Deutsche Physikalische Gesellschaft

DPG

DPG-Frühjahrstagung (Spring Meeting)

of the Condensed Matter Section (SKM)

together with the Division
Radiation and Medical Physics

and the Working Groups
Equal Opportunities, Industry and Business,
Young DPG

Short Programme

31 March – 5 April 2019

Universität Regensburg

Impressum:

Deutsche Physikalische Gesellschaft e. V.
Hauptstraße 5
53604 Bad Honnef
Tel.: 02224 / 9232-0
Fax: 02224 / 9232-50
dpg@dpg-physik.de
www.dpg-physik.de
Gerichtsstand: Königswinter

Eingetragen in das Vereinsregister (VR 90474) des Amtsgerichtes Siegburg. Die DPG fördert wissenschaftliche Zwecke. Sie ist nach § 5 Abs. 1 Nr. 9 KStG von der Körperschaftsteuer befreit, weil sie ausschließlich und unmittelbar steuerbegünstigten gemeinnützigen Zwecken i. S. der §§ 51 ff. AO dient.

Verantwortlich für den Inhalt:
Dr. Bernhard Nunner (Hauptgeschäftsführer)

Deutsche Physikalische Gesellschaft DPG

#DPGFR19

DPG Fall Meeting

of the Deutsche Physikalische Gesellschaft

Quantum Science and Information Technologies

Joint Meeting of the Atomic, Molecular, Plasma Physics and Quantum Optics Section (SAMOP)
Condensed Matter Section (SKM)
Matter and Cosmos Section (SMuK)

The German Physical Society (DPG) is launching a new meeting format dedicated to a research theme identified by its three sections. The first DPG Fall Meeting addresses Quantum Science in its relation to Information Technologies, and provides a forum for cross-disciplinary discourse between condensed matter and AMO physics, information science and quantum technologies, applied and fundamental research. Rapid developments in a priori distinct fields, from artificial intelligence to the first small-scale quantum computation platforms, dedicated efforts in academia as well as in industrial research, and an intensifying public debate on the diverse aspects of these truly revolutionary emerging technologies, necessitates an accentuated and concerted scientific exchange across disciplines. We look forward to bringing together key players from academia to industry, senior and junior researchers, and the interested public, to engage in this endeavour.

September 23-27, 2019

University of Freiburg

Local Organiser:
Prof. Dr. Andreas Buchleitner
Dept. for Quantum Optics and Statistics
Physikalisches Institut
Albert-Ludwigs-Universität Freiburg
freiburg19@dpg-tagungen.de

Conference Venue:
Albert-Ludwigs-Univ. Freiburg
Kollegiengebäude I
Platz der Universität 3
79098 Freiburg

freiburg19.dpg-tagungen.de

Table of Content

Greeting

Dear guests,

Welcome to the DPG-Frühjahrstagung (Spring Meeting) of the Condensed Matter Section (SKM) at the Universität Regensburg. I wish all of us the intensive scientific and personal exchange we all are looking for and enjoy at conferences. It is to my particular delight to welcome all the young physicists, many of them attending a DPG Meeting for the first time. The DPG Spring Meetings offer an excellent place for a direct exchange to everyone – from bachelor students to established physics prize winners.

Our conferences are furthermore an ideal place to share information about developments in the scientific community and to help shape a joint opinion. Two topics from the DPG are very important to us in these times, and we have to take a close look at them while approving the social goals: The role of "Open Access" and the role of open research databases which should contribute to the OSPP (Open Science Policy Platform) concept at European level. These two topics request a binding response.

For many years, the DPG has also been committed to the principles of Open Access in order to promote scientific exchange. This is why, together with the Institute of Physics (IOP), we founded the electronic journal "New Journal of Physics" (NJP) 20 years ago, one of the first Open Access journals, and demonstrated that Open Access can work. The topic of Open Access is more relevant today than ever before: It is closely related to the great dynamics of the Open Science Policy which is linked to the aspects of "Open Data" (i. e. "research data management") and Open Access:

"Plan S", supported and demanded by the funding agencies of "cOAlition S", stipulates that scientific publications benefiting from publicly funded research must be published strictly in **Open Access** journals or platforms (so-called "gold standard") from 2020!

In **research data management**, new binding infrastructures for the digital supply of information to science must be introduced in order to sustainably secure them and make them available for public use. To this purpose the "Joint Science Conference" in Germany ("Gemeinsame Wissenschaftskonferenz – GWK") passed a federal-state agreement on the establishment and funding of a National Research Data Infrastructure (NFDI) at the end of last year – a call for proposals from the German Research Foundation (DFG) is expected.

We want to assume responsibility for our science by developing our own **DPG statement on Open Science**. The consequences of the developments towards Open Science are not yet precisely foreseeable for the field of physics, but we may be sure they will be serious. That is why we urgently call on all DPG members, conference guests and colleagues: Gain expert knowledge on this topic and share your expertise! On this basis we would then like to enter into the necessary dialogue with the political decision-makers in order to work towards the consideration of the specific needs of physics and its adjacent sciences.

Such a conference can only be realized with the enormous commitment of many persons, especially of volunteers. I want to sincerely thank all of them here. Let me express my further thanks to the Universität Regensburg for its hospitality and support. I thank the Wilhelm and Else Heraeus-Foundation for their generous support of all our DPG Spring Meetings. It is my pleasure to thank the members of the respective section, divisions and working groups for organising the outstanding scientific programme. My special thanks go to the Local Organising Committee, Prof. Dieter Weiss, Universität Regensburg, Faculty of the Institute of Experimental and Applied Physics, and his team. Last but not least I thank the DPG office for their support and supervision at all DPG Spring Meetings.

Prof. Dr. Dieter Meschede
President of the
Deutsche Physikalische Gesellschaft e. V.

Organisation

Organiser

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Hauptstraße 5, 53604 Bad Honnef
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Local Secretary

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Email dpg-conference@uni-regensburg.de

Scientific Organisation

Chair of the Condensed Matter Section (SKM)

Prof. Dr. Erich Runge
Fakultät für Mathematik und Naturwissenschaften
Technische Universität Ilmenau
Weimarer Straße 25, 98693 Ilmenau
Phone +49 (0) 3677 – 69 3707
Email erich.runge@tu-ilmenau.de

Chairs of the Participating Divisions

(BP) Biological Physics
– Prof. Dr. Sarah Köster (sarah.koester@phys.uni-goettingen.de)
(CPP) Chemical and Polymer Physics
– Prof. Dr. Adreas Fery (fery@ipfdd.de)
(DS) Thin Films
– Priv.-Doz. Dr. Patrick Vogt (patrick.vogt@hrz.tu-chemnitz.de)
(DY) Dynamics and Statistical Physics

– Prof. Dr. Walter Zimmermann
(walter.zimmermann@uni-bayreuth.de)

(HL) Semiconductor Physics
– Prof. Dr. Jürgen Christen
(juergen.christen@physik.uni-magdeburg.de)

(KFM) Crystalline Solids and their Microstructures
– Prof. Dr. Theo A. Scherer
(theo.scherer@kit.de)

(MA) Magnetism
– PD Dr. Andy Thomas
(a.thomas@ifw-dresden.de)

(MM) Metal and Material Physics
– Prof. Dr. Jörg Neugebauer
(neugebauer@mpie.de)

(O) Surface Science
– Prof. Dr. Ulrike Diebold
(diebold@iap.tuwien.ac.at)

(SOE) Physics of Socio-economic Systems
– Priv.-Doz. Dr. Jens C. Claussen
(j.claussen@aston.ac.uk)

(ST) Radiation and Medical Physics
– PD Dr. Thilo Michel (thilo.michel@fau.de)

(TT) Low Temperature Physics
– Prof. Dr. Christian Enss
(christian.enss@kip.uni-heidelberg.de)

(VA) Vacuum Science and Technology
– Dr.-Ing. Thomas Giegerich
(thomas.giegerich@kit.edu)

Chairs of the Participating Working Groups

(AKC) Equal Opportunities
– Dr. Susanne Kränkl
(susanne.kraenkl@googlemail.com)

(AKjDPG) Young DPG
– B. Sc. Matthias Dahlmanns
(dahlmanns@jdpg.de)

(AIW) Industry and Business
– Dr. Rolf Loschek (loschek@dpg-mail.de)

Symposia

SYSD – SKM Dissertation Prize

SYCZ – Czech Republic as Guest of Honor

SYCC – Identifying Optimal Physical Implementations for beyond von Neumann Computing Concepts

SYCO – Mechanically Controlled Electrical Conductivity of Oxides

SYDN – Physics of Self-Organization in DNA Nanostructures
SYGT – Geometry, Topology, and Condensed Matter
SYHE – Hydrodynamic Electronics: Transport in ultrapure Quantum Systems
SYIS – Interactions and Spin in 2D Heterostructures
SYPN – Patterns in Nature: Origins, Universality, Functions
SYTS – Interaction Effects and Correlations in two-dimensional Systems – New Challenges for Theory

Organisation of the Exhibition of Scientific Instruments and Literature

DPG-Kongress-, Ausstellungs- und Verwaltungsgesellschaft mbH
Hauptstraße 5, 53604 Bad Honnef
Phone +49 (0) 2224 9232-0
Fax +49 (0) 2224 9232-50
Email dpg@dpg-physik.de
Homepage www.dpg-gmbh.de

Programme

The scientific programme consists of 4,524 contributions:

12	Plenary talks
2	Evening talks
7	Prize talks
6	Lunch talks
35	Topical talks
13	Tutorials
260	Invited talks
2,789	Contributed talks
1,397	Posters
3	Discussions


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Information for Participants

The conference will be held March 31 – April 05, 2019.

Conference Information

Conference Venue
University of Regensburg
Universitätsstraße 31
93053 Regensburg

The central activities like registration etc. will take place in the Main Lecture Hall (Audimax) of the University of Regensburg (Universitätsstraße 31). For a detailed map of the campus and the buildings please see the end of this booklet.

Parking at Universität Regensburg

Please note: The underground car park "West" is closed due to renovation. Please use the new parking garages near BioPark (see campus map at the end of this booklet). There are no parking fees.

Please do not park in areas set aside for special users or in handicapped parking areas without a special parking permit. If you do, you may fined and your car towed. Towed vehicles will be taken to the alternative car parking near the building of Chemistry and Pharmacy. It can be reached through the street “Am BioPark”. To reclaim a towed vehicle, please call the towing service on +49 (0) 172 8128601. You will be provided with a lock code so you can retrieve your car.

Transportation

Regensburg offers a very good transportation infrastructure (see public transport map at the end of this booklet). The conference ticket printed on your conference name tag will authorize you to use all buses of the public transport system (RVV) in Regensburg from March 31 to April 5 in the fare zone 1 for free.

You can reach the bus stop “Universität” by the bus lines 2B, 4, 6, 11 and 19.

From Monday to Wednesday you can also use the additional “campus bus lines” C1/C2/C4/C6. A map of the public transport system in Regensburg is printed in this booklet.

Construction Sites

Unfortunately the whole Forum zone (between Mensa and Central Library) is under construction at the moment as well as the area between Biology Building and Sports Building. You may use the "UR Walking App" to find your way across the campus. We apologise for the inconvenience caused.

Conference Office – Information Desk

The conference office and the information desk are located in the foyer of the Main Lecture Hall (Audimax H1). The opening hours are:

		Registration	Information Desk
Sunday	March 31	15:00 – 19:00	15:00 – 20:00
Monday	April 1	07:30 – 18:00	07:30 – 18:00
Tuesday	April 2	08:00 – 16:00	08:00 – 18:00
Wednesday	April 3	08:00 – 16:00	08:00 – 18:00
Thursday	April 4	08:00 – 16:00	08:00 – 18:00
Friday	April 5	08:00 – 12:00	08:00 – 15:00

To contact the information desk during the opening hours call +49 (0) 941-943 2530.

You will receive the printed short programme and your name tag at the conference office. The name tag must be worn visibly during the entire conference. With your name tag you will receive a receipt for your conference fee, the conference ticket for public transport and free coffee at our coffee corners.

The organisers, staff of the conference desk, and the student assistants will be identifiable by coloured name tags and Φ-T-shirts. Please contact them if you have any questions. Do not hesitate to inquire about all necessary information concerning the conference, orientation in Regensburg, accommodation, restaurants, going out, and cultural events at the information desk located in the foyer of the Main Lecture Hall.

At the Info Desk conference participants can also register for the supporting programme with excursions to institutions and industrial sites in the area.

Allocation of the Lecture Halls

H1-H10, H22, H23	Main Lecture Hall
H11-H17	Law and Economy Building
H18-H21	Multi-purpose Building
H24-H26	Vielberth-Building
H31, H32	Mathematics Building
H33-H36	Physics Building
H37-H39	Pre-clinical Medicine Building
H43-H48	Chemistry&Pharmacy Building
H52, H53	Biology Building

Plenary talks, joint symposia
H1 (Audimax), H2

Lunch Talks
H2, H15

Prize ceremony, Evening talks
H1 (Audimax)

Job Market
Kunsthalle (Foyer Audimax, 1st floor)

Registration desk
Foyer Audimax (Main Lecture Hall)

Information desk
Foyer Audimax (Main Lecture Hall)

EinsteinSlam
H1 (Audimax)

With the DPG-App through the Spring Meetings!

The updated app for the DPG Spring Meetings is ready for use: Faster and in a new design, the app allows you to learn not only about the conference programme but also about the venue and the exhibitors of the industry and book exhibition. With the help of new functions such as "What's going on now?" or the building plan overview, it is now even easier to find your way through the conferences. Download the free "DPG Spring Meeting" app for Android or iOS now!

Communication / Internet Access

The University of Regensburg is member of the eduroam-network. Users from eduroam institutions, who have registered for eduroam, can use WLAN at the University of Regensburg without local registration in Regensburg. Please ask the computer center/network administration of your home institution for eduroam-registration. Eduroam in Regensburg is possible with WLAN SSID eduroam.

In addition to eduroam a WLAN (WPA2 secured) with

the SSID conference is offered without prior registration:

SSID: conference.uni-regensburg.de

PSK: unirconf

Furthermore, access to the Internet will be available in every public computer room (= “CIP Pool”) at the Campus daily from 08:00 to 22:00 with the following access data:

Login-Name: tag45

(or tag45.tagung.extern.uni-regensburg.de)

Password: dpg-2019

Printing Service "Copy & Paper"

The copyshop at the Forum (Monday to Thursday 08:00 – 18:00, Friday 08:00 – 16:00) offers office supplies and printing service up to DIN A0 paper size.

Lost and Found Property

You can bring found items to the information desk in the foyer of the Audimax. There you can also get your lost property back.

Cloakroom

Participants are asked to look carefully after their wardrobe, valuables, laptops, and other belongings. The organisers decline any liability. You will find a cloakroom in the basement of the Main Lecture Hall (Audimax). The opening hours will be announced. Please note that there is no possibility to store luggage!

Presentation

Scientific presentations will be held either orally or by poster. Presentations with a German abstract will be given in German.

Oral Presentation

Lecturers are requested to provide their presentations electronically. All lecture rooms are equipped with projectors (“beamers”), and a majority offers radio microphone amplifiers. OHPs are not available.

Laptops must be provided by the speakers. Furthermore, the presentation should be recorded onto an USB stick as back-up in PDF and power point format.

Contributed talks should take 12 minutes with 3 minutes for discussions; Topical and Invited Talks must not exceed 30 or 45 minutes as specified in the programme.

All lecture rooms will be opened, at the latest, 30 minutes prior to the talk. Speakers are requested to be in the lecture room at least 20 minutes prior to the start of the session, to report to the chairperson of the session as well as the technical staff to ensure that the laptops handshake with the beamers and to receive a brief introduction to the equipment in the lecture room.

Poster Presentation

Sites for poster sessions are named and located as follows:

Poster A	Cafeteria Wirtschaft und Recht (Law and Economics)
Poster B1+B2	Zentralbibliothek (Central Library)
Poster C	Chemie (Chemistry and Pharmacy)
Poster D	Physik (Physics)
Poster E	Vorklinikum (Pre-Clinical Medicine)
Poster F	Vielberth-Gebäude (Vielberth-Building)

The poster boards will be marked with the number according to the scientific programme. Authors are asked to mount their poster 2 – 3 hours before their session. Each poster should display the number according to the scientific programme. Each poster should be no larger than 85 cm x 120 cm (A0 portrait format).

For the mounting of the poster please use the prepared "power strip" at the poster frame or contact the available student staff. Please make sure to use only power strips for mounting the poster (residue-free removing). The presenting authors should be at hand for discussion at their poster during at least half of the poster session and should note this time at the poster.

The posters have to be removed after the session. Any posters remaining on display walls will be removed and disposed without requesting your permission. The conference management accepts no liability for the posters.

Discussion with Plenary Speakers

After the plenary talks, coffee, tea, and refreshments will be served in the Kunsthalle (Foyer Audimax 1st floor), and there will be a possibility of informal discussions with the plenary speakers.

Message Board

All alterations in the scientific programme and other important information for participants will be announced on a message board near the information desk and via http://regensburg19.dpg-tagungen.de/index.html.

WE Heraeus Communication Programme

Important notes for participants who apply for a grant of the Wilhelm and Else Heraeus Foundation:

At the beginning of the conference you will receive an identification form at the conference office. The participation in the conference must be certified by the conference desk. You have the possibility to leave this certificate by the staff members of the DPG (recommended!) in the conference office or submit it to the DPG Head Office (DPG-Geschäftsstelle, Hauptstr. 5, 53604 Bad Honnef, Germany) by April 23, 2019 at the latest.

For more detailed information refer to

http://regensburg19.dpg-tagungen.de

The Deutsche Physikalische Gesellschaft thanks the Wilhelm and Else Heraeus Foundation for the generous financial support of young academic talents. We hope that young physicists will continue to seize the offered opportunity for active scientific communication at scientific conferences. A total of about 35,000 young academics were supported by this programme so far.

Catering

Coffee

Free coffee will be provided to all registered participants of the conference at DPG-coffee corners located near all exhibition areas and poster areas. All locations are displayed in the map of the campus at the end of this booklet. Please wear your name tag visibly during the entire conference.

In addition you can get coffee, tea, refreshments and snacks at the cafeterias (with costs) in the Buildings of Chemistry, Physics, Philosophy and Law (Monday – Friday).

Lunch

Lunch will be supplied in the Mensa of the University (Monday – Friday: 11:00 – 14:00). Prices: about 10.00 € including the meal, one drink and one dessert.

In addition to the Mensa and the cafeterias there will be two Food trucks in front of H36 (outside).

Uni-Pizzeria

The Pizzeria „Unikat“ offers freshly made Italian food (Sunday-Friday: 09:00 – 24:00). Reservation recommended!

Weltneuheit. Erstes kommerzielles ...

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Für die erfolgreiche Initialisierung, Manipulation und das Auslesen von Qubits bedarf es der besten verfügbaren elektronischen Komponenten. Unser Quantum Computing Control System basiert auf einem ausgeklügelten Zusammenspiel der einzelnen Instrumente. Dabei wird ein hohes Maß an Komplexität verarbeitet, um die Arbeit für den Anwender effizient zu gestalten.

DPG

DPG Regensburg
Stand Nr. 71

+41 44 515 0410
info@zhinst.com
www.zhinst.com

Was sind Ihre Anforderungen?
Sprechen Sie uns an.

Zurich Instruments

Campus' Grocery Store

The Campus' Grocery Store "Hechtbauer" at the Forum offers food, beverages and convenience goods (Monday – Friday: 08:00 – 18:00).

Events

Tutorials

On Sunday, March 31, 16:00 – 18:15, there will be tutorial workshops on current scientific topics for interested conference participants, in particular for students and young scientists. All conference participants are welcome.

Topics:

- Next generation of SI-Units
- Statistical Physics Methods for Data Science in Physics
- Resistive Switching: From basic physics of memristive devices to neuromorphic systems
- Diamond-Growth, characterisation, electronics and applications

Welcome Evening

Sunday, March 31, 18:30 – 21:00, Mensa

On Sunday evening, a Bavarian Welcome Evening will be held in the Mensa of the University of Regensburg to which all registered participants are kindly invited. Snacks and drinks will be served. "De Verkeadn" (Bavarian Brass Music) will entertain you with music.

Do not miss the opportunity to register (15:00 – 18:30) before the official beginning of the conference and to meet people in an informal atmosphere. When registering for the conference you will receive your badge and food and drink vouchers for the Welcome Evening.

The (unguarded) wardrobe in the basement of the Mensa is open from 18:30 – 21:30. Please note that the cloakroom in the lecture hall basement closes on Sunday at 20:00!

EinsteinSlam

Monday, April 1, 20:00, Audimax (H1)

Keen to hit the stage and fascinate the audience? The EinsteinSlam is yours! Be smart, take part, let science rock

EinsteinSlam is the competitive art of making complex science accessible to a broad audience. There are just 10 minutes for every attendee to present his/her self-made performance. The event will finish with a public poll in order

to evaluate if a particular contribution was either instructive and amusing or rather should have never been performed. All presentations will be given in German. For more information please see www.einstein-slam.de.

Special Plenary Session with Award Ceremony (in German language)

On Tuesday, April 2 at 16:00, the special plenary session with award ceremony and ceremonial lecture will take place in the Audimax (H1).

Am Dienstag, den 2. April um 16:00 Uhr findet im H1 (Audimax) die Festsitzung mit Preisverleihung und anschließendem Festvortrag statt:

Musik

Begrüßung
durch den Örtlichen Tagungsleiter
Prof. Dr. Dieter Weiss, Universität Regensburg

Grußwort
des Präsidenten der Universität Regensburg
Prof. Dr. Udo Hebel

Ansprache
des Präsidenten der
Deutschen Physikalischen Gesellschaft
Prof. Dr. Dieter Meschede

Musik

Preisverleihung

Vergabe des Walter-Schottky-Preises 2019
an Dr. Eva Vera Benckiser
Max-Planck-Institut für Festkörperforschung, Stuttgart

Vergabe des Gaede-Preises 2019
an Dr. Selina Olthof
Universität zu Köln

Vergabe des Dissertationspreises der Sektion Kondensierte Materie (SKM)
(Der Preisträger / die Preisträgerin wird nach dem SKM-Dissertationspreissymposium ernannt)

Musik

Festvortrag

Professor Laura H. Greene

National MagLab and Florida State University

„The Dark Energy of Quantum Materials"

Evening Lectures

The Evening Lectures are open for all conference participants and interested public. The entrance is free.

Lise-Meitner-Lecture

Tuesday, April 2, 18:30, Audimax (H1)

Professor Halina Rubinsztein-Dunlop from the University of Queensland, Brisbane, Australia will speak about:

„Sculpted light in nano- and microsystems"

Public Evening Talk

Wednesday, April 3, 20:00 to 21:00, Audimax (H1)

Professor Gianfranco Pacchioni from the University Milano-Bicocca, Italy will speak about:

„The overproduction of truth. Passion, competition, and integrity in modern science"

Job Market

During the conference various companies and organisations will present their working fields and career opportunities to all interested participants. The presentations will take place from Tuesday, April 2 to Friday, April 5 in the Kunsthalle (Foyer Audimax, 1st floor). The presentations will last for about 30 minutes plus discussion. For additional information and contacts refer to the information board close to the conference office.

