

**Deutsche Physikalische Gesellschaft**



## **82<sup>nd</sup> Annual Meeting of the DPG and DPG-Frühjahrstagung (Spring Meeting)**

**of the Section on Atomic, Molecular, and  
Plasma Physics and Quantum Optics  
(SAMOP)**

together with the

**Environmental Physics Division**

and the Working Groups

**Energy, Industry and Business, Information,**

**Physics and Disarmament, Young DPG**

## **Short Programme**

**Friedrich-Alexander-Universität  
Erlangen-Nürnberg**

**4 – 9 March 2018**



**Impressum:**

Deutsche Physikalische Gesellschaft e. V.

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53604 Bad Honnef

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[www.dpg-physik.de](http://www.dpg-physik.de)

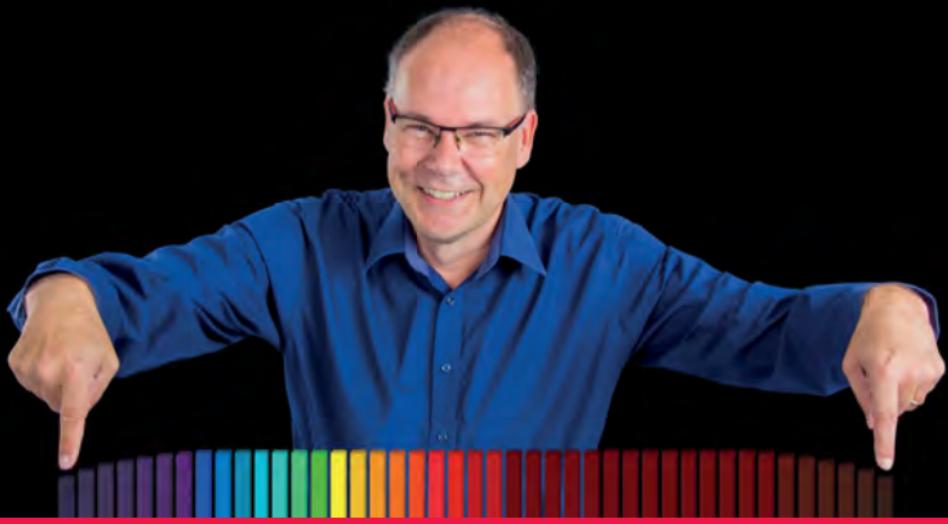
Gerichtsstand: Königswinter

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:

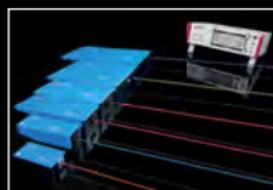
Dr. Bernhard Nunner (Hauptgeschäftsführer)

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## All Wavelengths.

190 nm - 0.1 THz



▶ Tunable Diode Lasers:  
190 - 3500 nm



▶ Frequency Combs:  
420 nm - 2200 nm



▶ Ultrafast Fiber Lasers:  
488 nm - 15000 nm



▶ Terahertz Systems:  
0 - 6 THz, pulsed or cw

Meet us in the right tent



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**WE WANT YOU**

**Wir brauchen  
Deine Unterstützung**



Melde Dich bei unserem Newsletter an:  
[www.dpg-physik.de/pff/newsletter.html](http://www.dpg-physik.de/pff/newsletter.html)



Weitere Informationen zum Projekt findest  
Du unter: [www.dpg-physik.de/pff](http://www.dpg-physik.de/pff)

# Physik für Flüchtlinge

## Physics for all



Ein Projekt der Deutschen Physikalischen Gesellschaft e.V. und der Georg-August-Universität Göttingen  
mit Unterstützung des Bundesministeriums für Bildung und Forschung

## Greeting

Welcome to the 82<sup>nd</sup> Annual Meeting of the DPG and DPG Spring Meeting (82. Jahrestagung der DPG und DPG-Frühjahrstagung) of the Atomic, Molecular, Plasma Physics and Quantum Optics Section (SAMOP), along with its divisions and working groups. I am very grateful to the Friedrich-Alexander-Universität (FAU) Erlangen-Nürnberg for hosting us this year. The DPG Spring Meetings, with industrial and publishers' exhibitions, are attended by thousands of physicists, from students to post-docs, professors and Nobel laureates. This mix is of the utmost importance for scientific networking, particularly for the students who are presenting their bachelor or master theses for the first time. Such a comprehensive integration of young talents is also a unique feature of our Spring Meetings on an international scale.

As DPG President, my pleasure in reaching so many physicists through our Spring Meetings, especially the younger generation, comes with a great responsibility: we at the DPG have to use the public visibility these meetings provide to highlight the value of science to society, and to be role models for young academics. Physics as a profession must dare to make its voice heard. We must make it clear in language understandable to politicians and to the public where scientific results are needed and lacking, identifying which perceived dangers are real for society and which are not. Many of the challenges facing society today are based on a scientific analysis of probability and statistics, but just because something is likely does not mean it will happen, and just because something is improbable does not mean it will not occur. It is natural that this concept is often difficult for people not embedded in science to grasp, yet it is vital that society as a whole is able to act on the information provided by such analyses. To underline publicly the great value of science for society, the participation of many DPG members in last year's March for Science was so important. The DPG is also supporting this year's March for Science taking place in April. I encourage all physicists to participate – and to wear with pride the DPG buttons carrying the motto, "Physik ist weltoffen" (Physics is cosmopolitan). We must not cease to advocate for the value of science and a cosmopolitan, tolerant society – not only in Germany, but also at the European and international levels. This includes providing policy advice, which means that we have to approach politicians providing fact-based advice and warning of risks when necessary. For this, our DPG Spring Meetings are important, but at the same time we must be wary of

politicising science. This is fundamental for society's confidence in the scientific endeavour on which it depends.

Great commitment and support are prerequisites for the successful implementation of a conference such as this. First of all I would like to thank the Wilhelm and Else Heraeus Foundation for its generous support of all DPG Spring Meetings and the participating section, divisions and working groups for an outstanding and exciting programme. I particularly want to thank the Local Organising Committee, Prof. Peter Hommelhoff, FAU Erlangen-Nürnberg, and his entire team, as well as the staff of the DPG head office for the support they provide to all DPG Spring Meetings.

Finally, I would like to take this opportunity to call on all DPG members to participate in the activities of the DPG. The DPG promotes the exchange of knowledge within the scientific community with a special focus on the promotion of young scientists and equal opportunities. As the largest learned physical society in the world, the DPG thrives on the contributions of its committed members. This spirit of community is essential. Our work relies on volunteers, but even if you are unable to donate your time, you can still support our volunteer work. You will find a donation button with information on how your contribution will be used on our homepage.

