

C³: Campus-Circle-Cycling

Discover our sustainable research and green campus by bike.



The tour stops at several locations to visit research institutes of Forschungszentrum Jülich and takes approximately 1.5 hours, of which 45 minutes will be spent cycling. We provide good-quality bikes, helmets and safety vests. Enjoy!

Venue and time: Building 04.7

Central Library on the 12th of July, 13:30.

Meet your tour guide in the foyer of the Central Library building.

Visit:

Institute of Physics,
RWTH Aachen



Prof. Dr. Achim Stahl and colleagues

The III. Institute of Physics B at the RWTH Aachen University has been working since 1967 in the field of experimental particle and astroparticle physics. Guideline for the institute was and is the exploration of elementary particles and their interactions at the highest energies. For many years, international experiments at the world's largest particle accelerator and observatories for cosmic particles are designed.

Venue and time: Building "Physikzentrum", Room 26C 205, Otto-Blumenthal-Strasse, 52074 Aachen on 13th of July 2017, 10:00 – 12:00. Bus transfer starts at the guest house in Jülich at 09:00, please be in front of the Guest house at latest at 08:50!

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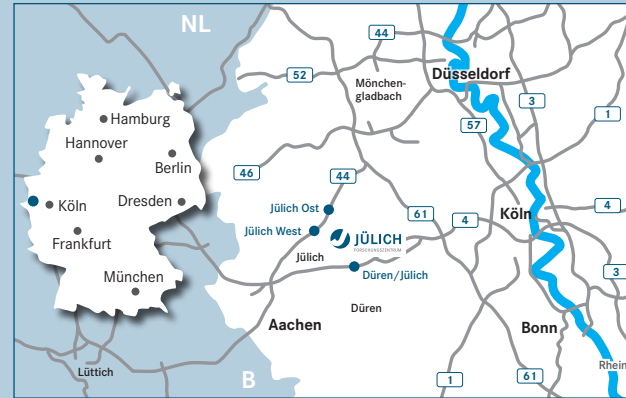
Photos: Forschungszentrum Jülich

How to get to Forschungszentrum Jülich

Aachen – Jülich bus connection:

The SB 20 and the 220 bus lines connect Forschungszentrum Jülich to the local public transport system. Time tables for bus routes (please chose „SB 20“ or „220“ in the field „Linie“ to get the time tables of the buses to Jülich):

<http://avv.de/de/linienfahrplaene>



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Further information:

The **Guest house** of Forschungszentrum Jülich is located in the city of Jülich, Münchener Straße 4, close to the citadel with direct access to the Rurtalbahn.

Day	Time	Activity
Sunday, 7.7.2017	ARRIVAL IN JÜLICH	
Monday, 10.7.2017	10:00	Registration at the front desk
	10:30	Welcome Bldg. 15.3, Room 3105
Tuesday, 11.7.2017	08:30	INM Lecture Lab tour, Bldg. 15.19, Room 4012
	11:00	PGI-5 Lectures and Lab tour, Bldg. 05.2W, Entrance E 22, Room 3089 (1st floor)
Wednesday, 12.7.2017	09:00	PGI-6 Lectures and Lab tour, Bldg. 04.8, Room 142/143
	11:00	PGI-7 Lectures and Lab tour, Bldg. 04.6, Entrance E 16
Thursday, 13.7.2017	09:00	Bus transfer to RWTH Aachen
	10:00	Institute of Physics, Lectures and Lab tour, Bldg. Physikzent- rum Aachen, Room 26C 205
Friday, 14.7.2017	12:00	Discover the city of Aachen
	DEPARTURE TO KRAKOW	

IKP: Nuclear Physics Institute, INM: Institute of Neuroscience and Medicine, IBG: Institute of Bio- and Geosciences, PGI: Peter Grünberg Institute, PGI-5: Microstructure Research, PGI-6: Electronic Properties, PGI-7: Electronic Materials, PGI-8: Bioelectronics

Member of the Helmholtz Association

Jülich Krakow Summer School 2017

Science-UP

9 – 14 July 2017



IBG Lectures:

Plant Sciences:

White Biotechnologie

Kevin Mark and Julia Otten

At the Forschungszentrum Jülich Institute of Bio- and Geosciences (IBG) biologists, biochemists, chemists, computer scientists, physicists, and engineers form an interdisciplinary team have a common aim: the use of microorganisms or isolated enzymes for the synthesis of bio-products from renewable carbon sources.

For thousands of years mankind has employed the metabolism of microorganisms, e.g. for the making of bread, cheese, wine, or beer. However, the enormous potential of microorganisms and enzymes for the synthesis of new bio-products, such as basic or fine chemicals, pharmaceuticals and proteins, from renewables is exploited only to a small extent currently. Research at IBG-1 aims at a detailed molecular understanding of microorganisms and enzymes which are used as biocatalysts and includes approaches of systems biology and synthetic biology. The resulting knowledge and technologies are used for the development of novel resource-efficient and sustainable bio-processes, thereby reducing our dependency on fossil carbon sources, in particular crude oil.