Programme:

Tuesday, April 2

12:00 – 13:00	Firma SRC Security Research & Consulting *Vom Labor zur sicheren Transaktion – Vom Physiker zum SRC-Experten*
13:15 – 14:15	Fintegral – Partners in Risk Management *Vorstellung Fintegral und Einblicke in die Projektarbeit*

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14:30 – 15:30 Bluefors Cryogenics Oy
Arbeiten bei Bluefors

Wednesday, April 3

12:00 – 13:00 McKinsey & Company. Inc.
Warum McKinsey?

13:15 – 14:15 Forschungszentrum Jülich GmbH
Karrierechancen für Physikerinnen und Physiker im Forschungszentrum Jülich

14:30 – 15:30 Bundesamt für Sicherheit und Informationstechnik
Aus der Physik in die IT-Sicherheit – Karriere beim BSI

Thursday, April 4

12:00 – 13:00 d-fine GmbH
analytical. technological. quantitative – why numbers matter in consulting

13:15 – 14:15 Basycon Unternehmensberatung GmbH
Hypothesen, Modelle, Experimente. Was Forschung und Unternehmensberatung gemeinsam haben.

14:30 – 15:30 KPMG AG
Eine der führenden Wirtschaftsprüfungs- und Beratungsunternehmen

Friday, April 5

12:00 – 13:00 The Boston Consulting Group
Als Physiker/in in die Strategieberatung

Annual General Meetings of the DPG Divisions and Working Groups

Division / Working Group		Date	Time	Location
(BP)	Biological Physics	Wednesday, April 3	18:00 – 19:00	H4
(CPP)	Chemical and Polymer Physics	Thursday, April 4	18:45 – 19:45	H13
(DS)	Thin Films	Wednesday, April 3	18:30 – 19:30	H39
(DY)	Dynamics and Statistical Physics	Thursday, April 4	18:30 – 19:30	H3

(HL)	Semiconductor Physics	Thursday, April 4	17:30 – 18:30	H34
(KFM)	Crystalline Solids and their Microstructures	Wednesday, April 3	18:30 – 19:00	PHY 5.0.21
(MA)	Magnetism	Thursday, April 4	18:00 – 19:00	H48
(MM)	Metal and Material Physics	Wednesday, April 3	19:00 – 20:00	H43
(O)	Surface Science	Thursday, April 4	19:00 – 19:30	H1
(SOE)	Physics of Socio-economic Systems	Wednesday, April 3	12:00 – 13:00	H17
(ST)	Radiation and Medical Physics	Wednesday, April 3	17:30 – 19:00	H48
(TT)	Low Temperature Physics	Thursday, April 4	18:30 – 20:00	H7
(VA)	Vacuum Science and Technology	Monday, April 1	17:15 – 18:00	H6
(AIW)	Industry and Business	Wednesday, April 3	09:00 – 12:30	Theater

Exhibition of Scientific Instruments and Literature

Tuesday, April 2 – Thursday, April 4

Opening hours: Tuesday 09:00 – 16:00, Wednesday – Thursday 09:00 – 18:00

From Tuesday to Thursday there will be an exhibition of scientific instruments and literature in the Main Lecture Hall Foyer (Audimax), Law and Economics Building ("Wirtschaft und Recht"), H6 area and the Multi-purpose Building ("Sammelgebäude"). More than 100 companies (see list of exhibitors at the end of this booklet) will present their products. All conference participants are welcome to attend the exhibition. The entrance is free.

"Role models"-Exhibition

Monday, April 1, to Thursday, April 4

Exhibition of 24 posters presenting biographies of "role model" female physicists. It is titled "Lise Meitners Töchter – Physikerinnen stellen sich vor" and aims to encourage women to choose a profession within the field of natural sciences. The exhibition is located in the foyer of the Central Library. It is permanently open to the general

public from Monday to Thursday, 09:00 – 19:00. The "Role models"-Exhibition is free of charge.

Women in Physics Lunch

Wednesday, April 3, 2019, 12:00 – 13:15, Location: in front the upper exit of H2

Female physicists of all career stages are cordially invited to join our meet-and-greet networking lunch. Interested colleagues and guests are welcome! Light snacks and finger food will be served. The idea of this event and the related activities of the AKC during the meeting is to provide a venue for informal exchange and getting-to-know each other. We want to open opportunities for making specific contacts and finding experts that can answer your urgent questions on-the-spot by intensifying the exchange between female scientists in different career stages. If you have specific issues or ideas, be it on scientific questions or family-related issues, please do not hesitate to contact the organisers, Prof. Martina Hentschel (TU Ilmenau) and Prof. Ulrike Woggon (TU Berlin) prior to the meeting.

"Physik hautnah"

Thursday, April 4 – Saturday, April 6 2019

Opening hours: 10:00 – 19:00

Location: On the large exhibition area within the "Donaueinkaufszentrum (DEZ)", on the 2nd floor in front of the candy shop "Hornung".

Exciting experiments and technological highlights will be presented for the interested public in the "DEZ" shopping center. Already in past years this show was a great success. People of all ages experienced the lively world of physics and materials science within an everyday life environment.

Supporting Programme

City Tours

Täglich 10:30 – 12:00 & 14:30 – 16:00
Stadtführung „Regensburg – Eine historische Stadt erleben" (deutsch)
Kosten: 10,00 EUR
Start: Rathausplatz, vor der Touristinformation

Anmeldung unter https://tourismus.regensburg.de/fuehrungen-rundfahrten/tickets-online.html oder in der Tourist-Information am Rathausplatz (+49 (0) 941 507-4410). Für diese Tour müssen Sie sich nicht zusätzlich an unserem

Infodesk anmelden!

Tuesday, April 2, 16:30 – 18:00
City tour "Regensburg – Experience a Historic City" (English)
Costs: 10.00 EUR

Meeting point: in front of the Tourist Information in the Old Town Hall of Regensburg

Please register online (tourismus@regensburg.de) or in the Tourist Information (+49 (0) 941 507-4410) by Monday, April 1, at the latest.

Excursions to Institutions and Industrial Sites in the Area

At the Info Desk conference participants can also register for the supporting programme with excursions to institutions and industrial sites in the area. Please note that only a very limited number of participants (25 - 30) can take part in each of the excursions. The stated times are the times of departure and return.

Tuesday, April 2, 16:10 – approx. 18:15

„TechBase – From Science to Business" (English)

Meeting point: Please sign up with your guide at the Information Desk in the Main Lecture Hall Foyer

Registration is free of charge. Please register for this tour at the Information Desk in the Main Lecture Hall Foyer by Monday, April 1, 12:00 at the latest.

Tuesday, April 2, 18:15 – approx. 20:45

„Physics in the Universe: Regensburg's Observatory. A guided tour by and for physicists"(English)

Costs: 5,00 EUR

Meeting point: Please sign up with your guide in front of the Tourist Information located in the Old Town Hall

Please register and pay for this tour at the Information Desk in the Main Lecture Hall Foyer by Monday, April 1, 12:00 at the latest. The building is not 'barrier-free' for people with disabilities. The observatory is located on the three top floors, there is no elevator!

Wednesday, April 3, 18:15 – approx. 20:45

„Physics in the Universe: Regensburg's Observatory. A guided tour by and for physicists"(English)

Costs: 5,00 EUR

Meeting point: Please sign up with your guide in front of the Tourist Information located in the Old Town Hall

Please register and pay for this tour at the Information Desk in the Main Lecture Hall Foyer by Tuesday, April 2, 12:00 at the latest. The building is not 'barrier-free' for people with disabilities. The observatory is located on the three top floors, there is no elevator!

Thursday, April 4, 9:30 – 13:00

„Infineon Innovation Site Regensburg" (English)

Meeting point: Please sign up with your guide at the bus stop "Universität" outside the university

Registration is free of charge. Please register for this tour at the Information Desk located in the Main Lecture Hall Foyer by Monday, April 1, 12:00 at the latest.

Thursday, April 4, 14:30 – 17:00

"Innovations at Continental" (English & German)

Meeting point: Please sign up with your guide at the bus stop "Universität" outside the university

Registration is free of charge. Please register for this tour at the Information Desk in the Main Lecture Hall Foyer by Tuesday, April 2, 12:00 at the latest. Not allowed during this tour: cardiac pacemaker, tights and high boots.

SAY CHEESE!

The DPG Spring Meetings are basically public to the press. Please note: On behalf of DPG, photos and videos will be recorded during the Spring Meetings. In the context of public relations, these recordings (as the case may be) will be published on our website, in social media or within prints of the DPG for example.

Acknowledgement

The Deutsche Physikalische Gesellschaft (DPG) and the Local Organisers want to thank the following institutions for supporting the conference:

- Wilhelm and Else Heraeus Foundation, Hanau
- University of Regensburg
- all industrial sponsors (see page 28 and 29 in this booklet)

and all staff who make this conference possible.

Disclaimer of liability

All participants are asked to take care of their wardrobe and valuables. We assume no liability.

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the DPG Spring Meeting

Synopsis of the Daily Programme

Sunday, March 31, 2019

Tutorials (TUT)

Sessions

TUT 1 16:00 — 18:20 H2
Next generation of SI-Units

TUT 1.1 16:00 — 16:35 H2
A Quantum-Based Pressure Standard for a New SI Realization of the Pascal
•*Jay Hendricks*

TUT 1.2 16:35 — 17:10 H2
Redefinition of the Kelvin – With what accuracy can temperatures be measured?
•*Steffen Rudtsch*

TUT 1.3 17:10 — 17:45 H2
The new kilogram – Now approachable for extraterrestrials and nonhumans
•*Frank Härting*

TUT 1.4 17:45 — 18:20 H2
Counting electrons for the new ampere
•*Frank Hohls*

TUT 2 16:00 — 18:30 H3
Statistical Physics Methods for Data Science in Physics

TUT 2.1 16:00 — 16:50 H3
Statistical network inference and community detection
•*Tiago Peixoto*

TUT 2.2 16:50 — 17:40 H3
Network filtering for big data
•*Tiziana Di Matteo*

TUT 2.3 17:40 — 18:30 H3
Multiscale simulations of soft matter augmented by data-driven methods
•Tristan Bereau

TUT 3 16:00 — 18:15 H4
Resistive Switching: From basic physics of memristive devices to neuromorphic systems

TUT 3.1 16:00 — 16:45 H4
Oxide based memristive devices: Current status of understanding and future prospects
•Regina Dittmann

TUT 3.2 16:45 — 17:30 H4
Memristors and memristive devices: theory, physics, criticisms
•Thomas Mussenbrock

TUT 3.3 17:30 — 18:15 H4
Memristive devices for bio-inspired electronics
• Hermann Kohlstedt

TUT 4 16:00 — 18:15 H10
Diamond-Growth, characterization, electronics and applications

TUT 4.1 16:00 — 16:45 H10
Diamonds' bright future in electronics and quantum technology
•Matthias Schreck

TUT 4.2 16:45 — 17:30 H10
Microwave CVD of Diamond
•Volker Buck

TUT 4.3 17:30 — 18:15 H10
High power and high frequency applications of diamond
•Dirk Strauß

Welcome Evening (for registered participants)

18:30 — 21:30 Mensa

Monday, April 1, 2019

Plenary Talks

PLV 1.1 08:30 — 09:15 H1
Linking the International System of Units to Fundamental Constants
•*Joachim Ullrich*

PLV 2.1 14:00 — 14:45 H1
Self-propelled topological defects in biological systems
•*Julia M Yeomans*

PLV 3.1 14:00 — 14:45 H2
Diamond: a Brilliant Wide Bandgap Semiconductor
•*Robert Nemanich*

Sessions

PLV 1 08:30 — 09:15 H1
Plenary Joachim Ullrich

PLV 2 14:00 — 14:45 H1
Plenary Julia Yeomans

PLV 3 14:00 — 14:45 H2
Plenary Robert Nemanich

Prize Talks

PRV 1.1 12:30 — 13:00 H32
Absolute energy levels and interface energetics of halide perovskites
•*Selina Olthof*
(Laureate of the Gaede-Prize 2019)

PRV 2.1 13:15 — 13:45 H1
Ultimate Rayleigh-Bénard and Taylor-Couette turbulence
•*Detlef Lohse*
(Laureate of the Max-Planck-Medal 2019)

Sessions

PRV 1 12:30 — 13:00 H32
Prize talk Selina Olthof

PRV 2 13:15 — 13:45 H1
Prize Talk Detlef Lohse

Lunch Talk, Discussion

PSV 1.1 13:15 — 13:45 H2
Physik im Patentwesen und anderen Feldern außerhalb der Forschung
•*Michael Schramm*

PSV 2.1 13:15 — 13:45 H15
A career in science: Should I stay or should I go?
•*Martin Wolf*

Sessions

PSV 1 13:15 — 13:45 H2
PSV I

PSV 2 13:15 — 13:45 H15
PSV II

Symposium SKM Dissertation Prize 2019 (SYSD)

Invited Talks

SYSD 1.1 09:30 — 09:50 H2
Synchronization and Waves in Confined Complex Active Media
•*Jan Frederik Totz*

SYSD 1.2 09:50 — 10:10 H2
Spin scattering of topologically protected electrons at defects
•*Philipp Rüßmann*

SYSD 1.3 10:10 — 10:30 H2
Beyond the molecular movie: Revealing the microscopic processes behind photo-induced phase transitions
•*Chris W. Nicholson*

SYSD 1.4 10:30 — 10:50 H2
Thermodynamic bounds on current fluctuations
•Patrick Pietzonka

SYSD 1.5 10:50 — 11:10 H2
Lightwave-driven quasiparticle acceleration
•Fabian Langer, Christoph P. Schmid, Stefan Schlauderer, Martin Gmitra, Jaroslav Fabian, Philipp Nagler, Christian Schüller, Tobias Korn, Peter G. Hawkins, Johannes T. Steiner, Ulrich Huttner, Stephan W. Koch, Mackillo Kira, Rupert Huber

SYSD 1.6 11:10 — 11:30 H2
Ultrafast plasmon-driven point-projection electron microscopy
•Jan Vogelsang, Germann Hergert, Andreas Wöste, Petra Groß, Christoph Lienau

SYSD 1.7 11:30 — 11:50 H2
Helimagnets, sand patterns and fingerprints linked by topology
•Peggy Schönherr

Session

SYSD 1 09:30 — 11:50 H2
SKM Dissertation Prize

Symposium Mechanically Controlled Electrical Conductivity of Oxides (SYCO)

Invited Talks

SYCO 1.1 09:30 — 10:00 H1
Dislocation Dynamics and Their Conductivities in Oxides
•Yuichi Ikuhara

SYCO 1.2 10:00 — 10:30 H1
Strain effects in ionic conductivity and electrode processes
•Jürgen Janek, Carsten Korte

SYCO 1.3 10:30 — 11:00 H1
Elastic dipoles of point defects in materials
•Celine Varvenne, Thomas Jourdan, Emmanuel Clouet

SYCO 1.4 11:30 — 12:00 H1
Mapping strain/pressure with ZnO nanowire arrays by piezo-phototronic effect
•Caofeng Pan

SYCO 1.5 12:00 — 12:30 H1
Bulk and Flexo-photovoltaic effect
•Marin Alexe, Ming-Min Yang, Dong-Jik Kim

Session

SYCO 1 09:30 — 12:30 H1
Mechanically controlled electrical conductivity of oxides

Symposium Patterns in Nature: Origins, Universality, Functions (SYPN)

Invited Talks

SYPN 1.1 15:00 — 15:30 H1
Engineering spatial-temporal organization of bacterial suspensions
•Igor Aronson

SYPN 1.2 15:30 — 16:00 H1
Collective behaviour and pattern formation in phoretic active matter
•Ramin Golestanian

SYPN 1.3 16:00 — 16:30 H1
Control and selection of spatio-temporal patterns in complex systems
•Svetlana Gurevich

SYPN 1.4 16:45 — 17:15 H1
Self-organization of Active Surfaces
•Frank Jülicher

SYPN 1.5 17:15 — 17:45 H1
Front instabilities can reverse desertification
•Ehud Meron, Cristian Fernandez-Oto, Omer Tzuk

Sessions

SYPN 1 15:00 — 17:45 H1
Patterns in Nature: Origins, Universality, Functions

Biological Physics Division (BP)

Invited Talks

BP 1.1 09:30 — 10:00 H4
Structural dynamics of active membrane transporters as seen by single-molecule techniques
•Thorben Cordes

BP 2.5 10:30 — 11:00 H10
Lessons learned from complex mimics of biological membranes
•Georg Pabst

BP 3.7 11:30 — 12:00 H11
Cryo-Electron Tomography: Reconstruction Methods and Applications
•Achilleas Frangakis

BP 5.1 15:00 — 15:30 H11
Gene transfer between bacteria: from single molecules to genome dynamics
•Berenike Maier

Sessions

BP 1 09:30 — 13:00 H4
Protein structure and dynamics

BP 2 09:30 — 12:30 H10
Membranes and vesicles I

BP 3 09:30 — 12:45 H11
Bioimaging and biospectroscopy I

BP 4 15:00 — 16:15 H10
Membranes and vesicles II

BP 5 15:00 — 16:45 H11
Systems biology & gene expression and signaling

BP 6 17:30 — 19:30 Poster B2
Poster I

Chemical and Polymer Physics Division (CPP)

Invited Talks

CPP 1.1 09:30 — 10:00 H14
Building Complex Colloids with Block Copolymers and Topology
•*Andre Groeschel*

CPP 1.2 10:00 — 10:30 H14
Gradient dynamics models for films of complex fluids and beyond – Dewetting, line deposition and crystallisation
•*Uwe Thiele*

CPP 1.4 10:45 — 11:15 H14
Controlling structure, orientation and nanomorphology in semi-conducting and conducting polymer films
•*Martin Brinkmann, Laure Biniek, Vishnu Vijayakumar, Viktoriia Untilova*

CPP 1.5 11:30 — 12:00 H14
Conjugated polymers: linking mesoscopic morphology and charge transport
•*Denis Andrienko*

CPP 2.1 09:30 — 10:00 H18
The perovskite/transport layer interfaces dominate non-radiative recombination in efficient perovskite solar cells
•*Martin Stolterfoht, Pietro Caprioglio, Christian Wolff, Jose Marquez, Thomas Kirchartz, Thomas Unold, Dieter Neher*

CPP 3.1 09:30 — 10:00 H13
Tailoring the Excited State Energy Landscape in Supramolecular Nanostructures
•*Richard Hildner*

CPP 9.1 15:00 — 15:30 H18
Bulk Amounts of (6,5) Carbon Nanotubes for (Opto)- Electronic Devices
•*Jana Zaumseil*

Sessions

CPP 1 09:30 — 12:30 H14
Focus: Morphology of Complex Polymer Mesophases: From Experiment to Modelling – organized by Kostas Daoulas and Volker Abetz

CPP 2 09:30 — 12:45 H18
Hybrid and Perovskite Photovoltaics I

CPP 3 09:30 — 13:00 H13
Molecular Electronics and Excited State Properties

CPP 4 09:30 — 12:15 H8
Responsive and Adaptive Systems

CPP 5 09:30 — 12:30 H10
Membranes and vesicles I

CPP 6 09:30 — 12:45 H20
Active Matter A

CPP 7 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge I

CPP 8 15:00 — 17:15 H14
Interfaces and Thin Films

CPP 9 15:00 — 17:15 H18
Organic Electronics and Photovoltaics I – Charge Transport and Electronic Devices

CPP 10 15:00 — 17:30 H13
Crystallization, Nucleation and Self-assembly I

CPP 11 15:00 — 16:00 H8
Emerging Topics in Chemical and Polymer Physics, New Instruments and Methods

CPP 12 15:00 — 17:30 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge II

CPP 13 15:00 — 16:15 H10
Membranes and Vesicles II

CPP 14 15:00 — 17:15 H31
Organic photovoltaics and electronics

CPP 15 15:45 — 18:30 H46
Symposium SYCO of the divisions MM (leading), O, CPP, KFM and DS continued as topical session: Mechanically controlled electrical conductivity of oxides

CPP 16 16:15 — 17:30 H8
Glasses and Glass Transition

CPP 17 17:30 — 19:30 Poster B1
Poster Session I

Thin Films Division (DS)

Invited Talk

DS 1.1 09:30 — 10:00 H32
Charge and ion exchange at electrochemical interfaces: atomistic insights by means of in-situ ellipsometry
•*Christoph Cobet*

Sessions

DS 1 09:30 — 11:45 H32
Optical Analysis of Thin Films I (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...)

DS 2 09:30 — 12:45 H34
Focus Session: Oxide Semiconductors for Novel Devices

DS 3 09:30 — 12:45 H39
Layer Properties: Electronic, Optical and Mechanical Properties

DS 4 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge I

DS 5 12:30 — 13:00 H32
Prize talk Selina Olthof

DS 6 15:00 — 17:30 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge II

DS 7 15:00 — 16:15 H32
Optical Analysis of Thin Films II (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...)

DS 8 15:00 — 16:30 PHY 5.0.21
Instrumentation Micro-/Nano-Analysis and Lithography/Structuring

DS 9 15:00 — 16:30 H39
Layer Deposition (ALD, MBE, Sputtering, ...)