I wish you an exciting conference with many new insights!

A handwritten signature in black ink, appearing to read "Rolf-Dieter Heuer".

Prof. Dr. Rolf-Dieter Heuer  
President of the  
Deutsche Physikalische Gesellschaft

# **Organisation**

## **Organiser**

Deutsche Physikalische Gesellschaft e. V.  
Hauptstraße 5, 53604 Bad Honnef  
Phone +49 (0) 2224 9232-0  
Fax +49 (0) 2224 9232-50  
Email dpg@dpg-physik.de  
[www.dpg-physik.de](http://www.dpg-physik.de)

## **Local Organiser**

FAU Erlangen-Nürnberg, Department of Physics  
Prof. Dr. Peter Hommelhoff  
Staudtstraße 1, 91058 Erlangen  
Phone +49 (0) 9131 85-27089  
Fax +49 (0) 9131 85-27889  
Email tagung-dpg18@fau.de

## **Scientific Organisation**

Chair of the Section AMOP (SAMOP)  
Prof. Dr. Andreas Buchleitner  
Quantum Optics and Statistics  
Institute of Physics, University of Freiburg  
Hermann-Herder-Str. 3, 79104 Freiburg  
Phone +49 (0) 0761 203 5830  
Fax +49 (0) 0761 203 5967  
Email a.buchleitner@physik.uni-freiburg.de

## **Chairs of the Participating Divisions and Working Groups**

- (A) Atomic Physics
  - Prof. Dr. Marc Vrakking ([vrakking@mbi-berlin.de](mailto:vrakking@mbi-berlin.de))
- (K) Short Time-Scale Physics and Applied Laser Physics
  - Dr. Andreas Görtler ([AGoertler@gmx.de](mailto:AGoertler@gmx.de))
- (MO) Molecular Physics
  - Prof. Dr. Stefan Lochbrunner ([stefan.lochbrunner@uni-rostock.de](mailto:stefan.lochbrunner@uni-rostock.de))
- (MS) Mass Spectrometry
  - Prof. Dr. Robin Golser ([robin.golser@univie.ac.at](mailto:robin.golser@univie.ac.at))
- (Q) Quantum Optics and Photonics
  - Prof. Dr. Dagmar Bruß ([dagmar.bruss@uni-duesseldorf.de](mailto:dagmar.bruss@uni-duesseldorf.de))
- (UP) Environmental Physics
  - Prof. Dr. Christian von Savigny ([csavigny@physik.uni-greifswald.de](mailto:csavigny@physik.uni-greifswald.de))

- (AGA) Physics and Disarmament
  - Prof. Dr. Götz Neuneck  
(neuneck@ifsh.de)
- (AKE) Energy
  - Prof. Dr. Hardo Bruhns (ake@bruhns.info)
- (AIW) Industry and Business
  - Dr. Rolf Loschek (rolf.loschek@t-online.de)
- (AKjDPG) Young DPG
  - Enrico Stein (estein@rhrk.uni-kl.de)

## Symposia

- SYAD – SAMOP Dissertation Prize
- SYPT – Applications and New Trends of Plasmatechnology - An Overview
- SYKW – Klimawandel – was nun?
- SYQC – Quantum Coherence in Quantum Technology
- SYRP – 25 Years of Recollision Physics
- SYET – Resonant Energy Transfer and Interatomic Coulombic Decay
- SYMM – Micromachines
- SYPS – Floquet Physics: How time-periodic systems can make a difference! (PhD-Symposium)

## 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  
[www.dpg-gmbh.de](http://www.dpg-gmbh.de)

## Programme

The scientific programme consists of 1513 contributions:

- 10 Plenary Talks
- 3 Evening Talk
- 3 Prize Talks
- 2 Lunch Talks
- 122 Invited Talks
- 13 Group Reports
- 756 Talks
- 594 Posters
- 6 Tutorials
- 2 Discussions
- 2 Fachvorträge

# **Information for Participants**

The conference will be held March 4 – 9, 2018.

## **Conference Information**

Conference Venue

Friedrich-Alexander-Universität Erlangen-Nürnberg

Kollegienhaus

Universitätsstraße 15

91054 Erlangen

The main conference venue (housing most lecture halls as well as registration, information desk etc) is the Kollegienhaus. For a detailed map of the entire conference venue including all buildings with active lecture halls please see the end of this booklet. The position of the lecture rooms can be found at the DPG-App.

## **Conference Office – Information Desk**

The conference office is located in room K 0.024, ground floor of the Kollegienhaus. The opening hours are

Sunday	March 4	13:00 – 18:00
Monday	March 5	08:00 – 19:00
Tuesday	March 6	08:00 – 16:00
Wednesday	March 7	08:00 – 16:00
Thursday	March 8	08:00 – 16:00
Friday	March 9	08:00 – 12:00

Beside this programme you have received a receipt for your conference fee, the login-password for using WiFi in the university buildings, and your name tag. The name tag must be worn visibly during the entire conference. Please note that in the buildings belonging to the university hospital, a separate personalised WiFi login-password is required, which can also be found in the conference bag.

On the information desk, located in room K 0.015 of the Kollegienhaus, you can buy vouchers for the mensa and look for lost and founds. There you can also find a public computer with a printer. Note that this computer is intended for brief email checks etc. but not for extended computer work. Unfortunately, we cannot offer a CIP pool.

Do not hesitate to inquire about all necessary information concerning the conference, orientation in Erlangen, accommodation, restaurants, going out, and cultural events at the information desk.