Venue and time: Building 15.4,
Meeting room 302 (Bibliothek IBG-1) on 10th of July 2017,
14:00 – 17:30

INM Lectures: Short-lived Radionuclides for Life Sciences

Prof. Dr. Johannes Ermert

The main focus of the Institute of Nuclear Medicine/Nuclear Chemistry (INM-5) at Forschungszentrum Jülich is on the development of radionuclides and radiotracers for the use in positron emission tomography (PET).

The research topics are:

- The examination of new production route to radionuclides for medical application (diagnostic and therapeutic use).
- The development of new labelling methods for radionuclides for diagnostic application.
- The development of new radiotracers for the molecular imaging of receptor systems involved in neurodegenerative diseases.

The INM-5 has working groups in the field of radio nuclide development, radiotracer development and radiopharmacology and, furthermore, a group responsible for the routine production of radiotracers for human use. The latter is the interface between the radiochemistry and medicine, that provides the PET-sites in and outside of the Forschungszentrum Jülich with new innovative radiotracers under GMP-conditions

Venue and time: Building 15.19,
Meeting room 4012 on 11th of July 2017,
08:30 – 10:30

IKP Lectures:

Fundamental Research in the Field of Hadron, Particle, and Nuclear Physics

Prof. Dr. Hans Ströher and colleagues

The Nuclear Physics Institute (IKP) at Forschungszentrum Jülich conducts experimental and theoretical basic research in the areas of nuclear, hadron and particle physics. To this end, it operates the COSY cooler synchrotron, an accelerator and storage ring, which provides unpolarized and polarized proton and deuteron beams with pulses of up to 3.7 GeV/c. In the context of large international collaborations, these are used for internal experiments (ANKE, PAX, WASA) and external experiments (TOF).

The results are analysed and interpreted within the scope of theoretical models. The goal is to develop a fundamental and in-depth understanding of quantum chromodynamics (QCD) as

the theory of the strong interaction. QCD causes the fundamental building blocks (quarks and gluons) to be bound into so-called hadrons (e.g. protons and neutrons) that structure us and our environment). Today they continue to provide many puzzles, including the question as to why there are not many more bound quark-antiquark-gluon systems.

The search for these kinds of exotic states will be conducted in the coming years at the Facility for Antiproton and Ion Research (FAIR) in Darmstadt, which provides high-energy heavy ions and antiprotons for basic research. Within the billion-euro FAIR project, Forschungszentrum Jülich is responsible for the construction of the high-energy storage ring (HESR) and to this end, is contributing its know-how concerning protons and antiprotons, as well as its experience with accelerator and hadron physics.

Venue and time: Building 07.1,
Meeting room 312 on 11th of July 2017,
14:00 – 17:30

PGI Lectures:

The Peter Grünberg Institute (PGI) at Forschungszentrum Jülich is dedicated to fundamental research on novel physical concepts and emerging materials in information technology and related fields. It also provides a state-of-the-art platform for the development of process technologies, devices and innovative nanoelectronic material systems.

PGI-5 Lecture: Microstructure Research

Prof. Dr. Rafal Dunin-Burkowski and colleagues

Development of new procedures for understanding material properties on the atomic level with a special focus on ultrahigh resolution electron microscopy techniques.

Venue and time: Building 05.2w, Entrance E22,
Meeting room 3098 (1st floor) on 11th of July 2017,
11:00 – 12:30

PGI-6 Lecture: Electronic Properties

Prof. Dr. Claus Michael Schneider,
Dr. Lukasz Plucinski and Dr. Ewa Mlynczak

The interrelations between electronic structure and physical properties such as magnetism and magnetic phenomena by applying, for example, synchrotron radiation techniques will be explored.

Venue and time: Building 04.8,
Meeting room 142/143 on 12th of July 2017,
09:00 – 10:30

PGI-7 Lecture: Electronic Materials

Prof. Dr. Regina Dittmann and Dr. Susanne Hoffmann-Eifert

The research focuses on the nanoelectronics of the future. PGI 7 investigates electronic phenomena in oxides and electronically-active organic molecules.

Venue and time: Building 04.6, Entrance E16
on 12th of July 2017, 11:00 – 12:30

PGI-8 Lecture: Bioelectronics

Prof. Dr. Andreas Offenhäusser and Dr. Dirk Mayer

An interdisciplinary team of physicists, chemists, biologists and electrical engineers studies and develops functional assemblies of biological components and electronic devices.

Venue and time: Building 02.4 v, Entrance E9,
Meeting room 206 (1st floor, Work Café) on 12th of July 2017,
15:30 – 18:00