DS 10 16:45 — 18:00 H39
Thermoelectric and Phase Change Materials

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 3.1 09:30 — 10:00 H20
Collective behavior and self-organisation of active granular particles
•Thorsten Pöschel, Michael Engel, Christian Scholz, Harol Torres

DY 5.1 10:00 — 10:30 H3
Direct numerical simulations towards ultimate turbulence
•Richard Stevens, Roberto Verzicco, Detlef Lohse

Sessions

DY 2 09:30 — 12:15 H8
Responsive and Adaptive Systems

DY 3 09:30 — 12:45 H20
Active Matter A

DY 4 09:30 — 12:45 H22
Nonequilibrium Quantum Many-Body Systems 1

DY 5 10:00 — 12:45 H3
Convection

DY 6 10:00 — 13:00 H19
Dynamics in many-body systems: Equilibration and localization I

DY 7 15:00 — 17:15 H14
Interfaces and Thin Films

DY 8 15:00 — 17:45 H20
Networks: From Topology to Dynamics

DY 9 15:30 — 18:00 H19
Dynamics in many-body systems: Equilibration and localization II

DY 10 16:15 — 17:30 H8
Glasses and Glass Transition

Semiconductor Physics Division (HL)

Invited Talks

HL 4.1 09:30 — 10:00 H34
The role of suboxide kinetics and thermodynamics for the catalysis and facet formation during the molecular beam epitaxy of oxides
•Oliver Bierwagen

HL 4.2 10:00 — 10:30 H34
Is There a Perspective of p-type Doping in Gallium Oxide?
•David Rogers, Ferechteh Teherani, Philippe Bove, Eric Sandana, Ryan McClintock, Manijeh Razeghi

HL 4.3 10:30 — 11:00 H34
Highly rectifying contacts on GaO_2, In_2O_3 and $(In,Ga)_2O_3$ thin films
•Daniel Splith

HL 4.4 11:15 — 11:45 H34
Understanding the impact of vibrations and defects on the optical properties of phosphors
•P. Erhart, C. Linderälv, D Åberg, Y.-C. Lin, M Bettinelli, N. C. George, S. F. Parker, M. Karlsson

HL 4.5 11:45 — 12:15 H34
Atomically resolved termination engineering of electronic states at oxide semiconductors
•Ya-Ping Chiu

HL 4.6 12:15 — 12:45 H34
Nanoscale Control of Native Point Defects and Doping in Oxide Semiconductors
•*Leonard Brillson*

HL 6.1 12:15 — 12:45 H33
Advanced nanoscale characterization of structural and optical properties of novel Nanostructures using scanning transmission electron microscopy cathodoluminescence
•*Frank Bertram*

Sessions

HL 2 09:30 — 13:15 H31
Nitrides: Devices

HL 3 09:30 — 12:00 H33
Semiconductor lasers and Photonic crystals

HL 4 09:30 — 12:45 H34
Focus Session: Oxide Semiconductors for Novel Devices I

HL 5 09:30 — 13:30 H36
Topological insulators

HL 6 12:15 — 12:45 H33
Invited talk Bertram

HL 7 15:00 — 17:15 H31
Organic photovoltaics and electronics

HL 8 15:00 — 17:30 H33
Transport and theory of electronic structure

HL 9 15:00 — 17:30 H34
Focus Session: Oxide Semiconductors for Novel Devices II

HL 10 15:00 — 17:15 H36
Quantum information systems

HL 11 15:00 — 18:40 PHY 5.0.20
Focus: Advanced TEM spectroscopy – low energy excitations and chemical composition at high resolution

HL 12 17:30 — 20:00 Poster E
HL Poster I

Crystalline Solids and their Microstructure Division (KFM)

Invited Talks

KFM 4.1 09:30 — 10:00 H47
Mixing microwave and light: up-conversion and frequency combs
•*Harald G. L. Schwefel*

KFM 4.6 11:40 — 12:10 H47
Nonlinear whispering gallery resonators for quantum optical technologies
•*Christoph Marquardt*

KFM 5.1 15:00 — 15:30 PHY 5.0.21
On-surface synthesis by atomic manipulation studied with AFM
•*Leo Gross*

KFM 6.1 15:00 — 15:30 PHY 5.0.20
Fifteen years of electron magnetic circular dichroism
•*Ján Rusz*

KFM 6.6 17:10 — 17:40 PHY 5.0.20
Advanced Imaging and Spectroscopy in an Ultrafast Transmission Electron Microscope
•*Armin Feist*

Sessions

KFM 2 09:30 — 11:10 PHY 5.0.20
Microstructure of Thin Films / Crystal Structure

KFM 3 09:30 — 11:10 PHY 5.0.21
Dielectric, Elastic and Electromechanical Properties

KFM 4 09:30 — 13:30 H47
Focus: Whispering-Gallery-Mode Resonators

KFM 5 15:00 — 16:30 PHY 5.0.21
Instrumentation for Micro-/Nano-Analysis and Lithography/Structuring

KFM 6 15:00 — 18:40 PHY 5.0.20
Focus: Advanced TEM spectroscopy – low energy excitations and chemical composition at high resolution

KFM 7 15:00 — 18:30 H47
Multiferroics

Magnetism Division (MA)

Invited Talks

MA 3.1 09:30 — 10:00 H38
Three-dimensional solitons in magnetism, nuclei and particle physics
•Paul Sutcliffe

MA 3.2 10:00 — 10:30 H38
Simulations of particlelike states in three-dimensional magnets: chiral skyrmions, bobbers and hopfions
•Filipp N. Rybakov

MA 3.4 10:45 — 11:15 H38
Quantitative measurements of three dimensional magnetic textures using off-axis electron holography
•András Kovács, Nikolai Kiselev, Jan Caron, Thibaud Denneulin, Fengshan Zheng, Dongsheng Song, Stefan Blügel, Rafal E Dunin-Borkowski

MA 3.5 11:30 — 12:00 H38
Three-dimensional nanomagnetism: Present and future
•Amalio Fernandez-Pacheco

MA 3.7 12:15 — 12:45 H38
Revealing magnetic configurations with X-ray magnetic nanotomography
•Valerio Scagnoli

MA 7.1 15:00 — 15:30 H37
The Surface Spin Flop in Synthetic Antiferromagnets with Perpendicular Magnetic Anisotropy
•Benny Böhm, Nikolai Kiselev, Darius Pohl, Lorenzo Fallarino, Leopold Koch, Bernd Rellinghaus, Kornelius Nielsch, Olav Hellwig

MA 11.1 15:45 — 16:15 H38
Microstructure optimization for rare-earth efficient permanent magnets
•Thomas Schrefl, Johann Fischbacher, Alexander Kovacs, Lukas Exl, Kazuya Yokota, Tetsuya Shoji

MA 11.2 16:15 — 16:45 H38
Advanced methods for the development of high performance hard and soft magnetic materials
•Dagmar Goll, Gerhard Schneider

MA 11.4 17:15 — 17:45 H38
Compositionally graded films as model systems to study magnetic materials for energy applications
•Nora Dempsey

MA 11.5 17:45 — 18:15 H38
Dissecting the magneto-structural transformation in materials with first-order field-induced transitions
•Konstantin Skokov

Sessions

MA 1 09:30 — 13:00 Theater
Topological Insulators

MA 2 09:30 — 13:15 H37
Ultrafast magnetization effects and magnetization dynamics

MA 3 09:30 — 13:15 H38
Focus Session: Novel 3D magnetic spin textures

MA 4 09:30 — 13:15 H52
Topological insulators and spin-dependent transport phenomena

MA 5 09:30 — 13:15 H53
Surface magnetism and magnetic coupling phenomena

MA 6 15:00 — 18:45 Theater
Frustrated Magnets – Spin Liquids

MA 7 15:00 — 19:15 H37
Magnetic Textures: Statics and Imaging I

MA 8 15:00 — 18:45 H52
Magnonics

MA 9 15:00 — 17:00 H53
Cooperative phenomena: Spin structures and magnetic phase transitions

MA 10 15:00 — 18:30 Poster D
Poster Session: Topological Topics

MA 11 15:45 — 18:45 H38
Focus Session: Magnetic materials for energy efficient applications

MA 12 17:15 — 18:30 H53
Spincaloric transport

Metal and Material Physics Division (MM)

Invited Talks, Topical Talks

MM 1.1 09:30 — 10:00 H43
Salient features of phase stability and mechanical properties of high-entropy alloys
•Easo George

MM 2.1 10:15 — 10:45 H43
Fundamentals of deformation in high- and medium-entropy alloys
•Guillaume Laplanche, Joël Bonneville, Céline Varvenne, Aleksander Kostka, William A. Curtin, Easo P. George

MM 2.5 11:45 — 12:15 H43
Single-crystal mechanical properties of equiatomic CrMnFeCoNi high-entropy alloy and its derivative equiatomic quaternary and ternary medium-entropy alloys
•Haruyuki Inui

MM 6.1 11:45 — 12:15 H44
Break through new materials characterization frontiers with Atom Probe Microscopy
•François Vurpillot, Benjamin Klaes, Rodrigue Larde, Stefan Parviainen, Bertrand Radiguet

MM 7.1 15:00 — 15:30 H43
Thermodynamics and optical response of nanoscale systems from atomistic simulations
•Paul Erhart, Tuomas Rossi, Magnus Rahm, Mikael Kuisma

MM 8.1 15:45 — 16:15 H43
First principles modeling of high entropy alloys
•Levente Vitos

MM 8.5 17:30 — 18:00 H43
Machine-learning interatomic potentials for multicomponent alloys
•Alexander Shapeev

MM 9.1 15:45 — 16:15 H44
Scanning transmission electron microscopy as a multidimensional information channel with spatial, momentum and time resolution
•Knut Müller-Caspary, Armand Beche, Florian Winkler, Florian Krause, Daen Jannis, Andreas Oelsner, Heike Soltau, Rafal Dunin-Borkowski, Sandra Van Aert, Johan Verbeeck, Andreas Rosenauer

MM 9.6 17:30 — 18:00 H44
Characterization of materials at the nanoscale using hard X-ray microspectroscopy techniques
•Gema Martinez-Criado

MM 11.1 15:45 — 16:15 H46
Probing the properties of dislocations in $SrTiO_3$ through transient transport measurements
•Roger De Souza

Sessions

MM 1 09:30 — 10:00 H43
Invited talk George

MM 2 10:15 — 13:15 H43
Topical session (Symposium MM): High entropy and compositionally complex alloys

MM 3 10:15 — 11:30 H44
Materials for Energy Storage and Conversion

MM 4 10:15 — 13:15 H45
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 5 10:15 — 13:00 H46
Mechanical Properties

MM 6 11:45 — 13:15 H44
Topical session (Symposium MM): Correlative and in-situ Microscopy in Materials Research

MM 7 15:00 — 15:30 H43
Invited talk Erhart

MM 8 15:45 — 18:30 H43
Topical session (Symposium MM): High entropy and compositionally complex alloys

MM 9 15:45 — 19:00 H44
Topical session (Symposium MM): Correlative and in-situ Microscopy in Materials Research

MM 10 15:45 — 18:45 H45
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 11 15:45 — 18:30 H46
Symposium SYCO of the divisions MM (leading), O, CPP, KFM and DS continued as topical session: Mechanically controlled electrical conductivity of oxides

MM 12 19:15 — 20:45 Poster C
Poster session I

Surface Science Division (O)

Invited Talks, Topical Talk

O 1.1 09:30 — 10:15 H15
Fundamentals of Atomic Layer Deposition
•*Stacey Bent*

O 4.1 10:30 — 11:00 H9
Scaling relations and beyond for kinetic Monte Carlo models in heterogeneous catalysis
•*Mie Andersen*

O 6.3 11:00 — 11:30 H16
Cold water and ice: Insights from computer simulations
•*Angelos Michaelides*

O 7.1 10:30 — 11:00 H24
Real-time imaging of adatom-promoted graphene growth on nickel
•*Laerte L. Patera*

O 8.9 12:30 — 13:00 H25
Deposition and properties of ultrathin films of organic radicals
•*Maria Benedetta Casu*

O 12.1 15:00 — 15:30 H15
Nanoscale engineering at surfaces
•*F Stefan Tautz*

Sessions

O 1 09:30 — 10:15 H15
Overview Talk: Stacey Bent

O 2 09:30 — 13:15 H53
Surface Magnetism and Magnetic Coupling Phenomena

O 3 10:30 — 13:15 H5
New Methods and Developments I: Scanning Probe Techniques

O 4 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge I

O 5 10:30 — 13:00 H15
Nanostructures at Surfaces I: Organics

O 6 10:30 — 13:00 H16
Water on Surfaces

O 7 10:30 — 13:00 H24
Graphene I: Structure and Growth

O 8 10:30 — 13:00 H25
Metal Substrates I: Adsorption and Reactivity

O 9 15:00 — 16:30 PHY 5.0.21
Instrumentation Micro-/Nano-Analysis and Lithography/Structuring: Invited Talk Leo Gross

O 10 15:00 — 18:00 H3
New Methods and Developments II: Scanning Probe, Spectroscopic, and Diffraction Techniques

O 11 15:00 — 17:30 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge II

O 12 15:00 — 17:45 H15
Nanostructures at Surfaces II: Designer Structures and Surfaces

O 13 15:00 — 17:30 H16
Solid-Liquid Interfaces I: Electrocatalysis and Photoelectrochemistry

O 14 15:00 — 18:00 H24
Graphene II: Excitations and Nanoribbons

O 15 15:00 — 17:30 Kunsthalle
Metal Substrates II: Adsorption and Reactivity

O 16 15:45 — 18:30 H46
Mechanically Controlled Electrical Conductivity of Oxides

O 17 17:45 — 20:00 Poster F
Poster Monday: 2D Materials

O 18 17:45 — 20:00 Poster F
Poster Monday: Nanostructures

O 19 17:45 — 20:00 Poster F
Poster Monday: Organic Molecules on Inorganic Surfaces

O 20 17:45 — 20:00 Poster F
Poster Monday: Electronic Structure

O 21 17:45 — 20:00 Poster F
Poster Monday: Plasmonics and Nanooptics

Physics of Socio-economic Systems Division (SOE)

Sessions

SOE 2 09:30 — 11:00 H17
Computational Social Science and Data Science I

SOE 3 11:00 — 12:00 H17
Financial Markets and Risk Management I

SOE 4 12:00 — 12:45 H17
Computational Social Science and Data Science II

SOE 5 15:00 — 16:00 H17
Financial Markets and Risk Management II

SOE 6 15:00 — 17:45 H20
Networks: From Topology to Dynamics

SOE 7 16:00 — 17:15 H17
Social Systems, Opinion and Group Formation I

SOE 8 17:15 — 18:30 H17
Social Systems, Opinion and Group Formation II

Low Temperature Physics Division (TT)

Invited Talks

TT 10.1 15:00 — 15:30 H2
Quantum dynamics of a microwave resonator strongly coupled to a tunnel junction
•*Jérôme Esteve*

TT 10.2 15:30 — 16:00 H2
Quantum optics with artificial atoms in an open space
•Oleg Astafiev

TT 10.3 16:00 — 16:30 H2
Quantum microwaves with a DC-biased Josephson junction
•Fabien Portier, Ambroise Peugeot, Chloé Rolland, Marc Westig, Gerbold Ménard, Yuri Mukharsky, Hélène le Sueur, Patrice Roche, Philippe Joyez, Carles Altimiras, Patrice Bertet, Daniel Esteve, Denis Vion, Max Hofheinz, Pérola Milman, Bjoern Kubala, Simon Dambach, Joachim Ankerhold

TT 10.4 16:45 — 17:15 H2
Photodetectors and metamaterials for on-chip microwave photonics
•Frank K. Wilhelm-Mauch

TT 10.5 17:15 — 17:45 H2
Correlated Cooper pair transport and microwave photon emission in the Coulomb blockade
•Juha Leppäkangas, Michael Marthaler, Mikael Fogelström, Göran Johansson

TT 11.4 15:45 — 16:15 H4
Majorana states in carbon nanotubes
•Magdalena Marganska, Lars Milz, Wataru Izumida, Christoph Strunk, Milena Grifoni

TT 14.8 17:00 — 17:30 H22
Gate-defined quantum point contacts and quantum dots in bilayer graphene
•Christoph Stampfer

TT 15.10 17:30 — 18:00 H23
Theory of superconducting pairing in iron-based superconductors
•Andreas Kreisel

Sessions

TT 2 09:30 — 13:00 H7
Correlated Electrons: Electronic Structure Calculations and Other Theoretical Topics

TT 3 09:30 — 13:00 Theater
Topological Insulators

TT 4 09:30 — 12:45 H22
Nonequilibrium Quantum Many-Body Systems 1

TT 5 09:30 — 13:00 H23
Superconductivity: Fe-based Superconductors – FeSe and 122

TT 6 09:30 — 13:15 H53
Surface magnetism and magnetic coupling phenomena

TT 7 10:00 — 13:00 H19
Dynamics in many-body systems: Equilibration and localization I

TT 8 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge I

TT 9 10:30 — 13:00 H24
Graphene I: Structure and Growth

TT 10 15:00 — 18:45 H2
Focus Session: New Bright Sources of Quantum Microwaves

TT 11 15:00 — 18:45 H4
Majorana Physics

TT 12 15:00 — 17:30 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge II

TT 13 15:00 — 18:45 Theater
Frustrated Magnets – Spin Liquids

TT 14 15:00 — 19:00 H22
Graphene

TT 15 15:00 — 19:00 H23
Superconductivity: Fe-based Superconductors – Other Materials and Theory

TT 16 15:00 — 18:00 H24
Graphene II: Excitations and Nanoribbons

TT 17 15:00 — 18:30 Poster D
Poster Session: Correlated Electrons 1

TT 18 15:00 — 18:30 Poster D
Poster Session: Topological Topics

TT 19 15:00 — 18:30 Poster D
Poster Session: Disordered Quantum Systems

TT 20 15:30 — 18:00 H19
Dynamics in many-body systems: Equilibration and localization II

Vacuum Science and Technology Division (VA)

Invited Talks

VA 2.1 09:30 — 10:10 H6
Vacuum metrology and its impact on research and industry
•Karl Jousten, Matthias Bernien

VA 4.1 14:00 — 14:40 H6
Development of a new wireless SAW-Pirani vacuum sensor with extended range and sensitivity
•Sofia Toto, Juergen Brandner

VA 5.1 15:25 — 16:05 H6
Outgassing rate measurements in practice: feasibility and comparability
•Michael Flämmich, Francisc Haidu, Christian Worsch, Marcel Kleßen, Klaus Bergner, Ute Bergner

Sessions

VA 2 09:30 — 12:15 H6
Vacuum Metrology

VA 3 12:30 — 13:00 H32
Gaede-Prize Talk: Selina Olthoff

VA 4 14:00 — 15:25 H6
New Vacuum Gauges – Development and Characterization

VA 5 15:25 — 17:05 H6
Vacuum Measurement in Technical Applications

VA 6 17:15 — 18:00 H6
Annual General Meeting of the Vacuum Science and Technology Division

Radiation and Medical Physics Division (ST)

Session

ST 1 15:00 — 17:30 H48
X-ray Imaging

"Role models"-Exhibition (free entrance)

09:00 — 19:00 Foyer of the Central Library

EinsteinSlam

20:00 H1

Tuesday, April 2, 2019

Plenary Talks

PLV 4.1 08:30 — 09:15 H1
Impact of Turbulence on Cloud Microphysics
•*Eberhard Bodenschatz*

Special Plenary Session with Award Ceremony

16:00 – 18:15 H1

PLV 5 The Dark Energy of Quantum Materials
•*Laura H Greene*

Sessions

PLV 4 08:30 — 09:15 H1
Plenary Eberhard Bodenschatz

PLV 6 18:30 — 19:15 H1
Lise Meitner Lecture Halina Rubinsztein-Dunlop

Prize Talks

PRV 3.1 09:30 — 10:00 Kunsthalle
Exploring Gamma-detected Magnetic Resonance Imaging
•*Robin Yoël Engel*
(Laureate of the Georg-Simon-Ohm-Prize 2019)

PRV 4.1 13:15 — 13:45 H1
Is room temperature magnetism possible without d or f electrons?
•*Michael Coey*
(Laureate of the Max Born Prize 2019)

Sessions

PRV 3 09:30 — 10:00 Kunsthalle
Prize Talk Robin Engel

PRV 4 13:15 — 13:45 H1
Prize Talk Michael Coey

Lunch Talks

PSV 3.1 13:15 — 13:45 H2
Berufseinstieg als Physikerin im R&D Bereich bei Infineon Technologies AG
•Alexandra Bausch

PSV 4.1 13:15 — 14:00 H15
Getting your research funded by the DFG – formal and informal aspects
•Michael Mößle, Manfred Bayer

Sessions

PSV 3 13:15 — 13:45 H2
PSV III

PSV 4 13:15 — 14:00 H15
PSV IV

Symposium Geometry, Topology, and Condensed Matter (SYGT)

Invited Talks

SYGT 1.1 09:30 — 10:00 H1
Thermal Properties of Vortices on Curved Surfaces
Leopoldo R. Gómez, Nicolás A. García, Daniel A. Vega, •José Lorenzana

SYGT 1.2 10:00 — 10:30 H1
Curvature-induced effects in manomagnets
•Denis Sheka

SYGT 1.3 10:30 — 11:00 H1
Magnetization configurations and reversal of individual ferromagnetic nanotubes
•Martino Poggio

SYGT 1.4 11:15 — 11:45 H1
An experimental perspective on topology and nanoelectronics in graphene and related 2D materials.
•Ivan J. Vera-Marun

SYGT 1.5 11:45 — 12:15 H1
Roles of the curvature in two-dimensional nematic films
•Gaetano Napoli, Luigi Vergori

Session

SYGT 1 09:30 — 12:15 H1
Geometry, topology, and condensed matter

Biological Physics Division (BP)

Invited Talks

BP 8.7 11:30 — 12:00 H10
Force generation by actin, microtubules and motors
•Rhoda Hawkins

BP 9.1 09:30 — 10:00 H11
Biomolecular structure determination from single molecule X-ray scattering with three photons per image
•Helmut Grubmueller, Benjamin von Ardenne

Sessions

BP 7 09:30 — 12:30 H4
Bioimaging and biospectroscopy II

BP 8 09:30 — 12:45 H10
Cytoskeletal filaments

BP 9 09:30 — 13:00 H11
Computational biophysics

BP 10 09:30 — 10:30 H14
Crystallization, nucleation and self-assembly

BP 11 11:30 — 12:30 H17
Evolutionary game theory

BP 12 14:00 — 16:00 Poster B2
Poster II

Chemical and Polymer Physics Division (CPP)

Invited Talks

CPP 20.6 10:45 — 11:15 H13
Dynamic surface tension of soft solids
Mathijs van Gorcum, Bruno Andreotti, Jacco Snoeijer, •Stefan Karpitschka

CPP 24.1 10:45 — 11:15 H14
Mechanochemical activation of Cu-NHC-complexes: molecular design, force-measurements and application in polymer materials
•Wolfgang H Binder, Michel Biewend, Philipp Michael, Martin Beyer, Matthew Sammon

CPP 24.2 11:30 — 12:00 H14
Mechanoradicals in collagen or: Why playing soccer hurts
•Frauke Gräter, Christopher Zapp, Agnieszka Obarska-Kosinski, Csaba Daday, Reinhard Kappl

CPP 24.5 12:30 — 13:00 H14
The challenges and opportunities of polymer mechanochemistry
•Roman Boulatov

Sessions

CPP 18 09:30 — 10:30 H14
Crystallization, Nucleation and Self-Assembly II

CPP 19 09:30 — 12:30 H18
Hybrid and Perovskite Photovoltaics II

CPP 20 09:30 — 13:00 H13
Wetting, Fluidics and Liquids at Interfaces and Surfaces

CPP 21 09:30 — 13:00 H36
Two-dimensional Materials I

CPP 22 10:30 — 12:45 H8
Plasmonics I

CPP 23 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge III

CPP 24 10:45 — 13:00 H14
Focus: Mechanoresponsive Molecules and Materials – organized by Kerstin Blank and Robert Göstl

CPP 25 14:00 — 16:00 Poster B1
Poster Session II

CPP 26 14:00 — 15:45 H3
Active Matter B

CPP 27 14:00 — 16:30 H8
Plasmonics II

CPP 28 14:00 — 16:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge IV

CPP 29 14:00 — 15:45 H36
Two-dimensional Materials II: graphene

Thin Films Division (DS)

Invited Talks

DS 11.1 09:30 — 10:00 H32
Photoluminescence Analysis of Thin Films: What can it tell us about (Perovskite) Solar Cells?
•*Thomas Unold*

DS 11.3 10:15 — 10:45 H32
Defect activity in lead halide perovskite semiconductors
•*Silvia Motti*

DS 11.5 11:15 — 11:45 H32
Beyond traditional use of photoluminescence: Assessing halide perovskites quantitatively and qualitatively
•*Carolin Sutter-Fella*

DS 11.7 12:00 — 12:30 H32
Photophysics of Sn-based hybrid perovskites
•*Maria Antonietta Loi*

Sessions

DS 11 09:30 — 13:15 H32
PhD-Symposium: Photoluminescence of halide perovskites: What does it tell us and what not?