# Festakt

Deutsche Physikalische Gesellschaft

## Preisverleihung

### Stern-Gerlach-Medaille 2018

an Prof. Dr. Karsten Danzmann,  
Max-Planck-Institut für Gravitationsphysik und  
Leibniz-Universität Hannover

### Max-Planck-Medaille 2018

an Prof. Dr. Dr. h.c. mult. Ignacio Cirac,  
Max-Planck-Institut für Quantenoptik, Garching und  
Technische Universität München

### Herbert-Walther-Preis 2018

an Prof. Dr. Gerd Leuchs  
Friedrich-Alexander-Universität Erlangen-Nürnberg und  
Max-Planck-Institut für die Physik des Lichts, Erlangen

### Dissertationspreis der Sektion AMOP (SAMOP)

(Der/die Preisträger/Preisträgerin wird nach dem  
SAMOP-Dissertationspreissymposium SYAD auserwählt)

## Preisträgervorträge

### Max-Planck-Medaille 2018

„*New theoretical challenges in  
quantum optics and quantum information*“

### Stern-Gerlach-Medaille 2018

„*Gravitational Wave Astronomy:  
Listening to the sounds of the dark universe!*“

### Herbert-Walther-Preis 2018

„*Focusing Light*“

Siehe S. 15

**Mittwoch, 7. März 2018, 10:30 Uhr  
Audimax**



## **The opening hours are**

Sunday	March 4	15:00 – 16:00
Monday	March 5	10:00 – 16:00
Tuesday	March 6	10:00 – 16:00
Wednesday	March 7	10:00 – 16:00
Thursday	March 8	10:00 – 16:00
Friday	March 9	10:00 – 12:00

The organisers, staff of the conference desk, and the student assistants will be identifiable by coloured name tags and Ø-T-shirts. Please contact them if you have any questions.

## **Message Board**

All alterations of the scientific programme and other important information for participants (e.g. cancellation of lectures, changing of lecture rooms etc.) will be announced on a message board near the conference office and via the homepage <http://erlangen18.dpg-tagungen.de>.

## **App for DPG Spring Meetings**

Download the DPG Spring Meeting App for Android or iOS and create your own conference programme. In addition to the scientific programme, the app also provides information about the supporting programme and supplies you with relevant information about the venue and conference office. Take a look in the AppStore or PlayStore for „DPG Spring Meetings“ and install the free app!

## **Presentation**

Scientific presentations will be held either orally or by poster and will be given in English or German. All plenary talks will be given in English.

All lecture halls and seminar rooms are equipped with projectors, aspect ratio 4:3, as well as computers. We ask you to upload your presentation prior to the session start from a USB stick in PDF or PowerPoint 2010 format. Alternatively, you may connect your own laptop via VGA. All lecture halls will be opened 30 minutes prior to the lecture. Speakers are requested to be in the lecture hall at least 15 minutes prior to the start of the session, reporting to the chairperson of the session as well as the technical staff to ensure the laptops handshake with the projectors and to receive a brief introduction to the equipment in the lecture hall.

If you need other presentation facilities, please ask for

availability at the information desk as soon as you arrive at the conference.

Usually, presentations will have the following durations. For exact information, please refer to your division.

- Contributed talks are 15 minutes including discussion and speaker change  
(12 min talk + 3 min discussion/speaker change)
- Invited talks are 30 minutes including discussion and speaker change  
(25 min talk + 5 min discussion/speaker change)
- Plenary presentations are 45 minutes without discussion

## **Poster Presentation**

The poster sessions will take place in the Orangerie, Re-doutensaal and in the two exhibition tents, directly behind the Kollegienhaus in the Schlossgarten.

The poster boards will be marked with the number according to the scientific programme. Authors are asked to mount their poster before their session. Each poster should display its identification number according to the scientific programme and should be no larger than 90 cm x 120 cm (DIN A0, portrait).

For the mounting of the poster please use the provided material at the poster frame or contact the available student staff. The presenting authors should be at hand for discussion at their poster during at least half of the poster session.

The posters have to be removed after the session. Any posters remaining on poster boards will be removed and disposed without notice. The conference management accepts no liability for the posters.

## **Wilhelm and Else 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 with 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 6, 2018 at the latest.

For more detailed information refer to <http://erlangen18.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 30,000 young academics were supported by this programme so far.

## **Communication / Internet Access**

WiFi access will be provided throughout the university buildings and those of the university hospital. You will obtain login and password credentials with your registration documents. Eduroam access via your home university is also available. Additionally, a PC with printer will be available at the information desk (K 0.015). Please note that in the buildings belonging to the university hospital, a separate personalised WiFi login-password is required, which can also be found in the conference bag.

## **Coffee and lunch breaks**

Coffee and tea will be served all-day free of charge for participants at various locations in almost all buildings with presentation rooms and in the exhibition tents.

Lunch will be offered at Mensa Langemarckplatz, Lange-  
marckplatz 15, between 11:15 and 14:30. Note that you  
NEED TO BUY VOUCHERS FOR MENSA IN THE KOLLEGIEN-  
HAUS as cash or credit card payment is not accepted by  
Mensa. Vouchers can be bought at the information desk in  
room K0.015. In addition, many restaurants, bakeries and  
snack places can be found close to the conference venue.

## **Annual General Meeting 2018 of the Deutsche Physikalische Gesellschaft**

Date: Monday, March 5, 18:00,  
Kollegienhaus, room K 1.011

The Annual General Meeting of the Deutsche Physikalische Gesellschaft will take place on Monday evening. Members of the DPG are kindly requested to attend the meeting.  
Please bring your membership card.

## **Annual General Meetings of the DPG Divisions and Working Groups**

<b>Division</b>	<b>Date</b>	<b>Time and Allocation</b>	
Atomic Physics (A)	Thursday, March 8	12:45 - 13:45	K 0.011
Short Time-scale Physics and Applied Laser Physics (K)	Wednesday, March 7	15:45 - 16:00	MB HS
Mass Spectrometry (MS)	Thursday, March 8	14:00 - 14:30	R 1.020
Molecular Physics (MO)	Thursday, March 8	12:30 - 13:15	PA 2.150
Plasma Physics (P)	Thursday, March 8	12:00 - 13:00	A 0.112
Quantum Optics and Photonics (Q)	Thursday, March 8	12:45 - 13:30	K 2.013
Environmental Physics (UP)	Monday, March 5	12:45 - 13:45	G 1.011

### **Working Groups**

on Physics and Disarmament (AGA)	Thursday, March 8	18:30 - 19:30	B 0.014
on Information (AGI)	Tuesday, March 6	16:30 - 17:30	B 0.017
on Industry and Business (AIW)	Thursday, March 8	10:00 - 13:00	BC 00.035

### **Cloakroom**

Participants are asked to look carefully after their wardrobe, valuables, laptops and other belongings. You will find secured cloakrooms in Audimax, Kollegienhaus and in the Rudolf-Wöhrl Hörsaal.

