the fields of material and engineering sciences with the unique expertise from ITMC of RWTH Aachen University and chemical engineering/chemistry at the KIT. The valuable equipment at both places is also available for non-member users to address new questions from their scientific research. The close link between users and developers will allow focused and user-specific development of NMR methods. This link also enables cooperations in education and related sciences and technology.

The operation of the centre at KIT links different institutes

like „Chemistry and Biosciences“ and „Chemical and Process Engineering“ located at the Campus Süd as well as at Campus Nord. At RWTH Aachen University the ITMC enriches this centre with its MARC and numerous cooperation partners from RWTH Aachen University belonging to Natural Sciences, Mechanical Engineering, Geosciences and Materials Engineering as well as Medicine.

The Autumn School

The focus of this autumn school is to introduce the concepts of measuring and understanding flow phenomena and materials in the applied sciences.

Selected speakers will give introductory lectures to fluid dynamics, computational dynamics (CFD), Raman spectroscopy, particle imaging velocimetry (PIV) and nuclear magnetic resonance (NMR). Applications of those techniques to flow, transport and diffusion processes as well as to the understanding material properties will be presented.

Programm

Tuesday December 8th 2015

12:00h **Reception & Poster Setup**

13:00h **Introduction to Fluid Dynamics**
Prof. Dr.-Ing. Wessling, AVT.CVT
RWTH Aachen University

14:00h **Basics of Raman Spectroscopy**
Prof. Dr.-Ing. Koß, LTT,
RWTH Aachen University

15:00h **Coffee Break & Poster Session**

15:30h **Basics of Imaging Particle Velocimetry**
Dr. Klaas, AIA
RWTH Aachen University

16:30h **Basics of NMR**
Prof. Blümich, ITMC.MC
RWTH Aachen University

17:30h **Fluid shuttling and settling characterized by NMR**
Prof. Granwehr, IEK-9
FZ Jülich

18:00h **End of Day
Visit of the Aachen Christmas Market**
(voluntary)

Wednesday December 9th 2015

09:00h **Basics of Computational Fluid Dynamics (CFD)**
Prof. Dr.-Ing. Nirschl, MVM
Karlsruhe Institute of Technology (KIT)

Programm

10:00h **Materials Testing**
Dr. Adams, ITMC.MC
RWTH Aachen University

10:30h **Coffee Break & Poster Session**

11:00h **Carbon Capture**
Prof. Reimer, Chemical and Biomolecular Engineering, UC Berkeley

12:00h **EHQE Nuclear Magnetic Resonance meets Hyperpolarized Gases**
Prof. Appelt, ZEA-2 / ITMC
FZ Jülich / RWTH Aachen University

12:30h **Lunch Break & Poster Session**

14:00h **Flow MRI**
Dr. Küppers, ITMC.MC
RWTH Aachen University

14:30h **Emulsions**
Dr. Guthausen, MVM
Karlsruhe Institute of Technology (KIT)

15:00h **Coffee Break & Poster Session**

15:30h **An Introduction to DEM and an Example of Use**
Dipl.-Ing. Schmelzle, MVM
Karlsruhe Institute of Technology (KIT)

16:00h **Reaction Monitoring**
M. Sc. Singh, ITMC.MC
RWTH Aachen University

16:30h **Concluding Remarks**