DS 12 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge III

DS 13 14:00 — 16:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge IV

DS 14 17:00 — 20:00 Poster E
Poster

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 12.1 09:30 — 10:00 H3
Active Cell Nematics: Architectures and flows
•Pascal Silberzan

DY 14.1 09:30 — 10:00 H19
The Fibonacci family of dynamical universality classes
•Gunter M. Schütz

DY 18.1 10:00 — 10:30 H20
Bursting, amplitude explosions and mixed mode oscillations at the onset of shear flow turbulence
•Björn Hof, Chaitanya Paranjape, Yohann Duguet, Vasudevan Mukund, Nazmi B Budanur

Sessions

DY 11 09:30 — 13:00 H2
Focus Session: Quantum Dynamics of Kinetically Constrained Many-Body Systems

DY 12 09:30 — 10:00 H3
Talk Pascal Silberzan

DY 13 09:30 — 13:00 H13
Wetting, Fluidics and Liquids at Interfaces and Surfaces

DY 14 09:30 — 10:00 H19
Talk Gunter M. Schütz

DY 15 10:00 — 13:15 H3
Pattern Formation

DY 16 10:00 — 11:30 H6
Quantum Dynamics, Decoherence and Quantum Information

DY 17 10:00 — 12:45 H19
Statistical Physics (General) I

DY 18 10:00 — 13:00 H20
Fluid physics and turbulence

DY 19 11:45 — 13:00 H6
Complex Systems

DY 20 14:00 — 15:45 H3
Active Matter B

DY 21 14:00 — 15:30 H6
Statistical Physics (General) II

DY 22 14:00 — 15:30 H19
Critical Phenomena and Phase Transitions

DY 23 14:00 — 15:30 H20
Stochastic Thermodynamics

DY 24 14:00 — 16:00 H23
Spintronics

Semiconductor Physics Division (HL)

Invited Talks

HL 13.1 09:30 — 10:00 H31
GaN-based quantum dot single photon sources at room temperature
•Yasuhiko Arakawa, Mark Holmes, Munetaka Arita

HL 13.2 10:00 — 10:30 H31
Quantum light generation based on group III-nitride semiconductor nanophotonic structures
•Yong-Hoon Cho

HL 13.3 10:30 — 11:00 H31

Growth of desorption-induced GaN quantum-dots

•Christoph Berger, Gordon Schmidt, Hannes Schürmann, Sebastian Metzner, Peter Veit, Jürgen Bläsing, Frank Bertram, Armin Dadgar, Jürgen Christen, André Strittmatter, Stefan Kalinoswki, Stefan T. Jagsch, Gordon Callsen, Markus R. Wagner, Axel Hoffmann

HL 13.6 11:45 — 12:15 H31

Nitride single photon sources: quantum dots and defects

•Rachel Oliver, Tongtong Zhu, Igor Aharonovich, Robert Taylor

HL 13.7 12:15 — 12:45 H31

GaN-based single photon emitters

•Donat Josef As

Sessions

HL 13 09:30 — 12:45 H31

Focus Session: GaN-based single photon emitters

HL 14 09:30 — 13:15 H32

PhD-Symposium: Photoluminescence of halide perovskites: What does it tell us and what not?

HL 15 09:30 — 11:15 H33

Energy materials (other than photovoltaics)

HL 16 09:30 — 13:15 H34

Focus Session: Oxide Semiconductors for Novel Devices III

HL 17 09:30 — 13:00 H36

Two-dimensional Materials I

HL 18 09:30 — 12:00 PHY 5.0.20

Diamond I

HL 19 11:30 — 12:45 H33

Thermoelectricity

HL 20 14:00 — 15:15 H31

Optical Properties

HL 21 14:00 — 15:30 H33
Quantum Nanophotonics in Solid State Systems

HL 22 14:00 — 15:45 H34
Quantum dots and wires: Transport properties

HL 23 14:00 — 15:45 H36
Two-dimensional Materials II: graphene

Crystalline Solids and their Microstructure Division (KFM)

Invited Talks

KFM 8.5 11:10 — 11:40 PHY 5.0.20
Development of Kinetic Inductance Detectors for polarimetric applications in plasma diagnostics
•Francesco Mazzocchi, Eduard Driessen, Shibo Shu, Giovanni Grossetti, Dirk Strauss, Theo Scherer

KFM 9.1 09:30 — 10:00 PHY 5.0.21
High Energy Density and Low Loss Dielectric Polymers for Electrical Applications
•Lei Zhu

KFM 9.5 11:20 — 11:50 PHY 5.0.21
Storing electrical energy using glasses and glass ceramics
•Martin Letz

Sessions

KFM 8 09:30 — 12:00 PHY 5.0.20
Diamond I

KFM 9 09:30 — 12:50 PHY 5.0.21
Focus: Materials for Energy Storage

KFM 10 09:30 — 12:50 H47
Ferroics – Domains and Domain Walls

KFM 11 14:00 — 15:45 H37
Multiferroics and Magnetoelectric coupling I

Magnetism Division (MA)

Invited Talk

MA 20.1 14:00 — 14:30 H37
Magnetoelectric Inversion of Domain Patterns
•Naëmi Leo, Vera Carolus, Jonathan White, Michel Kenzelmann, Matthias Hudl, Pierre Toledano, Takashi Honda, Tsuyoshi Kimura, Sergey Ivanov, Matthias Weil, Thomas Lottermoser, Dennis Meier, Manfred Fiebig

Sessions

MA 13 09:30 — 13:00 Theater
Frustrated Magnets – General 1

MA 14 09:30 — 11:30 H48
INNOMAG e. V. Dissertationspreis 2019 / Ph. D. Thesis Prize

MA 15 10:00 — 13:00 Poster E
Magnetism Poster A

MA 16 10:30 — 13:00 H37
Surface Magnetism

MA 17 11:30 — 12:30 H48
INNOMAG e. V. Diplom-/Master Prize 2019

MA 18 14:00 — 16:00 Theater
Frustrated Magnets – General 2

MA 19 14:00 — 16:00 H23
Spintronics

MA 20 14:00 — 15:45 H37
Multiferroics and Magnetoelectric coupling I

MA 21 14:00 — 15:30 H38
Magnetic textures: Transport and dynamics I

MA 22 14:00 — 15:45 H52
Terahertz spintronics

MA 23 14:00 — 15:45 H53
Soft and hard permanent bulk magnets

MA 24 14:15 — 15:45 H46
Miscellaneous: Biomaterials, Magnetic Shape Memory Alloys, Sensors and Actuators

Metal and Material Physics Division (MM)

Invited Talk, Topical Talks

MM 13.1 09:30 — 10:00 H43
Single Nanoparticle Insights to Create the Fastest Hydrogen Sensor in the World
•Christoph Langhammer

MM 14.1 10:15 — 10:45 H43
Nanocrystalline high-entropy alloys studied by atomistic computer simulations
Daniel Utt, Leonie Koch, Alexander Stukowski, •Karsten Albe

MM 14.5 11:45 — 12:15 H43
Bulk and grain boundary diffusion in high entropy alloys
•Mayur Vaidya, Sandipan Sen, Daniel Gartner, Gerhard Wilde, Sergiy Divinski

MM 15.1 10:15 — 10:45 H44
Correlative Microscopy of Biological Cells and Tissues by Scanning X-ray Diffraction, Holography, Tomography and Super-Resolution Optical Microscopy
Marten Bernhardt, Jan-David Nicolas, Andrew Wittmeier, Michael Sprung, Sarah Köster, •Tim Salditt

MM 15.2 10:45 — 11:15 H44
Experimental observations of molecular ordering in slitconfined non-polar fluids
•Oliver H. Seeck, Milena Lippmann, Anita Ehnes, Florian Bertram

MM 15.4 11:45 — 12:15 H44
In-situ Studies of Electrochemical Interfaces in Lithium-ion Batteries
•Hans-Georg Steinrück

Sessions

MM 13 09:30 — 10:00 H43
Invited talk Langhammer

MM 14 10:15 — 13:15 H43
Topical session (Symposium MM): High entropy and compositionally complex alloys

MM 15 10:15 — 13:15 H44
Topical session (Symposium MM): Correlative and in-situ Microscopy in Materials Research

MM 16 10:15 — 13:15 H45
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 17 10:15 — 13:00 H46
Nanomaterials

MM 18 14:15 — 15:30 H45
Interfaces

MM 19 14:15 — 15:45 H46
Miscellaneous: Biomaterials, Magnetic Shape Memory Alloys, Sensors and Actuators

MM 20 18:30 — 20:00 Poster C
Poster session II

Surface Science Division (O)

Invited Talks, Topical Talks

O 22.1 09:30 — 10:15 H15
Engineered electronic states in atomic and molecular lattices
•*Peter Liljeroth*

O 23.1 10:30 — 11:00 H5
Investigating atomic scale structure of liquid metal-electrolyte interfaces
•*Bridget M. Murphy*

O 25.1 10:30 — 11:00 H9
Addressing the structure and dynamics of weakly-bonded interfaces
•*Mariana Rossi*

O 26.1 10:30 — 11:00 H15
Imaging Electronic Correlations in Twisted Bilayer Graphene
•*Stevan Nadj-Perge*

O 26.2 11:00 — 11:30 H15
Designing Electronic Quantum Matter: Fabrication and Characterization with Atomic Scale Precision
•Ingmar Swart

O 27.5 11:30 — 12:00 H16
Cationic mixing in metal-supported oxide ultrathin films: interplay of intrinsic and substrate-induced effects
•Jacek Goniakowski, Claudine Noguera

O 32.1 14:00 — 14:30 H9
The Data Revolution in Materials Science, Through the Lens of the Materials Project
•Kristin Persson

O 36.1 14:00 — 14:30 H15
Topological quantum phases in atomically precise graphene nanoribbons
•Oliver Gröning, Shiyong Wang, Qiang Sun, Akimitsu Narita, Müllen Klaus, Pascal Ruffieux, Roman Fasel

O 36.2 14:30 — 15:00 H15
Electronic properties of twisted graphene layers: bands, interactions and superconductivity.
•Francisco Guinea

Sessions

O 22 09:30 — 10:15 H15
Overview Talk: Peter Liljeroth

O 23 10:30 — 13:00 H5
Solid-Liquid Interfaces II: Electrode Surfaces

O 24 10:30 — 12:45 H8
Plasmonics & Nanooptics I: Metastructures and Novel Techniques

O 25 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge III

O 26 10:30 — 12:45 H15
Focus Session: Designer Quantum Systems I

O 27 10:30 — 13:00 H16
Metal Oxide Surfaces I: Structure, Epitaxy and Growth

O 28 10:30 — 13:00 H24
Organic Molecules on Inorganic Substrates I: Switching and Manipulation

O 29 10:30 — 13:00 H25
Nanostructures at Surfaces III: Dots, Particles, and Clusters

O 30 10:30 — 13:00 H37
Surface Magnetism

O 31 14:00 — 16:30 H8
Plasmonics & Nanooptics II: SHG and Dielectric Properties

O 32 14:00 — 16:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge IV

O 33 14:00 — 16:15 H10
Solid-Liquid Interfaces III

O 34 14:00 — 15:45 H13
New Methods and Developments III: Spectroscopy and Tribology

O 35 14:00 — 16:45 H14
2D Materials I: Growth and Properties of Transition Metal Dichalcogenides, Phase Transitions

O 36 14:00 — 15:45 H15
Focus Session: Designer Quantum Systems II

O 37 14:00 — 16:45 H16
Metal Oxide Surfaces II: Structure, Epitaxy and Growth

O 38 14:00 — 16:45 H24
Organic Molecules on Inorganic Substrates II: Electronic Properties and Charge Transfer

O 39 18:00 — 20:00 Poster D
Poster Tuesday: 2D Materials

O 40 18:00 — 20:00 Poster D
Poster Tuesday: Adsorption and Catalysis

O 41 18:00 — 20:00 Poster D
Poster Tuesday: Nanostructures

O 42 18:00 — 20:00 Poster D
Poster Tuesday: Organic Molecules on Inorganic Surfaces

O 43 18:00 — 20:00 Poster D
Poster Tuesday: Electronic Structure

O 44 18:00 — 20:00 Poster D
Poster Tuesday: Spins and Magnetism

O 45 18:00 — 20:00 Poster D
Poster Tuesday: Ultrafast Processes

O 46 18:00 — 20:00 Poster D
Poster Tuesday: Plasmonics and Nanooptics

O 47 18:00 — 20:00 Poster D
Poster Tuesday: Scanning Probe Techniques

Physics of Socio-economic Systems Division (SOE)

Prize Talk, Invited Talk

SOE 11.1 14:00 — 14:45 H17
From individual models of attitude change to patterns and dynamics of opinion landscapes
•*Jan Lorenz*

SOE 11.2 15:00 — 15:45 H17
The Dynamics of Social Conventions: From Names to Cryptocurrencies
•*Andrea Baronchelli*

Sessions

SOE 9 09:30 — 11:30 H17
Economic Models

SOE 10 11:30 — 12:30 H17
Evolutionary Game Theory (joint SOE/BP/DY)

SOE 11 14:00 — 16:00 H17
Award Session: Young Scientist Award for Socio-and Econophysics (YSA)

SOE 12 16:00 — 19:00 Poster A
Poster

Low Temperature Physics Division (TT)

Invited Talks

TT 21.1 09:30 — 10:00 H2
Quantum dynamics, scars, and integrability in constrained Rydberg systems
•Vedika Khemani, Christopher Laumann, Anushya Chandran

TT 21.2 10:00 — 10:30 H2
DMRG investigation of constrained models: from quantum dimer and quantum loop ladders to hard-boson and Fibonacci anyon chains
•Natalia Chepiga, Frederic Mila

TT 21.3 10:30 — 11:00 H2
Localization in Fractonic Random Circuits
Shriya Pai, •Michael Pretko, Rahul Nandkishore

TT 21.4 11:15 — 11:45 H2
Many-body localization dynamics from gauge invariance
•Markus Heyl

TT 21.5 11:45 — 12:15 H2
Slow dynamics due to kinetic constraints, from classical to quantum
•Juan Garrahan

TT 22.10 12:00 — 12:30 H7
Superconducting films and interfaces: Novel features from spin imbalance and Rashba spin-orbit coupling
•Gertrud Zwicknagl

TT 29.1 14:00 — 14:30 H2
Mesoscopic quantum electrodynamics with carbon nanotubes
•Takis Kontos

TT 29.2 14:30 — 15:00 H2
Nanomechanical characterization of the Kondo charge dynamics in a carbon nanotube
Karl J. G. Götz, Daniel R. Schmid, Felix J. Schupp, Peter L. Stiller, Christoph Strunk, •Andreas K. Hüttel

Sessions

TT 21 09:30 — 13:00 H2
Focus Session: Quantum Dynamics of Kinetically Constrained Many-Body Systems

TT 22 09:30 — 12:30 H7
Superconductivity: Theory

TT 23 09:30 — 13:00 Theater
Frustrated Magnets – General 1

TT 24 09:30 — 12:15 H22
Molecular Electronics and Photonics

TT 25 09:30 — 11:00 H23
Disordered Quantum Systems

TT 26 10:30 — 13:00 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge III

TT 27 10:30 — 12:45 H15
Focus Session: Designer Quantum Systems I

TT 28 11:15 — 12:45 H23
Cryotechnique: Refrigeration and Thermometry

TT 29 14:00 — 16:00 H2
Nanotubes and Nanoribbons

TT 30 14:00 — 15:45 H4
Correlated Electrons: 1D Theory

TT 31 14:00 — 16:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge IV

TT 32 14:00 — 15:45 H15
Focus Session: Designer Quantum Systems II

TT 33 14:00 — 16:00 Theater
Frustrated Magnets – General 2

TT 34 14:00 — 16:00 H22
Nonequilibrium Quantum Many-Body Systems 2

TT 35 14:00 — 16:00 H23
Spintronics

Radiation and Medical Physics Division (ST)

Sessions

ST 2 09:30 — 10:00 Kunsthalle
Georg-Simon-Ohm-Prize Session

ST 3 10:15 — 11:30 Kunsthalle
Gamma Imaging

ST 4 14:00 — 16:00 Poster B1
Poster session

Working Group „Young DPG“ (AKjDPG)

Session

AKjDPG 1 09:30 — 13:15 H32
PhD Focus Session: Photoluminescence of halide perovskites: What does it tell us and what not?

“Role models”-Exhibition (free entrance)

09:00 — 19:00 Foyer of the Central Library

Exhibition of Scientific Instruments and Literature (free entrance)

09:00 — 16:00 Foyer Audimax, H6, LH Wirtschaft/Recht, Sammelgebäude

Jobbörse: Fintegral Deutschland AG

13:15 — 14:15 Kunsthalle

Jobbörse: Bluefors Oy

14:30 — 15:30 Kunsthalle

Lise Meitner Lecture (free entrance)

PLV 6.1 18:30 — 19:15 H1

Sculpted light in nano- and microsystems

•Halina Rubinsztein-Dunlop

Wednesday, April 3, 2019

Plenary Talks

PLV 7.1 08:30 — 09:15 H1
Mechanics of Single Protein Molecules
•*Matthias Rief*

PLV 8.1 14:00 — 14:45 H1
Physics and applications of nanomembranes: A fantastic voyage through disciplines
•*Oliver G. Schmidt*

PLV 9.1 14:00 — 14:45 H2
Vestigial order in quantum materials
•*Jörg Schmalian*

Sessions

PLV 7 08:30 — 09:15 H1
Plenary Matthias Rief

PLV 8 14:00 — 14:45 H1
Plenary Oliver Schmidt

PLV 9 14:00 — 14:45 H2
Plenary Jörg Schmalian

PLV 10 20:00 — 21:00 H1
Evening Talk Gianfranco Pacchioni

Prize Talk

PRV 5.1 13:15 — 13:45 H1
Heat radiation at the nanoscale – Planck law and Stefan-Boltzmann law reloaded
•*Svend-Age Biehs*
(Laureate of the Gustav-Hertz-Prize 2019)

Session

PRV 5 13:15 — 13:45 H1
Prize Talk Svend-Age Biehs

Lunch Talks

PSV 5.1 13:15 — 13:45 H2
Still close to academia: the job as an editor at the Nature Research Group
•Tobias Rödel, Benjamin Heinrich, Konstantin Hirsch

PSV 6.1 13:15 — 14:00 H15
"Go public!“ (Wie) wollen wir Wissenschaft kommunizieren?
•Axel Lorke, Nicolas Wöhrl

Sessions

PSV 5 13:15 — 13:45 H2
PSV V

PSV 6 13:15 — 14:00 H15
PSV VI

Symposium Hydrodynamic Electronics: Transport in ultra-pure Quantum Systems (SYHE)

Invited Talks

SYHE 1.1 09:30 — 10:00 H1
Hydrodynamic theory of dissipative magnetophonons
•Sean Hartnoll

SYHE 1.2 10:00 — 10:30 H1
Unconventional transport in mesostructures of ultra-pure delafossite metals
•Andrew Mackenzie

SYHE 1.3 10:30 — 11:00 H1
Topological Materials with liquid electrons
•Claudia Felser, Johannes Gooth

SYHE 1.4 11:15 — 11:45 H1
Hydrodynamic approach to electronic transport
•Boris Narozhny

SYHE 1.5 11:45 — 12:15 H1
Electron hydrodynamics in graphene: introduction and status
•Denis Bandurin

Session

SYHE 1 09:30 — 12:15 H1
Hydrodynamic electronics: Transport in ultrapure quantum systems

Symposium Interaction Effects and Correlations in twodimensional Systems – New Challenges for Theory (SYTS)

Invited Talks

SYTS 1.1 15:00 — 15:30 H1
Spectra of layered semiconductors from many-body perturbation theory
Thorsten Deilmann, Peter Krüger, Philipp Marauhn, •Michael Rohlfing

SYTS 1.2 15:30 — 16:00 H1
Dark exciton dynamics in 2D materials
•Ermin Malic

SYTS 1.3 16:00 — 16:30 H1
Excitons versus electron-hole plasma in monolayer transition metal dichalcogenide semiconductors
•Alexander Steinhoff, Matthias Florian, Malte Rösner, Gunnar Schönhoff, Tim O. Wehling, Frank Jahnke

SYTS 1.4 16:45 — 17:15 H1
Theory of near K-point optical properties of TMDC multilayers
•Tineke Stroucken, Lars Meckbach, Ulrich Huttner, Stephan W. Koch

SYTS 1.5 17:15 — 17:45 H1
High-throughput modeling and discovery of novel 2D materials
•Kristian Thygesen

Session

SYTS 1 15:00 — 17:45 H1
Interaction effects and correlations in two-dimensional systems – New challenges for theory

Biological Physics Division (BP)

Invited Talks

BP 13.7 11:15 — 11:45 H4
Non-equilibrium dynamics in biological matter
•Christoph F Schmidt

BP 14.5 10:30 — 11:00 H10
Physical determinants of phagocytic uptake and transport
•Holger Kress

BP 15.1 09:30 — 10:00 H11
Statistical physics of correlated neuronal variability
•Moritz Helias

BP 17.4 15:45 — 16:15 H4
Chaos in self-propelled droplets
•Annette Zippelius, Reiner Kree

BP 18.7 16:30 — 17:00 H10
Physics of epithelial folding
•Guillaume Salbreux

BP 19.1 15:00 — 15:30 H11
Self-organized wave-like beating of actin bundles
Marie Pochitaloff, Mathieu Richard, Takagi Yasuharu, Wenxiang Cao, Enrique De La cruz, Jim Sellers, Jean-François Joanny, Frank Jülicher, Laurent Blanchoin, •Pascal Martin

Sessions

BP 13 09:30 — 13:00 H4
Active matter I

BP 14 09:30 — 13:00 H10
Cell mechanics I

BP 15 09:30 — 13:00 H11
Focus session: Collective Dynamics in Neural Networks

BP 16 09:30 — 12:00 H17
Dynamics of multilayer networks I

BP 17 15:00 — 17:30 H4
Statistical physics of biological systems I

BP 18 15:00 — 17:15 H10
Cell mechanics II

BP 19 15:00 — 17:00 H11
Focus session: Physics of cilia: Dynamics of synchronized oscillators

BP 20 15:00 — 16:45 H17
Dynamics of multilayer networks II

BP 21 15:45 — 18:30 H13
Biopolymers, biomaterials and bioinspired functional materials

BP 22 18:00 — 19:00 H4
Annual general meeting of the BP division (BP Mitgliederversammlung)

Chemical and Polymer Physics Division (CPP)

Invited Talks

CPP 30.1 09:30 — 10:00 H14
Microstructural transitions and characterization of capillary suspensions
Sebastian Bindgen, Frank Bossler, Irene Natalia, •Erin Koos

CPP 39.1 15:00 — 15:30 H14
Film formation, microstructure and ferroelectricity of MAPbI3 light-harvesting layers
Holger Röhm, Tobias Leonhard, Alexander Schulz, Susanne Wagner, Michael Hoffmann, •Alexander Colsmann

CPP 39.2 15:30 — 16:00 H14
How do evaporating thin films evolve? Unravelling phase-separation mechanisms during solvent-based fabrication of polymer blends
•Olga Wodo

CPP 39.7 17:15 — 17:45 H14
Thin film structuring upon liquid-vapor mass exchange
•Jasper Michels

CPP 48.1 15:45 — 16:15 H13
Many Weak Interactions Make a Difference – from Fuzzy Biomolecular Self Assembly to Superselectivity
•Ralf Richter

CPP 49.1 17:15 — 17:45 H18
Stimuli-Responsive Polymer-Based Sensors, Muscles, and Drug Delivery Platforms
•Michael Serpe

Sessions

CPP 30 09:30 — 12:45 H14
Complex Fluids and Colloids, Micelles and Vesicles

CPP 31 09:30 — 11:00 H18
Organic Electronics and Photovoltaics II – Non-Fullerene Organic Solar Cells

CPP 32 09:30 — 13:00 H13
Charged Soft Matter, Polyelectrolytes and Ionic Liquids I