The opening hours are

Kollegienhaus (K 0.020):

Sunday	March 4	14:00 – 18:00
Monday	March 5	08:00 – 19:30
Tuesday	March 6	08:00 – 19:30
Wednesday	March 7	08:00 – 19:30
Thursday	March 8	08:00 – 19:30
Friday	March 9	08:00 – 17:30

## Audimax

(wardrobe in the basement, directly opposite the stairs):

Monday	March 5	08:00 – 11:00
Tuesday	March 6	08:00 – 13:00, 17:30 – 22:00
Wednesday	March 7	08:00 – 14:00
Thursday	March 8	08:00 – 11:00, 17:30 – 21:30
Friday	March 9	08:00 – 11:00

## Rudolf-Wöhrl Hörsaal

(turn left after entering the building):

Monday	March 5	13:30 – 16:30
Thursday	March 8	10:00 – 16:30
Friday	March 9	10:00 – 16:30

More public cloakrooms are available in each building.

## Do you know DPG?

Get information about

- DPG offers
- Your support for DPG
- DPG's support for you

Meet us in room K 0.015 of the Kollegienhaus.

# **Social Events**

## **Opening**

Monday, March 5, 8:20, Audimax

The conference will be open officially. All participants are kindly invited.

## **Welcome Evening**

Date: Monday, March 5, 20:00 (19:30 doors open)

On Monday, the Welcome Evening will be held in the Siemens Canteen located in Werner-von-Siemens-Straße 67, 91052 Erlangen (red square), to which all registered participants are kindly invited. Fingerfood and drinks will be served. Do not miss the opportunity to register before the official beginning of the conference and to meet people in an informal atmosphere. Please wear your name tag which you received at the registration.

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## **Festakt – Special Plenary Session with Award Ceremony (partly in German language)**

Am Mittwoch, den 7. März, um 10:30 Uhr findet im Audimax der Festakt mit Preisverleihung und anschliessenden Preisträgervorträgen statt:

### **Musik**

### **Eröffnung**

Prof. Dr. Peter Hommelhoff, Friedrich-Alexander-Universität Erlangen-Nürnberg

Örtlicher Tagungsleiter

### **Begrüßung**

Prof. Dr. Joachim Hornegger

Präsident der Friedrich-Alexander-Universität Erlangen-Nürnberg

### **Begrüßung**

Dr. Florian Janik

Oberbürgermeister der Stadt Erlangen

### **Ansprache**

Prof. Dr. Rolf-Dieter Heuer

Präsident der Deutschen Physikalischen Gesellschaft

## **Musik**

### **Preisverleihung**

#### **Stern-Gerlach-Medaille 2018**

an Prof. Dr. Karsten Danzmann, Max-Planck-Institut für Gravitationsphysik und Leibniz Universität Hannover

#### **Max-Planck-Medaille 2018**

an Prof. Dr. Dr. h.c. mult. J. Ignacio Cirac, Max-Planck-Institut für Quantenoptik in Garching und Technische Universität München

#### **Herbert-Walther-Preis 2018**

an Prof. Dr. Gerd Leuchs, Lehrstuhl für Optik am Physikalischen Institut der Friedrich-Alexander-Universität Erlangen-Nürnberg und Max-Planck-Institut für die Physik des Lichts

#### **Dissertationspreis 2018 der Sektion AMOP**

(Der Preisträger wird nach dem SAMOP-Dissertationspreissymposium SYAD ernannt)

## **Musik**

### **Preisvorträge**

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## **Laureates 2018 of the Deutsche Physikalische Gesellschaft**

### **Max-Planck-Medal**

Prof. Dr. Dr. h.c. mult. Ignacio Cirac, Max-Planck-Institut für Quantenoptik in Garching and Technische Universität München

### **Stern-Gerlach-Medal**

Prof. Dr. Karsten Danzmann, Max-Planck-Institut für Gravitationsphysik and Leibniz Universität Hannover

### **Walter-Schottky-Prize**

Prof. Dr. Sascha Schäfer, Carl von Ossietzky Universität Oldenburg

### **Gaede-Prize**

Assoc. Prof. Gareth S. Parkinson, PhD, Institut für Angewandte Physik, Technische Universität Wien, Austria

**Gustav-Hertz-Prize**

Dr. Lavinia Heisenberg, ETH Zurich, Switzerland

**Hertha-Sponer-Prize**

Dr. Karin Everschor-Sitte, Johannes Gutenberg-Universität Mainz

**Georg-Simon-Ohm-Prize**

Toni Hache, M.Sc., Helmholtz-Zentrum Dresden-Rossendorf

**Robert-Wichard-Pohl-Prize**

Prof. Dr. Hartmut Wiesner, Ludwig-Maximilian-University of Munich

**Georg-Kerschensteiner-Preis**

Lutz Schäfer, Gesamtschule Gießen-Ost

**Max-Born-Prize**

Prof. Dr. Angel Rubio, Max-Planck-Institute for the Structure and Dynamics of Matter and Universität Hamburg

**Gentner-Kastler-Prize**

Laureate was not determined at the time of printing

**Herbert-Walther-Prize**

Prof. Dr. Gerd Leuchs, Lehrstuhl für Optik am Physikalischen Institut der Friedrich-Alexander-Universität Erlangen-Nürnberg und Max-Planck-Institut für die Physik des Lichts

**DPG-Technologietransferpreis**

Karlsruher Institut für Technologie (KIT), Institut für Nanotechnologie und Innovations- und Relationsmanagement sowie Nanoscribe GmbH, Eggenstein-Leopoldshafen

**Schülerinnen- und Schülerpreis**

44. International PhysikOlympiade in Kopenhagen (DK)

Pascal Reeck, Neukieritzsch

Christian Schmidt, Dresden

Konstantin Schwark, Isseroda

Markus Zetto, Spaichingen

Maurice Zeuner, Jena

**Schülerinnen- und Schülerpreis**

30<sup>th</sup> International Young Physicists' Tournament (IYPT 2017) in Singapur

Waleed El-Kishawi, Schwelm

Sebastian Friedl, Bayreuth

Birk Magnussen, Kassel

Raymond Mason, München

Auguste Medert, Langenau

## **Public Evening Talks**

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

### **Public Evening Lecture**

Tuesday, March 6, 20:00, Audimax

Prof. Dr. Vahid Sandoghdar, will speak about

„Physik und Medizin: von einzelnen Atomen im Vakuum zu einzelnen Proteinen in lebenden Zellen“

### **Lise-Meitner-Lecture**

Thursday, March 8, 18:30, Audimax

Prof. Dr. Nicola Spaldin, ETH Zurich, Switzerland, will speak about

„From Materials to Cosmology: Studying the early universe under the microscope“

### **Max-von-Laue-Lecture**

Thursday, March 8, 20:00, Audimax

Prof. Dr. Paul G. Richards , will speak about

„Max-von-Laue Lecture: Scientific Work in Support of Bans on Nuclear Testing: Lessons for Science Advice“

### **SAMOP Dissertation Prize 2018**

Tuesday, March 6, 10:30 – 12:30, Audimax

Talks by the four finalists will be given at this symposium. Right after the symposium, the awardee will be selected by the prize committee.