CPP 33 09:30 — 13:00 H4
Active Matter I

CPP 34 09:30 — 13:00 H36
Two-dimensional Materials III

CPP 35 10:30 — 13:15 H8
Plasmonics III

CPP 36 10:30 — 13:15 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge V

CPP 37 11:00 — 13:00 Poster B1
Poster Session III

CPP 38 11:30 — 12:45 H18
Polymer Networks and Elastomers

CPP 39 15:00 — 18:45 H14
Focus: Controlling Phase Formation Dynamics in Solution Processed Semiconductors – organized by Christoph Brabec, Jens Harting and Hans-Joachim Egelhaaf

CPP 40 15:00 — 17:00 H18
Modeling and Simulation of Soft Matter I

CPP 41 15:00 — 15:30 H13
Charged Soft Matter, Polyelectrolytes and Ionic Liquids II

CPP 42 15:00 — 17:45 H8
Plasmonics IV

CPP 43 15:00 — 17:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge VI

CPP 44 15:00 — 18:45 H20
Condensed-matter simulations augmented by advanced statistical methodologies

CPP 45 15:00 — 17:30 H36
Photovoltaics

CPP 46 15:30 — 18:00 H19
Microswimmers

CPP 47 15:00 — 19:15 H3
Complex Fluids and Soft Matter

CPP 48 15:45 — 18:30 H13
Biopolymers, Biomaterials and Bioinspired Functional Materials

CPP 49 17:15 — 18:30 H18
Hydrogel und Microgel

Thin Films Division (DS)

Invited Talks

DS 15.1 09:30 — 10:00 H32
3D-Nanoprinting with Focused Electron Beams. Advances and Applications
•Robert Winkler, Jason D Fowlkes, Jürgen Sattelkow, Philip D Rack, Harald Plank

DS 15.7 11:30 — 12:00 H32
Resist-free fabrication of graphene devices using focused ion beam patterning and direct-write ALD
•Ageeth Bol

DS 19.1 15:00 — 15:30 H32
Fabrication of functional nanostructures by electron and ion beams
•Milos Toth

DS 19.6 16:45 — 17:15 H32
Fundamentals of low-energy electron induced dissociation of focused electron beam induced deposition precursors
•Oddur Ingólfsson

Sessions

DS 15 09:30 — 12:30 H32
Focus Session: Direct-Write Nanofabrication and Applications I (Electron Beam Induced Processing)

DS 16 09:30 — 12:30 H39
Organic Thin Films, Organic-Inorganic Interfaces

DS 17 10:30 — 13:15 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge V

DS 18 15:00 — 17:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge VI

DS 19 15:00 — 18:00 H32
Focus Session: Direct-Write Nanofabrication and Applications II (Electron Beam Induced Processing)

DS 20 18:30 — 19:30 H39
Annual General Meeting of the Thin Films Division

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 25.1 09:30 — 10:00 H3
Why the desert is not flat
•Klaus Kroy

DY 29.1 09:30 — 10:00 H19
Dynamical localization in Z_2 lattice gauge theories
•Dmitry Kovrizhin

DY 30.1 10:00 — 10:30 H6
Fluctuations and responses in nonequilibrium fluids
•Matthias Krüger

DY 32.1 15:00 — 15:30 H3
Phase-separation in an elastic matrix: from living cells to synthetic materials
•Eric Dufresne

DY 36.1 15:00 — 15:30 H20
Quantum Machine Learning
•Anatole von Lilienfeld

Sessions

DY 25 09:30 — 12:30 H3
Granular Matter / Contact Dynamics

DY 26 09:30 — 13:00 H4
Active matter I

DY 27 09:30 — 12:45 H14
Complex Fluids and Colloids, Micelles and Vesicles

DY 28 09:30 — 12:00 H17
Dynamics of Multilayer Networks I (Focus Session SOE/DY/BP)

DY 29 09:30 — 13:00 H19
Many-body Quantum Dynamics

DY 30 10:00 — 12:45 H6
Statistical Physics far from Thermal Equilibrium

DY 31 10:00 — 13:15 H20
Nonlinear Dynamics, Synchronization and Chaos

DY 32 15:00 — 19:15 H3
Complex Fluids and Soft Matter

DY 33 15:00 — 17:30 H4
Statistical physics of biological systems I

DY 34 15:00 — 16:45 H17
Dynamics of Multilayer Networks II (Focus Session SOE/DY/BP)

DY 35 15:00 — 17:00 H18
Modeling and Simulation of Soft Matter I

DY 36 15:00 — 18:45 H20
Condensed-matter simulations augmented by advanced statistical methodologies

DY 37 15:30 — 17:00 H6
Quantum Chaos

DY 38 15:30 — 18:00 H19
Microswimmers

DY 39 17:15 — 18:30 H6
Quantum matter: Chaos, correlation

Semiconductor Physics Division (HL)

Invited Talks

HL 26.1 09:30 — 10:00 H34
GaAs quantum dots as tunable sources of entangled and indistinguishable photons
•*Armando Rastelli*

HL 26.3 10:15 — 10:45 H34
Phonon-assisted bright and dark exciton preparation in a semiconductor quantum dot
•Doris Reiter

HL 26.5 11:15 — 11:45 H34
Towards Quantum Communication Networks Exploiting Solid-State Quantum-Light Sources
•Tobias Heindel

HL 26.6 11:45 — 12:15 H34
Single Organic Molecules for Quantum Optics
•Ilja Gerhardt, Mohammad Rezai, Jörg Wrachtrup

HL 26.8 12:30 — 13:00 H34
Quantum repeater development based on entangled photons from quantum dots
•Michael Zopf, Robert Keil, Yan Chen, Jingzhong Yang, Fei Ding, Oliver G. Schmidt

HL 30.1 12:15 — 12:45 H33
Topology-driven excitonic Aharonov-Bohm effect in core-multishell nanowires
•Vladimir M. Fomin, Pierre Corfdir, Oliver Marquardt, Ryan B. Lewis, Chiara Sinito, Manfred Ramsteiner, Achim Trampert, Uwe Jahn, Lutz Geelhaar, Oliver Brandt

Sessions

HL 24 09:30 — 13:00 H31
Nitrides: Preparation and characterization I

HL 25 09:30 — 12:00 H33
Group IV (other than C): Si/Ge/SiC

HL 26 09:30 — 13:00 H34
Focus Session: Quantum light sources for applications in quantum communication networks

HL 27 09:30 — 13:00 H36
Two-dimensional Materials III

HL 28 09:30 — 11:30 PHY 5.0.20
Diamond II

HL 29 09:30 — 12:10 H47
Microscopy, Tomography and Spectroscopy with X-ray Photons, Electrons, Ions and Positrons

HL 30 12:15 — 12:45 H33
Invited talk Fomin

HL 31 15:00 — 17:15 H31
Nitrides: Preparation and characterization II

HL 32 15:00 — 17:30 H33
Spintronics

HL 33 15:00 — 17:30 H34
Quantum light sources

HL 34 15:00 — 17:30 H36
Photovoltaics

HL 35 17:30 — 20:00 Poster E
HL Poster II

Crystalline Solids and their Microstructure Division (KFM)

Sessions

KFM 12 09:30 — 11:30 PHY 5.0.20
Diamond II

KFM 13 09:30 — 12:10 H47
Microscopy, Tomography and Spectroscopy with X-ray Photons, Electrons, Ions and Positrons

KFM 14 16:00 — 18:30 Poster C
Postersession KFM

KFM 15 18:30 — 19:00 PHY 5.0.21
Annual General Meeting of the KFM division

Magnetism Division (MA)

Invited Talks

MA 27.1 09:35 — 10:15 H38
Magnetism in biomedicine: basics and applications
•Kannan Krishnan

MA 27.2 10:15 — 10:45 H38
Spin-dynamics of a magnetic nanoparticle chain.
•Michael Winklhofer

MA 27.3 11:15 — 11:35 H38
Magnetic materials for biodetection
•Galina V. Kurlyandskaya, Alexander P. Safronov

MA 27.4 11:35 — 11:55 H38
From synthetic to biological magnetic microswimmers
•Damien Faivre

MA 34.1 15:00 — 15:30 H37
Reservoir Computing with Random Skyrmion Fabrics
•Daniele Pinna, George Bourianoff, Karin Everschor-Sitte

MA 37.1 15:45 — 16:15 H38
Magnon Transport and Magnonic Topological Insulators
•Daniel Loss

MA 37.2 16:15 — 16:45 H38
Implementation of the Stimulated-Raman-Adiabatic-Passage mechanism in magnonics
•Burkard Hillebrands

MA 37.4 17:15 — 17:45 H38
Spintronics at interfaces of insulators and non-magnetic metals – magnon Bose-Einstein condensation and induced superconductivity
•Niklas Rohling, Eirik Løhaugen Fjaerbu, Arne Brataas

MA 37.5 17:45 — 18:15 H38
Magnon Transport and Dynamics in Magnetic Insulator
•*Jing Liu*

MA 37.7 18:30 — 19:00 H38
Tunable long distance spin transport in antiferromagnetic insulators
•*Mathias Kläui*

Sessions

MA 25 09:30 — 12:30 H22
Topological Semimetals – Theory

MA 26 09:30 — 13:00 H37
Spin dynamics and transport

MA 27 09:30 — 12:40 H38
PhD Focus Session: Biogenic spin phenomena

MA 28 09:30 — 11:30 H52
Bio- and molecular magnetism including biomedical applications

MA 29 09:30 — 10:30 H53
Quantum information systems

MA 30 10:45 — 11:45 H53
Magnetic instrumentation and characterization

MA 31 11:45 — 12:45 H52
Spin dynamics: Magnetic relaxation and Gilbert damping

MA 32 12:00 — 13:00 H53
Magnetic recording, sensors and other devices

MA 33 15:00 — 18:15 H2
Focus Session: Topology in 3D Reciprocal Space: Beyond Dirac and Weyl Quasiparticles

MA 34 15:00 — 19:00 H37
Magnetic textures: Transport and dynamics II

MA 35 15:00 — 17:00 H52
Caloric effects in ferromagnetic materials

MA 36 15:00 — 18:15 H53
Spin transport

MA 37 15:45 — 19:15 H38
Focus Session: Insulator Spintronics

MA 38 17:15 — 19:00 H52
Spin hall effects

Metal and Material Physics Division (MM)

Invited Talks, Topical Talks

MM 21.1 09:30 — 10:00 H43
Rational design of Cu based shape memory alloys with low functional fatigue properties
•Xian Chen, Mostafa Karami

MM 24.1 10:15 — 10:45 H45
Correlating electrical and mechanical behaviour of polymer supported metal thins with in-situ methods
•Megan J. Cordill

MM 24.5 11:45 — 12:15 H45
Pathing the way to unique, nondestructive 3D-microstructure properties by in situ Laue tomography
Jean-Baptiste Molin, Loic Renversade, Jean-Sebastien Micha, •Christoph Kirchlechner

MM 28.1 15:00 — 15:30 H45
Towards understanding dislocation based plasticity in high entropy alloys by in-situ TEM
•Gerhard Dehm

MM 28.5 16:45 — 17:15 H45
Recent advances in in situ TEM
•Christian Kübel, C.N. Shyam Kumar, Simone Dehm, Ralph Krupke, Manuel Konrad, Wolfgang Wenzel, Ankush Kashiwar, Horst Hahn

MM 30.1 18:15 — 18:45 H43
Advanced in situ Electron Microscopy for targeted Battery Development
•Benjamin Butz

Sessions

MM 21 09:30 — 10:00 H43
Invited talk Chen

MM 22 10:15 — 13:15 H43
Materials for Energy Storage and Conversion

MM 23 10:15 — 13:15 H44
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 24 10:15 — 13:15 H45
Topical session (Symposium MM): Correlative and in-situ Microscopy in Materials Research

MM 25 10:15 — 13:15 H46
Transport (Diffusion, conductivity, heat)

MM 26 15:00 — 18:15 H43
Materials for Energy Storage and Conversion

MM 27 15:00 — 18:15 H44
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 28 15:00 — 17:45 H45
Topical session (Symposium MM): Correlative and in-situ Microscopy in Materials Research

MM 29 15:00 — 18:15 H46
Microstructure and Phase Transformations

MM 30 18:15 — 18:45 H43
Invited talk Butz

MM 31 19:00 — 20:00 H43
General Meeting of the Metal- and Materials Division and Best Poster Award

Surface Science Division (O)

Invited Talks, Topical Talks

O 48.1 09:30 — 10:15 H15
Catalytic activity from first principles – towards operando computational catalysis
•Henrik Grönbeck

O 51.1 10:30 — 11:00 H9
Theoretical Investigations of Electrochemical CO2 Reduction
•Karen Chan

O 51.2 11:00 — 11:30 H9
First-principles approach to model electrochemical reactions at the solid-liquid interface
•Mira Todorova, Sudarsan Surendralal, Jörg Neugebauer

O 52.1 10:30 — 11:00 H15
Electron-boson coupling in correlated materials: a non-equilibrium perspective
•Claudio Giannetti, Stefano Dal Conte, Giulio Cerullo, Andrea Damascelli

O 52.5 11:45 — 12:15 H15
Carrier lifetime trends in highly efficient thermoelectrics
•Vidvuds Ozolins

O 58.1 15:00 — 15:30 H15
Towards a systematic way of treating non-adiabatic effects
•E.K.U. Gross

O 59.3 15:30 — 16:00 H16
Carbon Nanomembranes: Preparation, Properties, and Applications
•Xianghui Zhang

Sessions

O 48 09:30 — 10:15 H15
Overview Talk: Henrik Grönbeck

O 49 10:30 — 12:30 H5
Metal Substrates III: Structure, Epitaxy and Growth

O 50 10:30 — 13:15 H8
Plasmonics & Nanooptics III: STM and Time-Resolved Methods

O 51 10:30 — 13:15 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge V

O 52 10:30 — 12:45 H15
Focus Session: Electron-Phonon Interactions I

O 53 10:30 — 13:15 H16
2D Materials II: Transition Metal Dichalcogenides

O 54 10:30 — 13:00 H24
Organic Molecules on Inorganic Substrates III: Magnetism, Doping and Interfaces

O 55 15:00 — 17:45 H5
Metal Oxide Surfaces III: Adsorption and Reactivity

O 56 15:00 — 17:45 H8
Plasmonics & Nanooptics IV: Materials Science and Chemistry Applications

O 57 15:00 — 17:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge VI

O 58 15:00 — 17:15 H15
Focus Session: Electron-Phonon Interactions II

O 59 15:00 — 17:30 H16
2D Materials III: Nanomembranes, hBN, and Particle Interactions

O 60 15:00 — 17:30 H24
Organic Molecules on Inorganic Substrates IV: Electronic Properties, Excitations, Dynamics

O 61 15:00 — 17:30 H25
Semiconductor Surfaces: Adsorption and Reactivity

O 62 17:45 — 20:00 Poster B1
Poster Wednesday: Topology and Symmetry-Protected Materials

O 63 17:45 — 20:00 Poster B1
Poster Wednesday: Ultrafast Processes

O 64 17:45 — 20:00 Poster B1
Poster Wednesday: Plasmonics and Nanooptics

O 65 17:45 — 20:00 Poster B1
Poster Wednesday: Surface Structure, Epitaxy and Growth

O 66 17:45 — 20:00 Poster B2
Poster Wednesday: 2D Materials

O 67 17:45 — 20:00 Poster B2
Poster Wednesday: Solid-Liquid Interfaces

O 68 17:45 — 20:00 Poster B2
Poster Wednesday: Nanostructures

O 69 17:45 — 20:00 Poster B2
Poster Wednesday: Organic Molecules on Inorganic Surfaces

O 70 17:45 — 20:00 Poster B2
Poster Wednesday: Electronic Structure

O 71 17:45 — 20:00 Poster B2
Poster Wednesday: Adsorption and Catalysis

O 72 17:45 — 20:00 Poster B2
Poster Wednesday: Scanning Probe Techniques

Physics of Socio-economic Systems Division (SOE)

Topical Talks

SOE 13.1 09:30 — 10:00 H17
Inhibition induced explosive synchronization in multiplex network
•*Sarika Jalan*

SOE 13.2 10:00 — 10:30 H17
Percolation on multi-layer networks
•*Filippo Radicchi*

SOE 13.3 10:45 — 11:15 H17
Mean field phase synchronization across multilayer networks in chimera states
•*Ralph Gregor Andrzejak, Giulia Ruzzene, Kaspar Schindler, Eckehard Schöll, Anna Zakharova*

SOE 13.5 11:30 — 12:00 H17
Relay synchronization in multiplex networks
•*Inmaculada Leyva, Irene Sendina-Nadal, Ricardo Sevilla-Escoboza, Victor Vera-Avila*

SOE 15.1 15:00 — 15:30 H17
Delay controls chimera relay synchronization in multiplex networks
•*Eckehard Schöll, Jakub Sawicki, Iryna Omelchenko, Anna Zakharova*

Sessions

SOE 13 09:30 — 12:00 H17
Dynamics of Multilayer Networks I (Focus Session SOE/DY/BP)

SOE 14 12:00 — 13:00 H17
Annual Member's Assembly

SOE 15 15:00 — 16:45 H17
Dynamics of Multilayer Networks II (Focus Session SOE/DY/BP)

Low Temperature Physics Division (TT)

Invited Talks

TT 38.1 09:30 — 10:00 H23
A new heavy-fermion superconductor $CeRh_2As_2$ with Rashba and quadrupolar interactions
•*Seunghyun Khim, Jacintha Banda, Daniel Hafner, Ulrike Stockert, Manuel Brando, Christoph Geibel*

TT 43.1 15:00 — 15:30 H2
Novel optical and electrical responses in topological semimetals
•*Joel Moore*

TT 43.2 15:30 — 16:00 H2
Beyond the elementary particles and the 10-fold classification of non-interacting topological phases
•*Alexey Soluyanov*

TT 43.3 16:00 — 16:30 H2
Direct optical detection of Weyl fermion chirality in a topological semimetal
•*Nuh Gedik*

TT 43.4 16:45 — 17:15 H2
Evidence for an axionic charge density wave in the Weyl semimetal $(TaSe_4)_2I$
•*Johannes Gooth*

TT 43.5 17:15 — 17:45 H2
Investigations of Dirac/Weyl semimetals under external stimuli
•*Ece Uykur*

Sessions

TT 36 09:30 — 10:30 H7
Fluctuations, Noise and Quantum Coherence

TT 37 09:30 — 12:30 H22
Topological Semimetals – Theory

TT 38 09:30 — 12:45 H23
f-Electron Systems and Heavy Fermions

TT 39 09:30 — 12:30 H32
Focus Session: Direct-Write Nanofabrication and Applications I (Electron Beam Induced Processing)

TT 40 09:30 — 13:00 H48
Superconductivity: Qubits 1

TT 41 10:30 — 13:15 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge V

TT 42 10:45 — 12:30 H7
Nano- and Optomechanics

TT 43 15:00 — 18:15 H2
Focus Session: Topology in 3D Reciprocal Space: Beyond Dirac and Weyl Quasiparticles

TT 44 15:00 — 19:00 H7
Correlated Electrons: Method Development

TT 45 15:00 — 17:45 H9
Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge VI

TT 46 15:00 — 18:30 H22
Quantum Dots, Quantum Wires, Point Contacts

TT 47 15:00 — 18:45 H23
Quantum Magnets, Molecular Magnets and Skyrmions

TT 48 15:00 — 18:00 H32
Focus Session: Direct-Write Nanofabrication and Applications II (Electron Beam Induced Processing)

TT 49 15:00 — 18:30 Poster D
Poster Session: Superconductivity

TT 50 15:00 — 18:30 Poster D
Poster Session: Correlated Electrons 2

Radiation and Medical Physics Division (ST)

Sessions

ST 5 09:30 — 11:15 Kunsthalle
Dosimetry and MRI

ST 6 15:00 — 17:00 H48
Radiation Therapy

ST 7 17:30 — 19:00 H48
Mitgliederversammlung Fachverband Strahlen- und Medizinphysik

Working Group on Industry and Business (AIW)

Invited Talks, Discussion

AIW 2.1 14:00 — 14:30 Theater
Mensch und Maschine: ein unschlagbares Team – Künstliche Intelligenz – Status Quo und zukünftige Entwicklung
•Christian Becker

AIW 2.2 14:30 — 15:00 Theater
Strategien zur Einführung von künstlicher Intelligenz
•Henrik Klagges

AIW 3.1 15:30 — 16:00 Theater
Wenn die Firma wüsste was die Firma weiß – wie kommt das Wissen zum Mitarbeiter?
•*Rolf Zajonc*

AIW 3.2 16:00 — 16:30 Theater
Quantum Computing: Empowering the Quantum Revolution
•*N N*

AIW 4.1 16:30 — 17:30 Theater
Podiumsdiskussion: Physik und IT
•*Michael Schramm*

Sessions

AIW 1 09:00 — 12:30 Theater
AIW Mitgliederversammlung

AIW 2 14:00 — 15:00 Theater
AIW Industrietag I

AIW 3 15:30 — 16:30 Theater
AIW Industrietag II

AIW 4 16:30 — 17:30 Theater
Podiumsdiskussion

AIW 5 17:30 — 18:30 Theater
Gemütlicher Ausklang mit Networking bei Bier & Brezn

Working Group on Equal Opportunities (AKC)

Invited Talks

AKC 1.1 10:00 — 10:30 H2
Striving towards a professorship: experiences of a Junior Researcher
•*Selina Olthof*

AKC 1.2 10:30 — 11:00 H2
Academi-JA!
•*Yana Vaynzof*

AKC 1.3 11:00 — 11:30 H2
Career in Physics with Children
•Kristin Persson

AKC 1.4 11:30 — 12:00 H2
Negotiations in Life and Career
•Laura H Greene

Session

AKC 1 10:00 — 12:00 H2
How to succeed in academia – examples of successful careers

Working Group „Young DPG“ (AKjDPG)

Session

AKjDPG 2 09:30 — 12:40 H38
PhD Focus Session: Biogenic spin phenomena

“Role models”-Exhibition (free entrance)

09:00 — 19:00 Foyer of the Central Library

Exhibition of Scientific Instruments and Literature (free entrance)

09:00 — 18:00 Foyer Audimax, H6, LH Wirtschaft/Recht, Sammelgebäude

Women in Physics Lunch

12:00 — 13:15 in front of H2 upper exit

Jobbörse: McKinsey & Company Inc.