### **jDPG Tower building contest – Hoch hinaus!**

The time has come to show how well theories perform in practice and teams can work together. The jDPG challenges you to a tower building contest! Who builds the highest tower with given materials – wins. It's simple as that... or is it?

The “jDPG Tower building contest” will start on Tuesday, March 6, 10:00 – directly after the plenary talks – and will take place in the foyer of the Audimax. All interested persons are welcome.

## **EinsteinSlam**

Tuesday, March 6, 20:00, Audimax

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. More information here: [www.einstein-slam.de](http://www.einstein-slam.de).

## **jDPG Pub Crawl**

The jDPG offers a pub crawl on Wednesday, March 7. Meeting Point: 19:00, Schlossplatz. Participants need to register beforehand. You can find the sign-up sheets at the information desk.

## **AIW Industry Day (in German Language)**

The AIW Industry Day will take place Thursday, March 8, from 14:30 to 18:00 in BC 00.035. Further information can be found at <http://erlangen18.dpg-tagungen.de/veranstaltung/industrietag.html> and on page 49 in this issue.

## **Exhibition of Scientific Instruments and Literature**

From Tuesday, March 6, to Thursday, March 8, there will be an exhibition of scientific instruments and literature in two tents placed in the Schlossgarten right behind the Kollegienhaus. Several companies will present their products; see the list of exhibitors at the end of this booklet. Opening hours are from 09:00 to 17:00. All conference participants are welcome to attend the exhibition. The entrance is free.

## **Lab Tours**

On Thursday, March 8, 12:00 - 14:00 and Friday, March 9, 16:00 - 18:00, there will be Lab Tours to the Max Planck Institute for the Science of Light. The number of participants is limited. Participants need to register beforehand. You can find the sign-up sheets at the information desk.

## **Liability Exclusion**

Participants are asked to look carefully after their wardrobe, valuables, laptops and other belongings. There can be no liability assumed.

## 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 organisers and the local secretary want to thank the following institutions for supporting the conference:

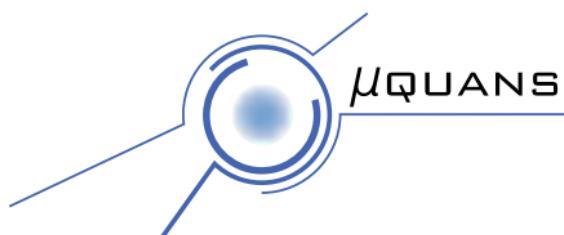
- Wilhelm and Else Heraeus Foundation, Hanau
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and all staff who made the success of the conference possible.



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# Synopsis of the Daily Programme

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**Sunday, March 4, 2018**

## Working Group „Young DPG“ (AKjDPG)

### Tutorials

- AKjDPG 1.1 16:00 – 16:45 K 1.011  
Introduction into physics of Wendelstein 7-X  
•*Sergey Bozhenkov, W7-X team*
- AKjDPG 1.2 16:55 – 17:40 K 1.011  
What's up in complex/dusty plasmas?  
•*Dietmar Block*
- AKjDPG 2.1 16:00 – 16:45 K 1.016  
An Introduction to Quantum Computers  
•*Norbert Schuch*
- AKjDPG 2.2 16:55 – 17:40 K 1.016  
The Quantum Way of Doing Computations  
•*Rainer Blatt*
- AKjDPG 3.1 16:00 – 16:45 K 2.016  
Molekülphysik – ein Tutorial  
•*Gereon Niedner-Schatteburg*
- AKjDPG 3.2 16:55 – 17:40 K 2.016  
Controlled molecules to investigate ultrafast  
chemical dynamics in the molecular frame  
•*Sebastian Trippel*

### Sessions

- AKjDPG 1 16:00 – 17:40 K 1.011  
Tutorial Plasma Physics
- AKjDPG 2 16:00 – 17:40 K 1.016  
Tutorial Quantum Computing
- AKjDPG 3 16:00 – 17:40 K 2.016  
Tutorial Molecular Physics

# Monday, March 5, 2018

Mon

## Conference Opening

08:20 B Audimax

## Plenary Talks

- PV I 08:30 – 09:15 B Audimax  
Learning and artificial intelligence in the quantum domain  
•*Hans J. Briegel*
- PV II 09:15 – 10:00 B Audimax  
On the road towards an Optical Nuclear Clock:  
What do we know about the elusive 229-Thorium isomer ?  
•*Peter G. Thirolf*

## PhD-Symposium (SYPS)

### Invited Talks

- SYPS 1.1 14:00 – 14:30 RW HS  
Floquet engineering of interacting quantum gases in optical lattices  
•*André Eckardt*
- SYPS 1.2 14:30 – 15:00 RW HS  
Experiments on driven quantum gas and surprises  
•*Cheng Chin*
- SYPS 1.3 15:00 – 15:30 RW HS  
Exploring 4D Quantum Hall Physics with a 2D Topological Pumps  
•*Oded Zilberberg, Michael Lohse, Christian Schweizer, Immanuel Bloch, Hannah Price, Yaakov Kraus, Sheng Huang, Mohan Wang, Kevin Chen, Jonathan Guglielmon, Mikael Rechtsman*
- SYPS 1.4 15:30 – 16:00 RW HS  
Floquet Discrete Time Crystals in a Trapped-Ion Quantum Simulator  
•*Guido Pagano, Jiehang Zhang, Paul Hess, Antonis Kyprianidis, Patrick Becker, Jacob Smith, Aaron Lee, Norman Yao, Tobias Grass, Alessio Celi, Maciej Lewenstein, Christopher Monroe*

## Session

SYPS 1 14:00 – 16:00 RW HS  
PhD-Symposium: Floquet Physics – how time-periodic systems can make a difference

## Atomic Physics Division (A)

### Invited Talks

- A 2.1 10:30 – 11:00 K 1.011  
Phase measurement and control with attosecond self-probing spectroscopy  
•*Michael Krüger*
- A 2.2 11:00 – 11:30 K 1.011  
Molecular Orbital Imprint in Laser-Driven Electron Recollision  
*Felix Schell, Timm Bredtmann, Claus Peter Schulz, Serguei Patchkovskii, Marc Vrakking,*  
•*Jochen Mikosch*
- A 3.1 10:30 – 11:00 K 1.016  
Segmented ion traps with integrated solenoids for scalable microwave based QIP  
•*Michael Johanning, Timm F. Gloer, Peter Kauffmann, Hendrik Siebeneich, Christof Wunderlich*
- A 8.1 14:00 – 14:30 K 1.011  
Attosecond timing with spectral resolution near resonances, and new opportunities with high-repetition rate attosecond sources  
•*Anne Harth*
- A 8.2 14:30 – 15:00 K 1.011  
Towards attosecond pump-probe experiments at high repetition rates  
•*Tobias Witting, Federico Furch, Felix Schell, Peter Susnjar, Carmen Menoni, Chih-Hsuan Lu, Andy Kung, Claus-Peter Schulz, Marc J.J. Vrakking*
- A 9.1 14:00 – 14:30 K 1.016  
A ppb measurement of the antiproton magnetic moment  
•*C. Smorra, S. Sellner, M. Borchert, J. A. Harrington, T. Higuchi, H. Nagahama, A. Mooser, G. Schneider, M. Bohman, K. Blaum, Y. Matsuda, C. Ospelkaus, W. Quint, J. Walz, Y. Yamazaki, S. Ulmer*

A 9.2	14:30 – 15:00	K 1.016
Towards laser cooling of atomic anions		
• <i>Alban Kellerbauer</i>		
A 13.1	16:15 – 16:45	K 1.011
Quantum teleportation via electron-exchange collisions		
• <i>Bernd Lohmann, Karl Blum, Burkhard Langer</i>		
A 13.2	16:45 – 17:15	K 1.011
Probing the forces of blackbody radiation and dark energy with matter waves		
• <i>Philipp Haslinger, Viktoria Xu, Matt Jaffe, Osip Schwartz, Paul Hamilton, Benjamin Elder, Justin Khouri, Matthias Sonnleitner, Monika Ritsch-Marte, Helmut Ritsch, Holger Müller</i>		
A 14.1	16:15 – 16:45	K 1.016
Collinear Laser Spectroscopy for High Voltage Metrology at the 1 ppm accuracy level		
• <i>Jörg Krämer, Kristian König, Christopher Gepert, Phillip Imgram, Bernhard Maaß, Johann Meisner, Ernst W. Otten, Stephan Passon, Tim Ratajczyk, Johannes Ullmann, Wilfried Nörterhäuser</i>		
A 16.1	16:15 – 16:45	K 2.016
Halo states in helium dimers/trimers		
• <i>Reinhard Doerner, Maksim Kunitski, Stefan Zeller, Lothar Schmidt, Till Jahnke, Markus Schöffler, Dörte Blume, Jörg Voitsberger, Florian Trinter, Anton Kalinin</i>		

### Sessions

A 1	10:30 – 12:00	K 0.011
Cold atoms I – Rydbergs		
A 2	10:30 – 12:30	K 1.011
Attosecond Science I		
A 3	10:30 – 12:00	K 1.016
Precision Spectroscopy I – trapped ions		
A 4	10:30 – 12:15	K 2.013
Ultracold Plasmas and Rydberg Systems I		
A 5	10:30 – 12:00	K 2.019
Cold atoms II – interactions		

A 6	14:00 – 15:30	K 0.011
	Cold atoms III – optical lattices	
A 7	14:00 – 15:45	K 0.023
	Laser Development and Applications	
A 8	14:00 – 15:45	K 1.011
	Attosecond Science II	
A 9	14:00 – 15:45	K 1.016
	Precision Spectroscopy II – trapped ions	
A 10	14:00 – 16:15	K 2.016
	Bose-Einstein Condensation	
A 11	14:00 – 15:45	PA 2.150
	X-Ray and XUV Spectroscopy	
A 12	16:15 – 17:30	K 0.011
	Cold atoms IV – topological systems	
A 13	16:15 – 18:00	K 1.011
	Fundamentals	
A 14	16:15 – 17:45	K 1.016
	Precision Spectroscopy III – trapped ions	
A 15	16:15 – 17:30	K 2.013
	Ultracold Plasmas and Rydberg Systems II	
A 16	16:15 – 17:45	K 2.016
	Atomic Clusters I	
A 17	16:15 – 17:45	K 2.019
	Atoms in external fields	
A 18	16:15 – 17:45	PA 2.150
	Ultrafast Spectroscopy with XUV	

## Short Time-scale Physics and Applied Laser Physics Division (K)

### Invited Talks

K 1.1	14:00 – 14:40	MB HS
	Abklingzeit, Zufall und Information	
	•Rudolf Germer	

K 2.1	16:15 – 16:45 MB HS Leistungsfähigkeit und Entwicklungsrichtungen moderner Bildsensoren und Kamerasyseme • <i>Gerhard Holst</i>
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**Sessions**

K 1	14:00 – 15:55 MB HS Optical Methods – EUV and x-ray Sources
K 2	16:15 – 17:45 MB HS Optical Methods – Light and Radiation Sources

**Molecular Physics Division (MO)****Invited Talks**

MO 3.1	10:30 – 11:00 PA 2.150 Electronic structure and relaxation of solvated organic molecules studied by time-resolved photoelectron spectroscopy • <i>Johan Hummert, Geert Reitsma, Nicola Mayer, Evgenii Ikonnikov, Martin Eckstein, Oleg Kornilov</i>
MO 5.1	14:00 – 14:30 PA 2.150 Theoretical soft X-ray spectroscopy of transition metal compounds: A multi-reference wave function approach • <i>Sergey I. Bokarev</i>
MO 5.5	15:15 – 15:45 PA 2.150 Tracing the spatial and electronic structure of excited molecules using X-ray FEL and HHG light • <i>Kirsten Schnorr</i>
MO 8.1	16:15 – 16:45 PA 2.150 Measurement of femtosecond dynamics in HCl molecules with THz streaking • <i>Katharina Wenig, Marek Wieland, Sophie Walther, Arne Baumann, Anastasios Dimitriou, Mark Prandolini, Oliver Schepp, Ivette Bermudez Macias, Malte Sumfleth, Nikola Stojanovic, Stefan Düsterer, Juliane Röntsch-Schulenburg, Markus Drescher, Ulrike Fröhling</i>