12:00 — 13:00 Kunsthalle

Jobbörse: Forschungszentrum Jülich

13:15 — 14:15 Kunsthalle

Jobbörse: Bundesamt für Sicherheit und Informationstechnik

14:30 — 15:30 Kunsthalle

Public Evening Talk (free entrance)

PLV 10.1 20:00 — 21:00 H1
The overproduction of truth. Passion, competition, and integrity in modern science
•Gianfranco Pacchioni

Thursday, April 4, 2019

Plenary Talks

PLV 11.1 08:30 — 09:15 H1
Beyond the molecular movie: The ultrafast electronic structure view of surface dynamics
•Martin Wolf

PLV 12.1 14:00 — 14:45 H1
Quantum computing – progress towards applications
•Heike Riel

PLV 13.1 14:00 — 14:45 H2
The Physics of Inference and Community Detection
•Cristopher Moore

Sessions

PLV 11 08:30 — 09:15 H1
Plenary Martin Wolf

PLV 12 14:00 — 14:45 H1
Plenary Heike Riel

PLV 13 14:00 — 14:45 H2
Plenary Cris Moore

Prize Talk

PRV 6.1 13:15 — 13:45 H1
Spin, charge, and orbital reconstructions in complex oxide heterostructures
•Eva Benckiser
(Laureate of the Walter-Schottky-Prize 2019)

Session

PRV 6 13:15 — 13:45 H1
Prize Talk Eva Benckiser

Lunch Talk, Discussion

PSV 7.1 13:15 — 13:45 H2
Als Physiker in der Automobilelektronik
•Thomas Riepl

PSV 8.1 13:15 — 14:00 H15
Being a PhD Candidate in Physics
•Erich Runge, Rima X. Schüssler, Philipp Jäger

Sessions

PSV 7 13:15 — 13:45 H2
PSV VII

PSV 8 13:15 — 14:00 H15
PSV VIII

Symposium Czech Republic as Guest of Honor (SYCZ)

Invited Talks

SYCZ 1.1 09:30 — 10:00 H4
Crystal symmetries and transport phenomena in antiferromagnets
•Tomas Jungwirth

SYCZ 1.2 10:00 — 10:30 H4
Terahertz subcycle charge and spin control
•Rupert Huber

SYCZ 1.3 10:30 — 11:00 H4
1D molecular system on surfaces
•Pavel Jelinek

SYCZ 1.4 11:15 — 11:45 H4
Tunneling microscopy on insulators provides access to out-of-equilibrium charge states
Laerte L. Patera, Fabian Queck, Philipp Scheuerer, •Jascha Repp

SYCZ 1.5 11:45 — 12:15 H4
Occam's razor and complex networks from brain to climate
•Jaroslav Hlinka

SYCZ 1.6 12:15 — 12:45 H4
Long range temporal correlations in complex systems
•Holger Kantz, Marc Hoell, Mozhdeh Massah, Philipp Meyer, Katja Polotzek

Session

SYCZ 1 09:30 — 12:45 H4
Czech Republic as Guest of Honor

Symposium Physics of Self-Organization in DNA Nanostructures (SYDN)

Invited Talks

SYDN 1.1 09:30 — 10:00 H1
Functional DNA Nanostructures and Their Applications
•Itamar Willner

SYDN 1.2 10:00 — 10:30 H1
Gaining control of DNA-based nanodevices
•Francesco Ricci

SYDN 1.3 10:30 — 11:00 H1
Self-assembly and optical properties of single molecule polymers on DNA origami
•Kurt Gothelf

SYDN 1.4 11:15 — 11:45 H1
DNA origami route to dynamic plasmonics
•Laura Liu

SYDN 1.5 11:45 — 12:15 H1
DNA templated metal nanostructures
•Ralf Seidel, Jingjing Ye, Türkan Bayrak, Artur Erbe

Session

SYDN 1 09:30 — 12:15 H1
Physics of Self-Organization in DNA Nanostructures

Symposium Interactions and Spin in 2D Heterostructures (SYIS)

Invited Talks

SYIS 1.1 15:00 — 15:30 H1
Magic Angle Graphene: a New Platform for Strongly Correlated Physics
•Pablo Jarillo-Herrero

SYIS 1.2 15:30 — 16:00 H1
Bilayer Graphene Quantum Devices
•Klaus Ensslin

SYIS 1.3 16:00 — 16:30 H1
Light-Matter interaction in van der Waals heterostructures
•Tobias Korn

SYIS 1.4 16:45 — 17:15 H1
Spin transport in Van der Waals materials and heterostructures
•Bart Van Wees

SYIS 1.5 17:15 — 17:45 H1
Flipping the valley in graphene quantum dots
•Markus Morgenstern

Session

SYIS 1 15:00 — 17:45 H1
Interactions and Spins in 2D Heterostructures

Biological Physics Division (BP)

Invited Talks

BP 24.1 09:30 — 10:00 H11
Active motion in living systems: from molecules to assemblies of organisms
•Ben Fabry

BP 26.1 15:00 — 15:30 H4
Understanding molecular machines by single-molecule FRET
•Thorsten Hugel

BP 27.4 15:45 — 16:15 H10
3D scaffolds as cell-instructive biomaterials
•Christine Selhuber-Unkel

BP 28.7 16:30 — 17:00 H11
Spontaneous buckling of active matter
•Karsten Kruse

Sessions

BP 23 09:30 — 12:45 H10
Biomaterials and biopolymers I

BP 24 09:30 — 13:00 H11
Cell adhesion and migration, multicellular systems I

BP 25 12:15 — 13:00 H13
Physics of self-organization in DNA nanostructures

BP 26 15:00 — 16:00 H4
Single molecules biophysics

BP 27 15:00 — 17:00 H10
Biomaterials and biopolymers II

BP 28 15:00 — 17:30 H11
Statistical physics of biological systems II

BP 29 15:00 — 18:45 H17
PhD Focus session: Theory of stochastic processes with applications in biology

BP 30 16:15 — 17:00 H4
Cell mechanics III

Chemical and Polymer Physics Division (CPP)

Invited Talks

CPP 51.1 09:30 — 10:00 H13
Systematic Dynamic Coarse-Graining with Memory
Gerhard Jung, Martin Hanke, •Friederike Schmid

CPP 56.1 15:00 — 15:30 H14
Microstructure resolved simulations and theory based modeling: Tools for exploring the inner life of a battery
•*Arnulf Latz*

CPP 56.3 15:45 — 16:15 H14
Increasing the rate capability of thick graphite electrodes: Insights from MRI, NMR and porous electrode theory modelling
•*Jamie Foster*

CPP 56.5 16:45 — 17:15 H14
Numerical Simulation and Machine Learning in Virtual Materials Design
•*Jan Hamaekers*

CPP 58.1 15:00 — 15:30 H13
Gyroids on the nanoscale: Metamaterials with surprising optical properties
•*Bodo Wilts*

CPP 59.1 15:00 — 15:30 H8
Polymer-Grafted Nanoparticle Membranes with Exceptional Gas Separation Performance
•*Sanat Kumar*

Sessions

CPP 50 09:30 — 13:00 H18
Organic Electronics and Photovoltaics III – Organic Photovoltaics

CPP 51 09:30 — 12:00 H13
Modeling and Simulation of Soft Matter II

CPP 52 09:30 — 12:45 H10
Biomaterials and biopolymers I

CPP 53 09:30 — 13:00 H36
Perovskite and Hybrid Photovolatics I

CPP 54 10:00 — 12:45 H19
Active Matter II

CPP 55 12:15 — 13:00 H13
Physics of Self-Organization in DNA Nanostructures

CPP 56 15:00 — 18:00 H14
Focus: Computational Methods for the Energy Transition: Paving the Road to Future Materials and Storage Systems - organized by Stephan Kramer and Jochen Zausch

CPP 57 15:00 — 18:15 H18
Organic Electronics and Photovoltaics IV – Excitonic Properties and Light-Emitting Devices

CPP 58 15:00 — 18:30 H13
Nanostructures, Nanostructuring and Nanosized Soft Matter

CPP 59 15:00 — 17:30 H8
Composites and Functional Polymer Hybrids

CPP 60 15:00 — 17:00 H10
Biomaterials and biopolymers II

CPP 61 15:00 — 17:30 H36
Perovskite and Hybrid Photovolatics II

CPP 62 17:45 — 18:30 H8
Electrical, Dielectrical and Optical Properties of Thin Films

CPP 63 18:45 — 19:45 H13
Annual General Meeting of the CPP Division (CPP Mitgliederversammlung)

Thin Films Division (DS)

Invited Talks

DS 21.1 09:30 — 10:00 H32
Epitaxial graphene on SiC(0001) studied by electron spectroscopy and microscopy
•Florian Speck

DS 21.6 11:15 — 11:45 H32
Patternable non-polar epigraphene for nano-electronics and Dirac point physics
Vladimir Prudkovskiy, Yiran Hu, Hue Hu, Lei Ma, Claire Berger, •Walt de Heer

DS 21.9 12:15 — 12:45 H32
Intrinsic stacking domains in graphene on silicon carbide: A pathway for intercalation
Tobias A de Jong, Eugene E Krasovskii, Christian Ott, Rudolf M Tromp, Sense Jan van der Molen, •Johannes Jobst

DS 23.1 15:00 — 15:30 H32
Artificial nano-granular heterostructures: fundamentals and applications
•Oleg Udalov, Igor Beloborodov

DS 23.5 16:30 — 17:00 H32
3D nanomagnetism and superconductivity: Current status and potential for future work
•Oleksandr Dobrovolskiy, Michael Huth

Sessions

DS 21 09:30 — 12:45 H32
Focus Session: Growth, Properties and Application of Epitaxial Graphene

DS 22 09:30 — 12:15 H39
Thin Film Applications

DS 23 15:00 — 17:45 H32
Direct-Write Nanofabrication and Applications III (Electron Beam Induced Processing)

DS 24 15:00 — 18:15 H39
Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...) Part I

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 40.1 09:30 — 10:00 H3
Non-Brownian diffusion: from disorder to physical insights
•Ralf Metzler

DY 42.1 09:30 — 10:00 H20
Quantum dynamics in strongly correlated one-dimensional Bose gases
•Hanns-Christoph Nägerl

DY 42.2 10:00 — 10:30 H20
Extreme Decoherence and Quantum Chaos
Zhenyu Xu, Aurélia Chenu, Luis Pedro García-Pintos, Javier Molina-Vilaplana, •Adolfo Del Campo

DY 42.10 12:30 — 13:00 H20
Semiclassical approach in Bose-Hubbard models: from universal spectral statistics to far-out-of-equilibrium dynamics
•Remy Dubertrand

Sessions

DY 40 09:30 — 10:00 H3
Talk R. Metzler

DY 41 09:30 — 12:00 H13
Modeling and Simulation of Soft Matter II

DY 42 09:30 — 13:00 H20
Focus: Many-Body Quantum Chaos

DY 43 10:00 — 13:15 H3
Anomalous diffusion / Brownian motion

DY 44 10:00 — 12:45 H19
Active Matter C

DY 45 10:30 — 11:15 H6
The Physics of Power grids

DY 46 11:30 — 12:30 H17
Energy Networks (joint SOE/DY)

DY 47 15:00 — 17:30 H11
Statistical physics of biological systems II

DY 48 15:00 — 18:45 H17
Theory of Stochastic Processes with Applications in Biology

DY 49 15:00 — 18:00 H23
Quantum-Critical Phenomena

DY 50 15:00 — 18:00 Poster B2
Poster: Nonlinear Systems, Patterns, Flows ..

DY 51 15:00 — 18:00 Poster B2
Poster: Stat. Phys., Comp. Meth

DY 52 15:00 — 18:00 Poster B2
Poster: Active Matter, Microswimmer, Microfluidics

DY 53 15:00 — 18:00 Poster B2
Poster Quantum Systems

DY 54 15:00 — 18:00 Poster B2
Poster: Complex, Fluids, Glasses, Granular

DY 55 15:00 — 18:00 Poster B2
Poster: Noneq. Stat. Phys., Stat. Bio. Phys., Brownian

DY 56 18:30 — 19:30 H3
Annual General Meeting of the Dynamics and Statistical Physics Division

Semiconductor Physics Division (HL)

Sessions

HL 36 09:30 — 13:00 H31
II-VI- and III-V-semiconductors

HL 37 09:30 — 12:45 H32
Focus Session: Growth, Properties and Application of Epitaxial Graphene

HL 38 09:30 — 11:15 H33
Organic semiconductors

HL 39 09:30 — 12:45 H34
Quantum dots and wires: Optical properties I

HL 40 09:30 — 13:00 H36
Perovskite and Hybrid Photovolatics I

HL 41 15:00 — 17:15 H31
Heterostructures, interfaces, and surfaces

HL 42 15:00 — 17:15 H34
Quantum dots and wires: Preparation and characterization

HL 43 15:00 — 17:30 H36
Perovskite and Hybrid Photovolatics II

HL 44 17:30 — 18:30 H34
Annual General Meeting of the Semiconductor Physics Division

HL 45 18:30 — 21:00 Poster E
HL Posters III

Magnetism Division (MA)

Invited Talks

MA 42.1 09:30 — 10:00 H38
Magnetic nanomembranes: From flexible magnetoelectronics to remotely controlled microrobotics
•Oliver G. Schmidt

MA 42.2 10:00 — 10:30 H38
Curvature-induced chiral effects in nanomagnets
•Oleksandr Pylypovskyi

MA 42.3 10:30 — 11:00 H38
Chiral magnetoresistance in curved and non-curved geometries
•Pietro Gambardella

MA 42.4 11:00 — 11:30 H38

Domain Wall Dynamics in Curved Geometries

•Robert M. Reeve, Mohamad-Assaad Mawass, Kornel Richter, Andre Bisig, Benjamin Krüger, Markus Weigand, Hermann Stoll, Andrea Krone, Florian Kronast, Gisela Schütz, Mathias Kläui

Sessions

MA 39 09:30 — 10:15 H15

Overview Talk: Christopher Lutz

MA 40 09:30 — 13:00 Theater

Frustrated Magnets –
Strong Spin-Orbit Coupling

MA 41 09:30 — 13:15 H37

Magnetic Textures: Statics and Imaging II

MA 42 09:30 — 12:30 H38

Focus Session: Curvilinear magnetism

MA 43 09:30 — 11:15 H52

Micro- and nanostructured magnetic materials

MA 44 09:30 — 11:00 H53

Magnetic imaging (Experimental techniques)

MA 45 10:30 — 13:00 H15

Focus Session: Spins on Surfaces I

MA 46 11:30 — 13:15 H52

Magnetic particles and clusters

MA 47 11:30 — 13:00 H53

Magnetic anisotropy in thin films

MA 48 15:00 — 17:45 H2

Topological Semimetals – Experiment

MA 49 15:00 — 18:00 H15

Focus Session: Spins on Surfaces II

MA 50 15:00 — 17:45 H24

Topology and Symmetry-Protected Materials

MA 51 15:00 — 18:00 Poster C
Magnetism Poster B

MA 52 18:00 — 19:00 H48
Annual General Meeting of the MA division

Metal and Material Physics Division (MM)

Invited Talk, Topical Talks

MM 32.1 09:30 — 10:00 H43
The Digital Transformation in Materials Science and Solid State Physics
•Chris Eberl et al.

MM 33.1 10:15 — 10:45 H43
Supervised and unsupervised learning from the large body of materials literature
•Gerbrand Ceder

MM 33.5 11:45 — 12:15 H43
Extending high-throughput materials discovery to finite temperatures: Concepts and application
•Tilmann Hickel, Janssen Jan, Halil Sözen, Fritz Körmann, Sudarsan Surendralal, Mira Todorova, Yury Lysogorskiy, Ralf Drautz, Jörg Neugebauer

MM 35.1 10:15 — 10:45 H45
Friction mechanisms revealed by scanning force and electron microscopy
•Roland Bennewitz, Christiane Petzold, Marcus Koch, Nicholas Chan, SG Balakrishna, Philip Egberts, Andreas Klemenz, Michael Moseler

MM 35.4 11:45 — 12:15 H45
In-situ Microscopy Testing of Metallic Thin Films
•Velimir Radmilović

MM 37.1 15:00 — 15:30 H43
Atomistic Machine Learning between Physics and Data
•Michele Ceriotti

MM 37.6 16:45 — 17:15 H43
High-throughput with Particle Technology
•Lutz Mädler

MM 37.7 17:15 — 17:45 H43
Microstructure is the know-it-all – classification approaches with data mining and deep learning methods
•*Frank Mücklich, Dominik Britz*

Sessions

MM 32 09:30 — 10:00 H43
Invited talk Eberl

MM 33 10:15 — 13:15 H43
Topical session (Symposium MM): Big Data Analytics in Materials Science

MM 34 10:15 — 13:00 H44
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 35 10:15 — 13:00 H45
Topical session (Symposium MM): Correlative and in-situ Microscopy in Materials Research

MM 36 10:15 — 13:00 H46
Liquid and Amorphous Metals

MM 37 15:00 — 18:45 H43
Topical session (Symposium MM): Big Data Analytics in Materials Science

MM 38 15:00 — 17:30 H44
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 39 15:00 — 17:45 H45
Structural Materials (Steels, light-weight materials, high-temperature materials)

MM 40 15:00 — 16:15 H46
Liquid and Amorphous Metals

Surface Science Division (O)

Invited Talks

O 73.1 09:30 — 10:15 H15
Magnetic sensing by single-atom spin resonance in an STM
•*Christopher Lutz*

O 75.3 11:00 — 11:30 H5
Structure evolution of oxide-supported metal nanoparticles under different conditions
•Yuemin Wang

O 78.3 11:00 — 11:30 H14
Photoemission of correlated electron pairs from metals excited by megahertz high-order harmonics
•Cheng-Tien Chiang, Andreas Trützschler, Michael Huth, Robin Kamrla, Frank O. Schumann, Wolf Widdra

O 79.1 10:30 — 11:00 H15
Enhancing quantum coherence of magnetic atoms on a surface
•Yujeong Bae, Kai Yang, Philip Willke, Taeyoung Choi, Andreas J. Heinrich, Christopher P. Lutz

O 81.1 10:30 — 11:00 H24
Zooming in on the electronic properties of van der Waals Heterostructures
•Søren Ulstrup, Jyoti Katoch, Roland J. Koch, Simon Moser, Kathleen M. McCreary, Simranjeet Singh, Jinsong Xu, Berend T. Jonker, Roland K. Kawakami, Aaron Bostwick, Eli Rotenberg, Chris Jozwiak

O 81.2 11:00 — 11:30 H24
Directly measuring the anisotropic magnetic exchange force field of a spin spiral
•Nadine Hauptmann, Tzu-Chao Hung, Wouter Jolie, Soumyajyoti Haldar, Daniel Wegner, Stefan Heinze, Alexander A. Khajetoorians

O 81.3 11:30 — 12:00 H24
Scanning Probe Microscopy at Ambient Pressures
•Baran Eren

O 81.4 12:00 — 12:30 H24
High energy surface x-ray diffraction from surfaces and particles in operando catalysis
•Uta Hejral, Stefano Albertin, Mikhail Shipilin, Jianfeng Zhou, Sebastian Pfaff, Sara Blomberg, Johan Zetterberg, Johan Gustafson, Andreas Stierle, Edvin Lundgren

O 81.5 12:30 — 13:00 H24
Batteries at Work: Towards Operando Photoelectron Spectroscopy on Lithium Ion Batteries
•Julia Maibach, Ida Källquist, Kristina Edström, Håkan Rensmo, Hans Siegbahn, Maria Hahlin

O 83.3 15:30 — 16:00 H9
Control of charge transfer into large organic molecules on ultrathin MgO(001) films
•Martin Sterrer

O 84.1 15:00 — 15:30 H15
Long-lived magnetic states in atomic-scale magnets
•Sebastian Stepanow

O 86.5 16:00 — 16:30 H24
Luttinger liquid in a box: electrons confined within MoS_2 mirror twin boundaries
•Wouter Jolie, Clifford Murray, Philipp Weiss, Joshua Hall, Fabian Portner, Nicolae Atodiresei, Arkady Krasheninnikov, Carsten Busse, Hannu-Pekka Komsa, Achim Rosch, Thomas Michely

O 86.7 16:45 — 17:15 H24
Quasiparticle interferences on Type I and Type II Weyl semimetal surfaces
•Hao Zheng

Sessions

O 73 09:30 — 10:15 H15
Overview Talk: Christopher Lutz

O 74 09:30 — 12:45 H32
Focus Session: Growth, Properties and Application of Epitaxial Graphene

O 75 10:30 — 13:00 H5
Fundamentals of Catalysis I

O 76 10:30 — 13:00 H8
Plasmonics & Nanooptics V: Nanostructures and Nanoantennae

O 77 10:30 — 13:15 H9
Organic Molecules on Inorganic Substrates V: Solid-Liquid Interfaces, Self-Organization, Ordering

O 78 10:30 — 13:15 H14
Electronic Structure of Surfaces I: Photoelectron Spectroscopy

O 79 10:30 — 13:00 H15
Focus Session: Spins on Surfaces I

O 80 10:30 — 13:00 H16
Ultrafast Electron Dynamics at Surfaces and Interfaces I

O 81 10:30 — 13:00 H24
Gerhard Ertl Young Investigator Award

O 82 15:00 — 17:45 H5
Fundamentals of Catalysis II

O 83 15:00 — 17:30 H9
Organic Molecules on Inorganic Substrates VI: Chirality, Charge Transfer, Self-Assembly

O 84 15:00 — 18:00 H15
Focus Session: Spins on Surfaces II

O 85 15:00 — 17:30 H16
Ultrafast Electron Dynamics at Surfaces and Interfaces II: New Methods and Developments

O 86 15:00 — 17:45 H24
Topology and Symmetry-Protected Materials

O 87 15:00 — 17:30 H25
2D Materials IV: Charge Density Waves and Electronic Properties

O 88 15:00 — 17:45 H26
Electronic Structure of Surfaces II

O 89 19:00 — 19:30 H1
Annual Meeting of the Surface Science Division

O 90 19:30 — 20:30 H1
Post-Deadline Session

Physics of Socio-economic Systems Division (SOE)

Invited Talks, Topical Talk

SOE 19.1 15:00 — 15:45 H17
Ecosystem stability and altruistic advantage
•*Nick Jones*

SOE 19.4 16:15 — 16:45 H17
Topological Hindrance and Jamming Transitions in Multi-Species Transport
•*Erwin Frey*

SOE 19.5 17:00 — 17:45 H17
Seeing and believing at super-resolution
•*Susan Cox*

SOE 19.7 18:00 — 18:30 H17
Reconstructing the topographic landscape of epithelial-mesenchymal plasticity
•*Francesc Font-Clos, Stefano Zapperi, Caterina A. M. La Porta*

Sessions

SOE 16 09:30 — 11:30 H17
Networks and Systemic Risks (joint SOE/DY)

SOE 17 10:30 — 11:15 H6
The Physics of Power grids

SOE 18 11:30 — 12:30 H17
Energy Networks (joint SOE/DY)

SOE 19 15:00 — 18:45 H17
Focus Session: Theory of Stochastic Processes with Applications in Biology

Low Temperature Physics Division (TT)

Invited Talks

TT 51.1 09:30 — 10:00 H2
Evaluation of chiral superconductivity in Sr_2RuO_4
•*Clifford Hicks*

TT 51.2 10:00 — 10:30 H2
Magnetic excitations and their possible role in the superconducting pairing in Sr_2RuO_4
•Markus Braden, Stefan Kunkemöller, Kevin Jenni, Paul Steffens, Yvan Sidis, Zhiqiang Q. Mao, Yoshiteru Maeno, Igor Mazin

TT 51.3 10:30 — 11:00 H2
Topologically protected Bogoliubov Fermi surfaces
•Daniel Agterberg, Philip Brydon, Henri Menke, Carsten Timm

TT 51.4 11:15 — 11:45 H2
Time-reversal symmetry breaking in Fe-based superconductors
•Andrey Chubukov

TT 51.5 11:45 — 12:15 H2
Emerging superconductivity with broken time reversal symmetry inside a superconducting s-wave state
•Vadim Grinenko, Rajib Sarkar, Philipp Materne, Kunihiro Kihou, Chul-Ho Lee, Saicharan Aswartham, Igor Morozov, Bernd Buechner, Ruben Huehne, Nielsch Kornelius, Konstantin Nenkov, Dmitriy Efremov, Stefan-Ludwig Drechsler, Paul Chekhonin, Werner Skrotzki, Vasiliy Vadimov, Mihail Silaev, Pavel Volkov, Ilya Eremin, Hubertus Luetkens, Hans-Henning Klauss