## Sessions

MO 1	10:30 – 12:30	K 1.011
Attosecond Science I		
MO 2	10:30 – 12:30	PA 1.150
Biology Related Molecules		
MO 3	10:30 – 12:30	PA 2.150
Photoelectron Spectroscopy		
MO 4	14:00 – 15:45	PA 1.150
Photochemistry		
MO 5	14:00 – 15:45	PA 2.150
X-Ray and XUV Spectroscopy		
MO 6	16:15 – 17:45	K 2.016
Atomic Clusters I		
MO 7	16:15 – 17:45	PA 1.150
High Resolution Spectroscopy		
MO 8	16:15 – 17:45	PA 2.150
Ultrafast Spectroscopy with XUV		

## Mass Spectrometry Division (MS)

### Invited Talks

MS 1.1	10:30 – 11:00	R 1.020
An Improved Value of the Atomic Mass of the Proton		
• <i>Florian Köhler-Langes</i>		
MS 2.1	14:00 – 14:30	R 1.020
Production, Separation and Implantation of $^{163}\text{Ho}$ for Neutrino Mass Measurements		
• <i>Tom Kieck, Holger Dorrer, Christoph E. Dülmann, Klaus Eberhardt, Lisa Gamer, Christian Enss, Loredana Gastaldo, Clemens Hassel, Ulli Köster, Christoph Mokry, Jörg Runke, Andreas Türler, Klaus Wendt</i>		
MS 3.1	16:15 – 16:45	R 1.020
Direkte Massenmessungen der schwersten Elemente		
• <i>Michael Block</i>		

**Sessions**

MS 1	10:30 – 12:00	R 1.020
Precision Mass Spectrometry 1		
MS 2	14:00 – 15:30	R 1.020
Laser Assisted Mass Spectrometry		
MS 3	16:15 – 17:15	R 1.020
Precision Mass Spectrometry 2		

**Plasma Physics Division (P)****Invited Talks**

P 2.1	10:30 – 11:00	KI 1.174
Key Features of Reactive High Power Impulse Magnetron Sputtering		
• <i>Daniel Lundin</i>		
P 4.1	14:00 – 14:30	KI 1.174
High-resolution spectroscopic and electrical diagnostics of barrier discharges		
• <i>Tomas Hoder</i>		
P 6.1	16:15 – 16:45	KI 1.174
Collisionless damping in the spectra of active plasma resonance spectroscopic probes		
• <i>Jens Oberrath</i>		

**Sessions**

P 1	10:30 – 13:00	A 0.112
Helmholtz Graduate School I – Theory		
P 2	10:30 – 12:30	KI 1.174
Low Pressure Plasmas I		
P 3	14:00 – 16:00	A 0.112
Plasma Wall Interactions I / Astrophysical Plasmas		
P 4	14:00 – 16:00	KI 1.174
Atmospheric Pressure Plasmas I		
P 5	16:15 – 17:55	A 0.112
Helmholtz Graduate School II		

P 6 16:15 – 17:45 KI 1.174  
Codes and Modelling

## Quantum Optics and Photonics Division (Q)

### Sessions

- Mon
- |      |   |         |
|------|---|---------|
| Q 1  | 10:30 – 12:00                                   | K 0.011 |
|      | Cold atoms I – Rydbergs                         |         |
| Q 2  | 10:30 – 12:30                                   | K 0.016 |
|      | Quantum Optics I                                |         |
| Q 3  | 10:30 – 12:45                                   | K 0.023 |
|      | Ultrashort Laser Pulses                         |         |
| Q 4  | 10:30 – 12:30                                   | K 1.013 |
|      | Matter Wave Optics I                            |         |
| Q 5  | 10:30 – 12:00                                   | K 1.016 |
|      | Precision Spectroscopy I – trapped ions         |         |
| Q 6  | 10:30 – 12:30                                   | K 1.019 |
|      | Quantum Information<br>(Concepts and Methods) I |         |
| Q 7  | 10:30 – 12:30                                   | K 1.020 |
|      | Quantum Information (Quantum Computing)         |         |
| Q 8  | 10:30 – 12:15                                   | K 2.013 |
|      | Ultracold Plasmas and Rydberg Systems I         |         |
| Q 9  | 10:30 – 12:00                                   | K 2.019 |
|      | Cold atoms II – interactions                    |         |
| Q 10 | 10:30 – 12:30                                   | K 2.020 |
|      | Quantum Gases (Bosons) I                        |         |
| Q 11 | 14:00 – 15:30                                   | K 0.011 |
|      | Cold atoms III – optical lattices               |         |
| Q 12 | 14:00 – 16:00                                   | K 0.016 |
|      | Quantum Optics II                               |         |
| Q 13 | 14:00 – 15:45                                   | K 0.023 |
|      | Laser Development and Applications              |         |
| Q 14 | 14:00 – 15:45                                   | K 1.016 |
|      | Precision Spectroscopy II – trapped ions        |         |

Q 15	14:00 – 16:00	K 1.019
	Quantum Information (Concepts and Methods) II	
Q 16	14:00 – 15:45	K 1.020
	Quantum Information and Simulation	
Q 17	14:00 – 16:15	K 2.016
	Bose-Einstein Condensation	
Q 18	14:00 – 16:00	K 2.020
	Quantum Gases (Bosons) II	
Q 19	16:15 – 17:30	K 0.011
	Cold atoms IV – topological systems	
Q 20	16:15 – 17:45	K 0.016
	Quantum Optics III	
Q 21	16:15 – 17:45	K 0.023
	Optomechanics I	
Q 22	16:15 – 17:45	K 1.013
	Matter Wave Optics II	
Q 23	16:15 – 17:45	K 1.016
	Precision Spectroscopy III – trapped ions	
Q 24	16:15 – 17:45	K 1.020
	Quantum Information (Solid State Systems)	
Q 25	16:15 – 18:00	K 1.022
	Quantum Gases (Fermions) I	
Q 26	16:15 – 17:30	K 2.013
	Ultracold Plasmas and Rydberg Systems II	
Q 27	16:15 – 17:45	K 2.020
	Quantum Gases (Bosons) III	

## Environmental Physics Division (UP)

### Invited Talks

UP 2.1	10:45 – 11:15	G 1.011
	Remote Sensing of Greenhouse Gases from Ground and Space	
	•André Butz	

UP 4.2	14:15 – 14:45 G 1.011 The response of the stratospheric circulation to climate change • <i>Hella Garny</i>
<b>Sessions</b>	
UP 1	10:30 – 10:45 G 1.011 Begrüßung
UP 2	10:45 – 12:30 G 1.011 Atmosphere – trace gases, Methods – remote sensing
UP 3	12:45 – 13:45 G 1.011 Mitgliederversammlung mit Mittagsimbiss
UP 4	14:00 – 14:45 G 1.011 Climate modelling
UP 5	14:45 – 17:30 G 1.011 Atmosphere – trace gases, aerosols; Methods – measurement techniques