Sessions

TT 51 09:30 — 13:00 H2
Focus Session: Broken Time Reversal Symmetry in Multiband Superconductors

TT 52 09:30 — 12:45 H7
Quantum Impurities and Kondo Physics

TT 53 09:30 — 13:00 Theater
Frustrated Magnets – Strong Spin-Orbit Coupling

TT 54 09:30 — 13:00 H22
Correlated Electrons: Complex Oxides and Other Materials

TT 55 09:30 — 13:00 H23
Superconductivity: Tunneling and Josephson Junctions

TT 56 15:00 — 17:45 H2
Topological Semimetals – Experiment

TT 57 15:00 — 18:00 H7
Superconductivity: Properties and Electronic Structure

TT 58 15:00 — 18:30 Theater
Superconductivity: Qubits 2

TT 59 15:00 — 18:00 H22
Complex Oxides Interfaces and Charge Order

TT 60 15:00 — 18:00 H23
Quantum-Critical Phenomena

TT 61 15:00 — 17:45 H24
Topology and Symmetry-Protected Materials

TT 62 15:00 — 17:45 H32
Direct-Write Nanofabrication and Applications III (Electron Beam Induced Processing)

TT 63 15:00 — 18:30 Poster D
Poster Session: Cryogenic Particle Detectors and Cryotechnique

TT 64 15:00 — 18:30 Poster D
Poster Session: Transport

TT 65 18:30 — 20:00 H7
Annual General Meeting of the Low Temperature Physics Division

Working Group „Young DPG“ (AKjDPG)

Session

AKjDPG 3 15:00 — 18:45 H17
PhD Focus Session: Theory of Stochastic Processes with Applications in Biology

“Role models”-Exhibition

09:00 — 19:00 Foyer of the Central Library

Exhibition of Scientific Instruments and Literature (free entrance)

09:00 — 18:00 Foyer Audimax, H6, LH Wirtschaft/Recht, Sammelgebäude

Exhibition „Physik hautnah“

10:00 — 19:00 Donaueinkaufszentrum

Jobbörse: d-fine

12:00 — 13:00 Kunsthalle

Jobbörse: Basycon

13:15 — 14:15 Kunsthalle

Jobbörse: KPMG AG

14:30 — 15:30 Kunsthalle

Friday, April 5, 2019

Plenary Talk

PLV 14.1 08:30 — 09:15 H1
Soft Matter: Topological constraints do matter
•Kurt Kremer

Session

PLV 14 08:30 — 09:15 H1
Plenary Kurt Kremer

Symposium Identifying Optimal Physical Implementations for beyond von Neumann Computing Concepts (SYCC)

Invited Talks

SYCC 1.1 09:30 — 10:00 H1
On the Link Between Energy and Information for the Design of Neuromorphic Systems
•Narayan Srinivasa

SYCC 1.2 10:00 — 10:30 H1
Encoding neural and synaptic functionalities in electron spin: A pathway to efficient neuromorphic computing
•Kaushik Roy

SYCC 1.3 10:30 — 11:00 H1
Neuromorphic computing with spintronic nano-oscillators
•Philippe Talatchian, Miguel Romera, Sumito Tsunegi, Flavio Abreu Araujo, Vincent Cros, Paolo Bortolotti, Juan Trastoy, Kay Yakushiji, Akio Fukushima, Hitoshi Kubota, Shinji Yuasa, Maxence Ernoult, Damir Vodenicarevic, Tifenn Hirtzlin, Nicolas Locatelli, Damien Querlioz, Julie Grollier

SYCC 1.4 11:15 — 11:45 H1
Artifcial Intelligence and beyond von Neumann architectures, a mutual opportunity
•Mirko Prezioso, Farnood Merrikh Bayat, Dmitri Strukov

SYCC 1.5 11:45 — 12:15 H1
Brain-inspired approaches in ultrafast magnetism
•*Johan H. Mentink*

Session

SYCC 1 09:30 — 12:15 H1
Identifying optimal physical implementations of non-conventional computing

Biological Physics Division (BP)

Invited Talks

BP 31.1 09:30 — 10:00 H10
Mechano-chemical self-organization determines search pattern in migratory cells
•*Milos Galic*

BP 33.1 12:30 — 13:15 H1
Pattern formation in active cytoskeletal systems
•*Andreas R. Bausch*

Sessions

BP 31 09:30 — 12:00 H10
Cell adhesion and migration, multicellular systems II

BP 32 09:30 — 12:00 H11
Active matter II

BP 33 12:30 — 13:15 H1
Closing talk

Chemical and Polymer Physics Division (CPP)

Invited Talk

CPP 66.1 09:45 — 10:15 H18
Coupled Organic-Inorganic Nanostructures for Optical Switches
•*Marcus Scheele*

Sessions

CPP 64 09:30 — 12:00 H11
Active Matter III

CPP 65 09:30 — 13:00 H36
Two-dimensional Materials IV

CPP 66 09:45 — 12:00 H18
Organic Electronics and Photovoltaics V – Semiconducting Properties and Devices

CPP 67 09:45 — 12:15 H13
Polymer and Molecular Dynamics, Friction and Rheology

CPP 68 10:00 — 12:15 H6
Microfluidics

CPP 69 10:00 — 11:45 H19
Glasses and Glass transition

CPP 70 12:30 — 13:15 H1
Closing talk

Thin Films Division (DS)

Session

DS 25 09:30 — 12:45 H32
Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...) Part II

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 57.1 09:30 — 10:00 H3
Toroidal droplets, active nematics and topological defects
•Alberto Fernandez-Nieves

DY 59.1 09:30 — 10:00 H19
Energy landscape exploration approach for non-ergodic soft matter systems
•Michael Schmiedeberg

Sessions

DY 57 09:30 — 10:00 H3
Talk Alberto Fernandes-Nieves

DY 58 09:30 — 12:00 H11
Active matter II

DY 59 09:30 — 10:00 H19
Talk Michael Schmiedeberg

DY 60 10:00 — 11:45 H3
Statistical Physics in Biological Systems III

DY 61 10:00 — 12:15 H6
Microfluidics

DY 62 10:00 — 11:45 H19
Glasses and Glass transition

DY 63 10:00 — 11:30 H20
Modeling and Data Analysis

DY 64 12:30 — 13:15 H1
Closing talk

Semiconductor Physics Division (HL)

Sessions

HL 46 09:30 — 12:45 H31
Ultra-fast phenomena

HL 47 09:30 — 13:00 H34
Quantum dots and wires: Optical properties II

HL 48 09:30 — 13:00 H36
Two-dimensional Materials IV

Crystalline Solids and their Microstructure Division (KFM)

Session

KFM 16 09:30 — 11:45 H39
Multiferroics and Magnetoelectric coupling II

Magnetism Division (MA)

Sessions

MA 53 09:30 — 12:45 H33
Magnetic Heuslers, half-metals and oxides

MA 54 09:30 — 12:30 H37
Magnetic textures: Transport and dynamics III

MA 55 09:30 — 13:15 H38
Electron theory and micromagnetism

MA 56 09:30 — 11:45 H39
Multiferroics and Magnetoelectric coupling II

MA 57 10:30 — 13:00 H24
Focus Session: Spins on Surfaces III

Surface Science Division (O)

Invited Talks

O 91.1 09:30 — 10:15 H15
Controlling and imaging electronic structures of Quantum Materials
•*Phil King*

O 96.1 10:30 — 11:00 H15
Electrical transport in semiconductor nanocrystal assemblies and nanocrystal heterostructures
•*Bruno Grandidier*

O 96.5 11:45 — 12:15 H15
Multiprobe STM measurements of electron transport at the atomic level
•*Marek Kolmer, Wonhee Ko, An-Ping Li*

O 99.1 10:30 — 11:00 H24
Quantum simulation through atomic assembly
•*Sander Otte*

O 100.1 13:15 — 14:00 H15
From UHV to Electrochemistry – Recent Developments
•*R. Jürgen Behm*

Sessions

O 91 09:30 — 10:15 H15
Overview Talk: Phil King

O 92 10:30 — 12:45 H5
Electronic Structure Theory

O 93 10:30 — 13:00 H8
Plasmonics & Nanooptics VI: Near-Field Microscopy and Phenomena

O 94 10:30 — 12:30 H9
2D Materials V: Novel Systems

O 95 10:30 — 13:00 H14
Semiconductor Substrates: Metallic Nanowires

O 96 10:30 — 13:00 H15
Focus Session: Surface Transport at the Atomic Scale

O 97 10:30 — 13:00 H16
Ultrafast Electron Dynamics at Surfaces and Interfaces III

O 98 10:30 — 12:15 H17
Organic Molecules on Inorganic Substrates VII

O 99 10:30 — 13:00 H24
Focus Session: Spins on Surfaces III

O 100 13:15 — 14:00 H15
Overview Talk: Jürgen Behm

Low Temperature Physics Division (TT)

Invited Talk

TT 66.1 09:30 — 10:00 H2
Non-equilibrium superconductivity: from post-quench dynamics to controlling competing orders
•Peter P. Orth

Sessions

TT 66 09:30 — 12:45 H2
Ultrafast Dynamics of Light-Driven Systems

TT 67 09:30 — 12:00 H4
Cryogenic Particle Detectors and Other Superconducting Electronics

TT 68 09:30 — 12:15 H22
Topology: Other Topics

TT 69 09:30 — 11:30 H23
Cold Atomic Gases and Superfluids

Exhibition „Physik hautnah“

10:00 — 19:00 Donaueinkaufszentrum

Jobbörse: Boston Consulting Group

12:00 — 13:00 Kunsthalle

Index of Exhibitors

University of Regensburg, Universitätsstraße 31
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Opening hours exhibition:

Tuesday, April 2	09:00 – 16:00
Wednesday, April 3	09:00 – 18:00
Thursday, April 4	09:00 – 18:00

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Durchstimmbare Lasersysteme: gepulste ns-/ps Farbstoff-Lasersysteme, cw-Farbstoff-Lasersysteme, gepulste ns- und cw-Ti:Saphir-Lasersysteme, cw-Frequenzverdoppler, Farbstoffe, Optik

SmarAct GmbH AF 51

Schütte-Lanz-Straße 9, 26135 Oldenburg

Piezopositioners, Interferometer

SPECS Surface Nano Analysis GmbH AF 64, 65, 70

Voltastraße 5, 13355 Berlin

Photoelektronenspektroskopie, Rastersondenmikroskopie, winkelaufgelöste Photoemission, Elektronenmikroskopie

Springer-Verlag GmbH AH6 36

Tiergartenstraße 17, 69121 Heidelberg

Wissenschaftliche Bücher und Zeitschriften

Staib Instrumente GmbH AH6 35

Hagenaustraße 22, 85416 Langenbach

RHEED, Elektronenquellen, Auger, XPS, Analysatoren, In-situ Oberflächenanalyse, Ionenquellen

Technische Informationsbibliothek Hannover (TIB) LHWR 23

Welfengarten 1B, 30167 Hannover

Wissenschaftliche Fachliteratur

Technische Universität München Forschungs-Neutronenquelle LHWR 12

Lichtenbergstraße 1, 85747 Garching

Das MLZ User Office informiert über die wissenschaftliche, industrielle und medizinische Nutzung der Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II) in Garching bei München.

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VACGEN LTD Maunsell Road AH6 34

St Leonhards-on-Sea, East Sussex, TX38 9NN, UK

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Vakuumkomponenten, Vakuummesstechnik, Durchführungen, Ventile, Schaugläser

vakuumfinder.de c/o CompoNext GbR AF 45

Freiligrathstraße 35, 07743 Jena

Vakuumkomponenten, Vakuumbauteile, Vakuummesstechnik

Vaqtec-scientific Mario Melzer LHWR 21

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Komponenten der UHV- und HV-Technik: u.a. Stromdurchführungen, Schaugläser, Ventile, mech. Durchführungen

Walter de Gruyter GmbH S 106

Genthiner Straße 13, 10785 Berlin

Wissenschaftliche Bücher und Zeitschriften

WITec GmbH Wissenschaftliche Instrumente AF 46

Lise-Meitner-Straße 6, 89081 Ulm

Hochauflösende Mikroskope: AFM, Raman, SNOM

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Maps

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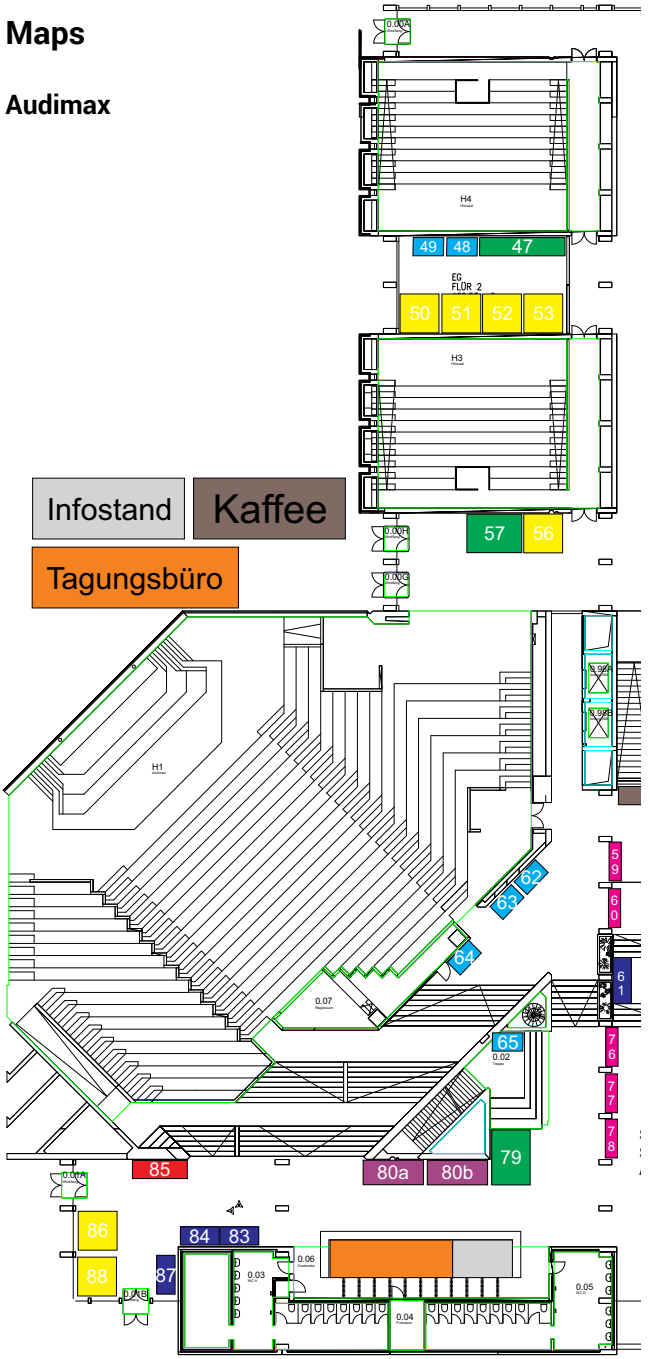

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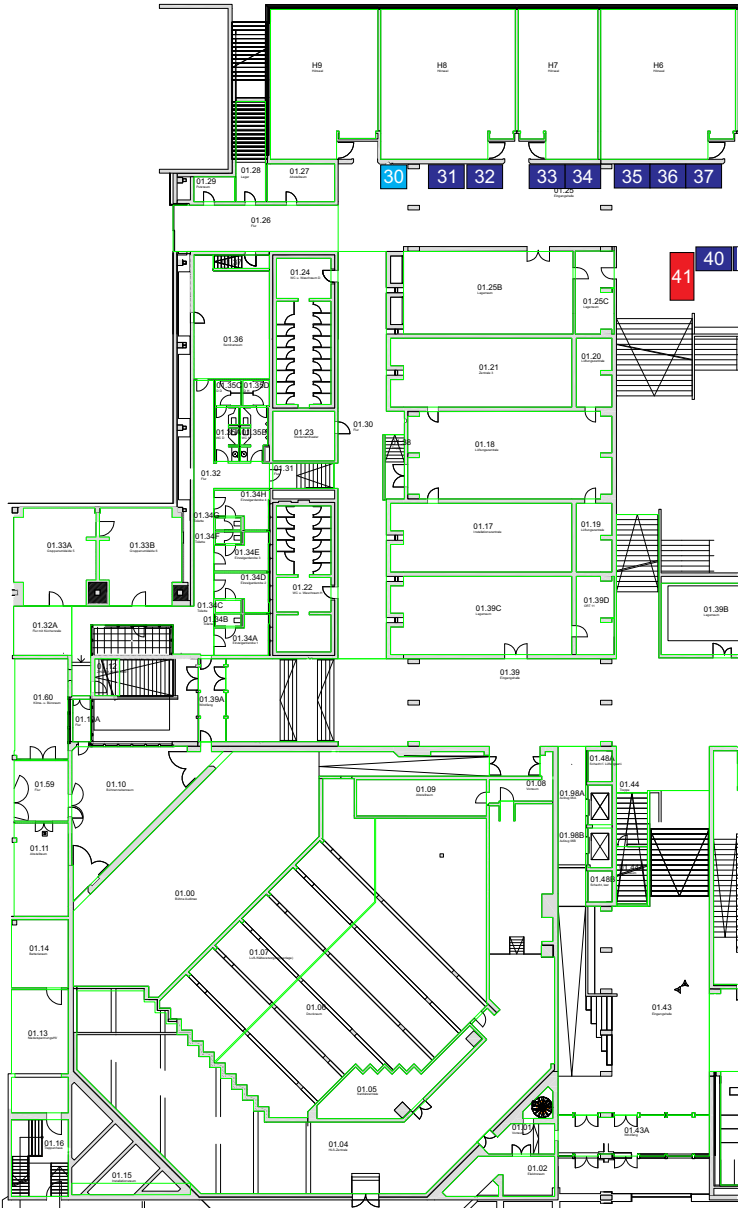
Einzeichnung Stände: Christian Bäuml

Audimax - H6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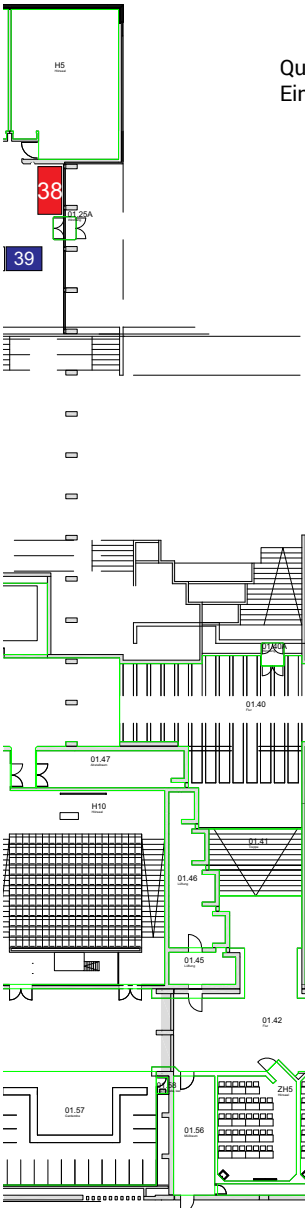

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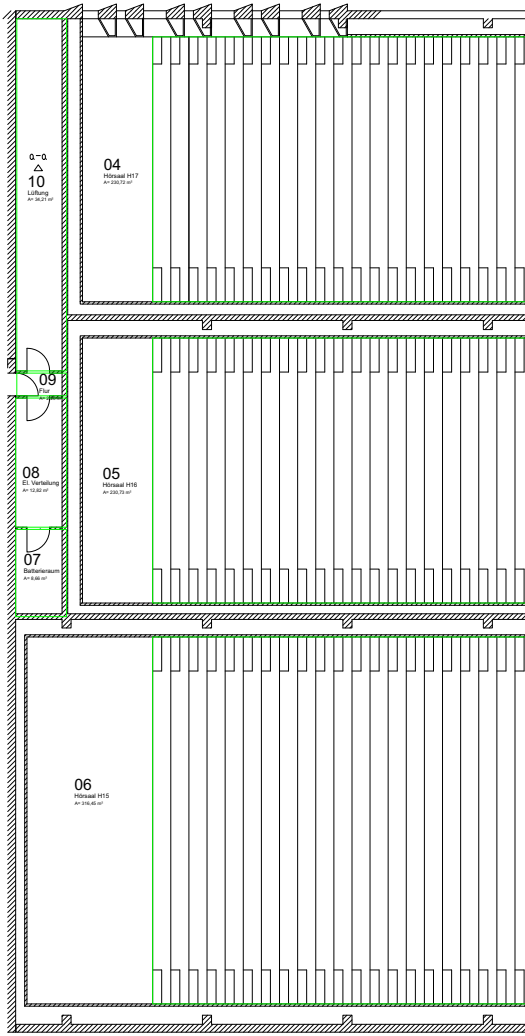
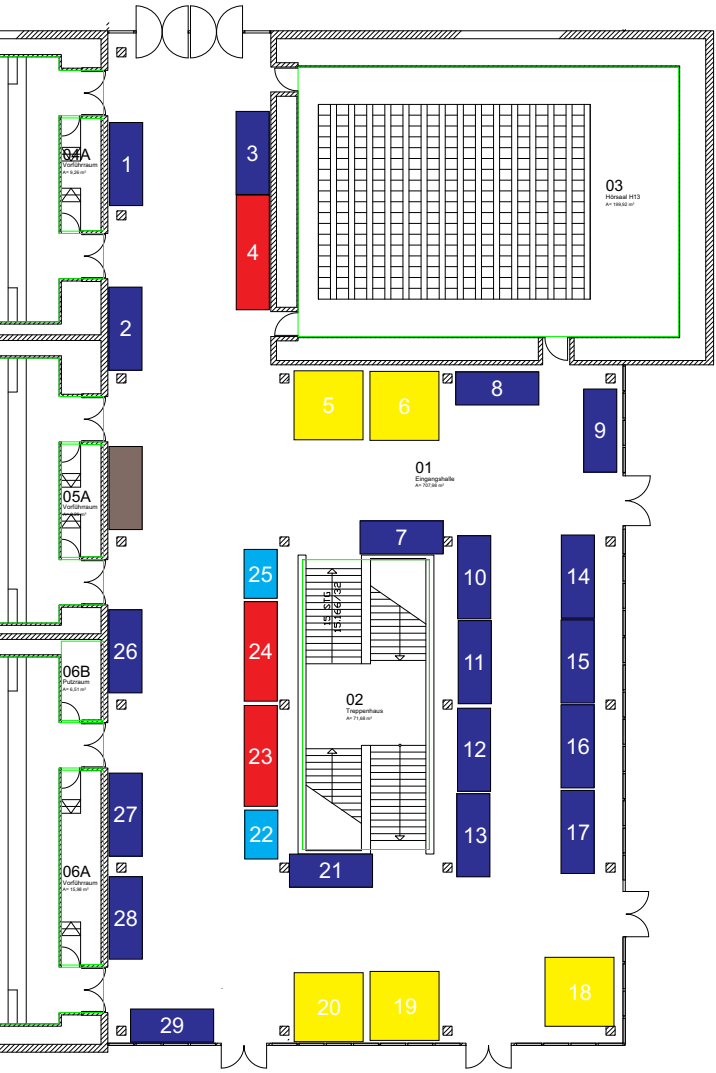
Einzeichnung Stände: Christian Bäuml

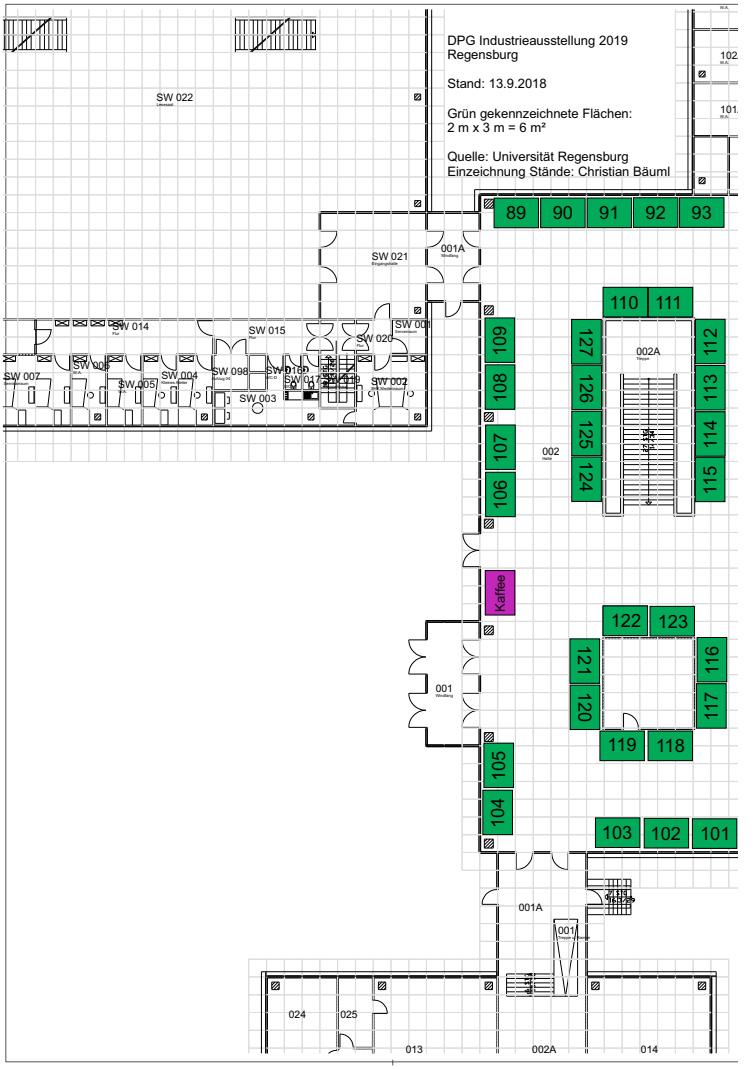
Lichthof Wirtschaft/Recht





Quelle: Universität Regensburg
Einzeichnung Stände: Christian Bäuml

Sammelgebäude



Sammelgebäude

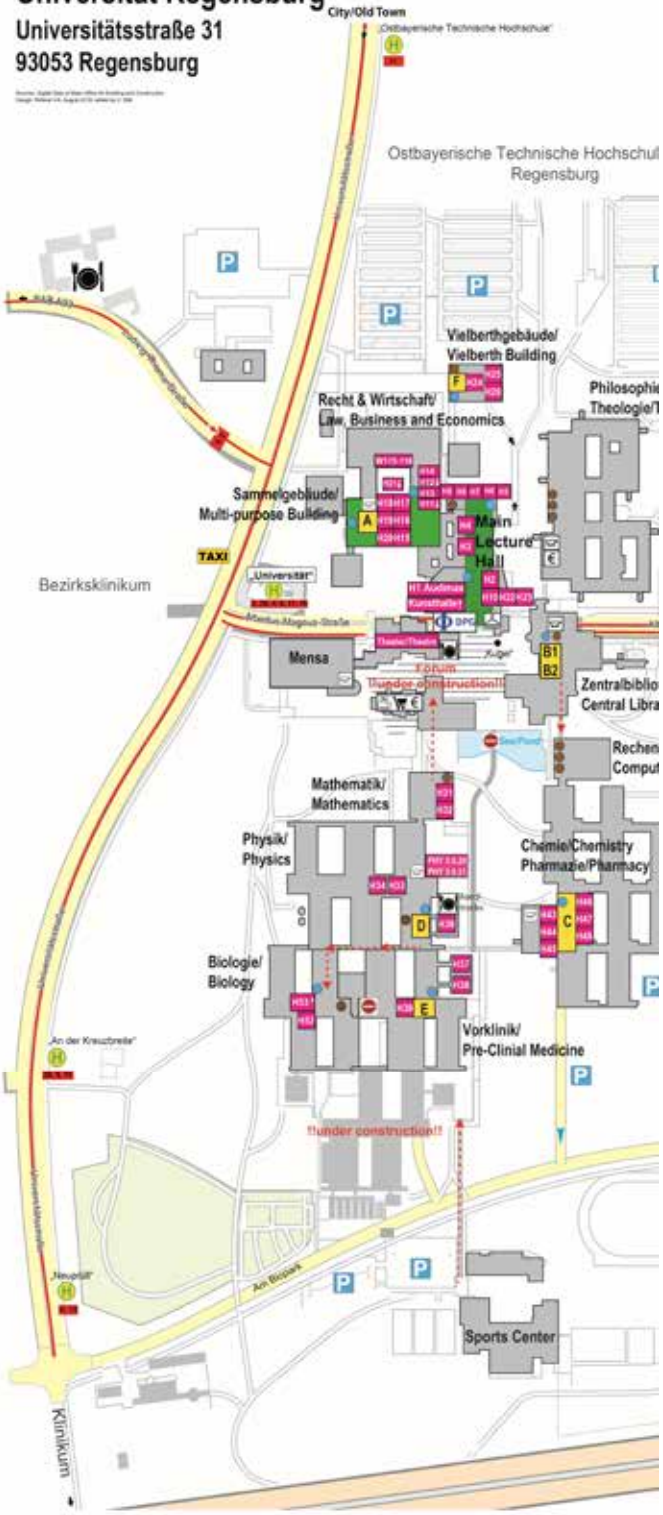
Technische Zentrale Referat W4
8QLYHUVLWWVWUD H5HUHQVEXUJ
Tel. 0941/943 - 2501 Fax. 0941/943 - 2178
E-Mail: constantin.heim@ur.de

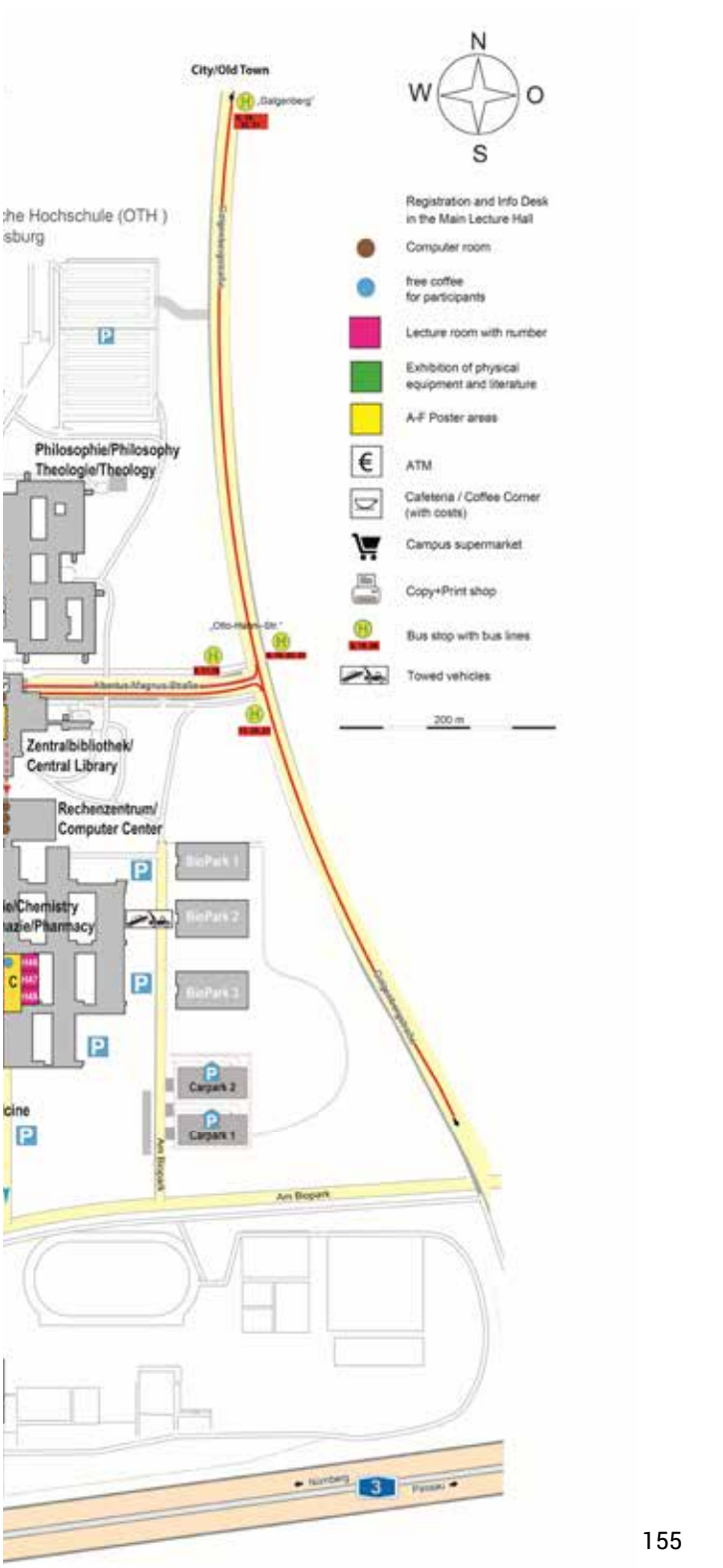
8QLYHUVLWW5HJHQVEXUJ
6DPPHOJHEIXGH
Erdgeschoss

0D VWDE
Bestandsplan
Stand: 10.07.18

Universität Regensburg

Universitätsstraße 31
93053 Regensburg




City/Old Town
N
W
O
S
Galgenberg
Registration and Info Desk
in the Main Lecture Hall
Computer room
free coffee
for participants
Lecture room with number
Exhibition of physical
equipment and literature
A-F Poster areas
ATM
Cafeteria / Coffee Corner
(with costs)
Campus supermarket
Copy+Print shop
Bus stop with bus lines
Towed vehicles
200 m
Hochschule (OTH)
sburg
Philosophie/Philosophy
Theologie/Theology
Albertus-Magnus-Straße
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BioPark 1
BioPark 2
BioPark 3
Carpark 2
Carpark 1
Am Biopark
Nürnberg
3
Passau

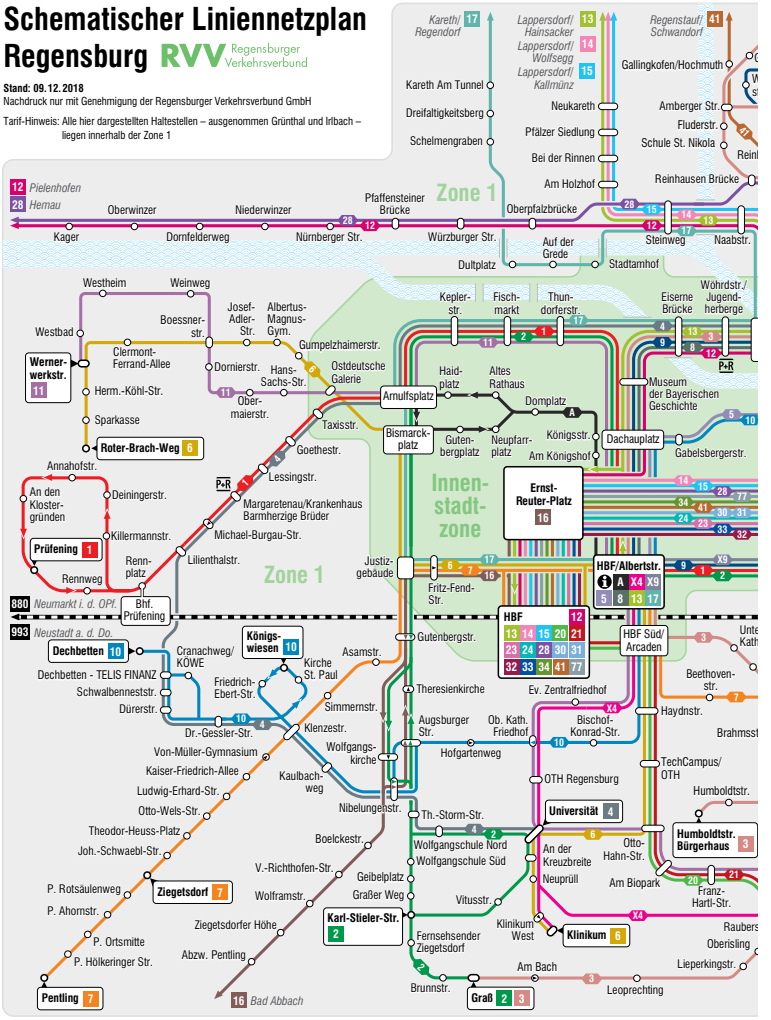
Public Transport

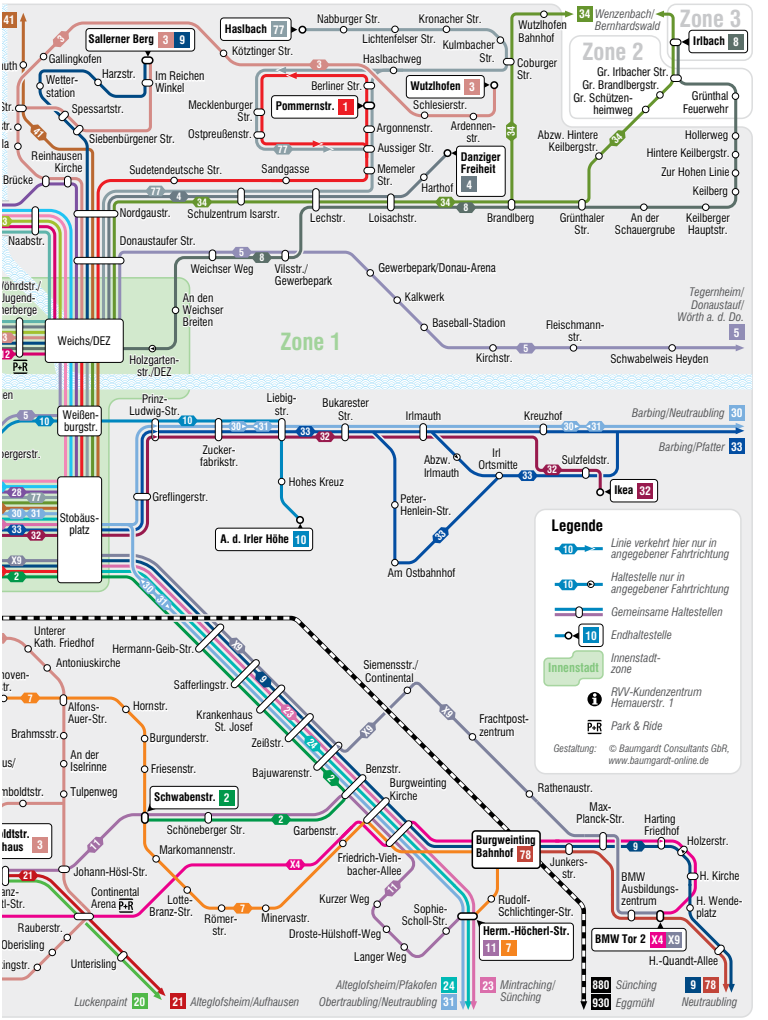
Schematischer Liniennetzplan Regensburg

RVV Regensburger Verkehrsverbund

Stand: 09.12.2018
Nachdruck nur mit Genehmigung der Regensburger Verkehrsverbund GmbH

Tarif-Hinweis: Alle hier dargestellten Haltestellen – ausgenommen Grünthal und Irlbach – liegen innerhalb der Zone 1




Zone 3
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Zone 1
Sallerner Berg 3 9
Haslbach 77
Irlbach 8
Wutzlhofen 3
Pommernstr. 1
Danziger Freiheit 4
Weichs/DEZ
A. d. Irler Höhe 10
Schwabenstr. 2
Burgweinting Bahnhof 78
Herm.-Höcherl-Str. 11 7
BMW Tor 2 X4 X9
Ikea 32
Legende
Linie verkehrt hier nur in angegebener Fahrtrichtung
Haltestelle nur in angegebener Fahrtrichtung
Gemeinsame Haltestellen
Endhaltestelle
Innenstadt-zone
RVV-Kundenzentrum Hemauerstr. 1
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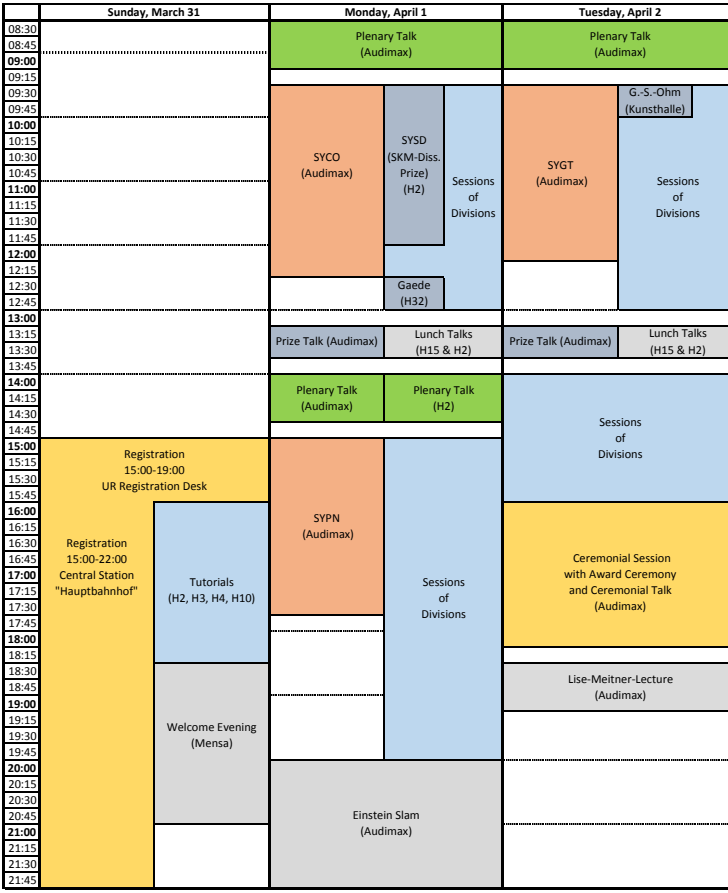
Wenzenbach/ Bernhardswald 34
Barbing/Neutraubling 30
Barbing/Pfatter 33
Luckenpaint 20
21 Alteglofsheim/Aufhausen
Alteglofsheim/Pfakofen 24
Obertraubling/Neutraubling 31
23 Mintraching/ Sünching
880 Sünching
930 Eggmühl
9 76 Neutraubling
Tegernheim/ Donaustauf/ Wörth a. d. Do. 5

Timetable


Sunday, March 31
Monday, April 1
Tuesday, April 2
Plenary Talk (Audimax)
Plenary Talk (Audimax)
SYCO (Audimax)
SYSD (SKM-Diss. Prize) (H2)
Sessions of Divisions
Gaede (H32)
SYGT (Audimax)
G.-S.-Ohm (Kunsthalle)
Sessions of Divisions
Prize Talk (Audimax)
Lunch Talks (H15 & H2)
Prize Talk (Audimax)
Lunch Talks (H15 & H2)
Plenary Talk (Audimax)
Plenary Talk (H2)
Sessions of Divisions
Registration 15:00-19:00 UR Registration Desk
Registration 15:00-22:00 Central Station "Hauptbahnhof"
Tutorials (H2, H3, H4, H10)
SYPN (Audimax)
Sessions of Divisions
Ceremonial Session with Award Ceremony and Ceremonial Talk (Audimax)
Lise-Meitner-Lecture (Audimax)
Welcome Evening (Mensa)
Einstein Slam (Audimax)

Wednesday, April 3		Thursday, April 4			Friday, April 5		
Plenary Talk (Audimax)		Plenary Talk (Audimax)			Plenary Talk & Closing Remarks (Audimax)		08:30
							08:45
							09:00
							09:15
SYHE (Audimax)	Sessions of Divisions	SYDN (Audimax)	SYCZ (H2)	Sessions of Divisions	SYCC (Audimax)	Sessions of Divisions	09:30
							09:45
							10:00
							10:15
							10:30
							10:45
							11:00
							11:15
							11:30
							11:45
							12:00
							12:15
					Closing Talk BP/CPP/DY (Audimax)		12:30
							12:45
Prize Talk (Audimax)	Lunch Talks (H15 & H2)	Prize Talk (Audimax)	Lunch Talks (H15 & H2)		Closing Talk O (H15)		**13:00**
							13:15
							13:30
							13:45
Plenary Talk (Audimax)	Plenary Talk (H2)	Plenary Talk (Audimax)	Plenary Talk (H2)				**14:00**
							14:15
							14:30
							14:45
SYTS (Audimax)	Sessions of Divisions	SYIS (Audimax)	Sessions of Divisions				**15:00**
							15:15
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Annual General Meetings of the DPG Divisions		Annual General Meetings of the DPG Divisions					**18:00**
							18:15
							18:30
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							19:00
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							19:45
Public Evening Talk (Audimax)							**20:00**
							20:15
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							21:45

Deutsche Physikalische Gesellschaft DPG

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Ceremonial Session

Deutsche Physikalische Gesellschaft

Award Ceremony

Walter-Schottky-Prize 2019
Dr. Eva Vera Benckiser
(MPI for Solid State Research, Stuttgart)

Gaede-Prize 2019
Dr. Selina Olthof
(University of Cologne)

SKM Dissertation Prize 2019
(The Laureate will be announced after the SKM Dissertation Prize Symposium)

Music

Ceremonial Lecture

"The Dark Energy of Quantum Materials"
Prof. Dr. Laura H. Greene
(National MagLab and Florida State University)

Tuesday, 2 April 2019, 16:00 – 18:15
Audimax (H1)

DPG

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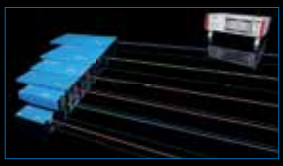
Lasers for Scientific Challenges



Tunable Diode Lasers

· Narrow linewidth at 190 - 3500 nm

· Up to 110 nm mode-hop-free tuning

· Convenient digital control

Frequency Combs

· Compact, robust, high end

· Complete 19“-systems

· Central user interface

Ultrafast Fiber Lasers

· 390 - 15000 nm, up to 5 W

· Down to 25 fs

· Compact, flexible, turnkey operation

Terahertz Systems

· Time-domain: > 5 THz bandwidth

· Frequency-domain: < 10 MHz resolution

· Excellent dynamic range / SNR

Multi-Laser Engines

· Four colors out of 405 - 640 nm

· Up to 100 mW each

· Automatic alignment

All Wavelengths.

190 nm - 0.1 THz