## Working Group on Energy (AKE)

### Invited Talks

AKE 1.1	10:30 – 11:00 B 0.014 Strom und Gas aus der Wüste als Option für eine globale Energiewende • <i>Michael Düren</i>
AKE 1.2	11:00 – 11:30 B 0.014 Aquifer thermal energy storage systems ensuring continuous cooling in arid climates compared to applications in Europe • <i>Felina Schütz, Gerd Winterleitner, Christian Wenzlaff, Ernst Huenges</i>
AKE 2.1	11:30 – 12:00 B 0.014 Wärmewende weltweit: Mit solider Physik kann das gelingen • <i>Wolfgang Feist</i>
AKE 2.2	12:00 – 12:30 B 0.014 Die Rolle der Fernwärme bei der Energie- und Wärmewende • <i>Manuel Rink</i>

AKE 3.1	14:00 – 14:30	B 0.014
CETCH me if you can – Bringing inorganic carbon into life with synthetic CO <sub>2</sub> fixation • <i>Tobias Erb</i>		
AKE 4.1	14:30 – 15:00	B 0.014
Solid State Photoelectrochemical Devices for Artificial Photosynthesis: State-of-the-Art and Perspectives • <i>Roel Van de Krol</i>		
AKE 5.1	15:00 – 15:30	B 0.014
Current developments and perspectives for polymer-based and metal-halide perovskite solar cells • <i>Thomas Kirchartz</i>		
AKE 6.1	15:30 – 16:00	B 0.014
(K)eine Wende ohne Bioenergie? – Die Rolle der Biomasse in unserer künftigen Energiewirtschaft • <i>Jürgen Karl</i>		
AKE 7.1	16:15 – 16:45	B 0.014
Neue Entwicklungen in der Windenergieforschung – warum Windenergie ein spannendes Feld für die Physik ist • <i>Stephan Barth</i>		

### Sessions

AKE 1	10:30 – 11:30	B 0.014
Energiewende in the Earth's Solar Belt		
AKE 2	11:30 – 12:30	B 0.014
Energiewende – Konzepte zur Wärmewende		
AKE 3	14:00 – 14:30	B 0.014
Pathways for Biological Photosynthesis and Carbon Fixation		
AKE 4	14:30 – 15:00	B 0.014
Solid State based Artificial Photosynthesis		
AKE 5	15:00 – 15:30	B 0.014
Photovoltaics: Novel Approaches		

AKE 6	15:30 – 16:00	B 0.014
Biomass in a future Energy Supply		
AKE 7	16:15 – 17:45	B 0.014
Wind Energy		

**Annual General Meeting of the  
Deutsche Physikalische Gesellschaft  
(for DPG Members only)**

18:00 K 1.011

**Welcome Evening (for Registered Participants)**

19:30 SIEMENS Canteen Emile

The poster features a 3D rendering of a landscape with blue peaks and green valleys, symbolizing mentorship and guidance. In the top right corner, the DPG logo is displayed with the text "Deutsche Physikalische Gesellschaft". A QR code is located in the top left corner.

# DPG Mentoring- Programm 2018

Jetzt anmelden unter:  
[mentoring.dpg-physik.de](http://mentoring.dpg-physik.de)  
Anmeldeschluss: 30. April 2018

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# Tuesday, March 6, 2018

## Plenary Talks, Evening Talk, Lunch Talk

PV III	08:30 – 09:15	B Audimax
	Rydberg Dipole-Dipole Energy Transfer from 300K to 300µK	
	• <i>Thomas Gallagher</i>	
PV IV	09:15 – 10:00	B Audimax
	The dimer-approach to characterize opto-elec- tronic properties of organic semiconductors	
	• <i>Bernd Engels</i>	
PV V	13:00 – 13:45	K 2.020
	Vom Doktorhut zum Vorstandshemd: Physiker können auch Unternehmer	
	• <i>Wilhelm Kaenders</i>	

Tue

## Symposium SAMOP Dissertation-Prize 2018 (SYAD)

### Invited Talks

SYAD 1.1	10:30 – 11:00	RW HS
	Integrated photonic quantum walks in com- plex lattice structures	
	• <i>Markus Graefe</i>	
SYAD 1.2	11:00 – 11:30	RW HS
	Testing the Quantumness of Atom Trajecto- ries	
	• <i>Carsten Robens</i>	
SYAD 1.3	11:30 – 12:00	RW HS
	Engineering and probing topological bands with ultracold atoms	
	• <i>Nick Fläschner</i>	
SYAD 1.4	12:00 – 12:30	RW HS
	Statistical signatures of many-particle inter- ference	
	• <i>Mattia Walschaers</i>	

### Session

SYAD 1	10:30 – 12:30	RW HS
	SAMOP Dissertation Prize	

## Symposium Klimawandel – was nun? (SYKW)

### Invited Talks

- SYKW 1.1 14:00 – 14:30 RW HS  
Das Ende der Eis-Zeit?  
•*Dirk Notz*
- SYKW 1.2 14:30 – 15:00 RW HS  
Dekarbonisierung des globalen Energiesystems: Optionen und kosteneffiziente Strategien  
•*Thomas Bruckner*
- SYKW 1.3 15:00 – 15:30 RW HS  
Retten die Klimaingenieure die Welt?  
•*Jost Heintzenberg*
- SYKW 1.4 15:30 – 16:00 RW HS  
Anpassung an den Klimawandel: was kommt auf uns zu und wie müssen wir reagieren?  
•*Daniela Jacob*

### Session

- SYKW 1 14:00 – 16:00 RW HS  
Symposium „Klimawandel – was nun?“

## Atomic Physics Division (A)

### Invited Talks

- A 20.1 14:00 – 14:30 K 1.011  
Attosecond Streaking in Dielectrics  
•*L. Seiffert, Q. Liu, S. Zherebtsov, A. Trabattoni, P. Rupp, M. C. Castrovilli, M. Galli, F. Süßmann, K. Wintersperger, J. Stierle, G. Sansone, L. Poletto, F. Frassetto, I. Halfpap, V. Mondes, C. Graf, E. Rühl, F. Krausz, M. Nisoli, T. Fennel, F. Calegari, M. Kling*
- A 20.2 14:30 – 15:00 K 1.011  
Controlling the refraction of ultrashort XUV pulses  
*Lorenz Drescher, Oleg Kornilov, Tobias Witting, Geert Reitsma, Jochen Mikosch, Marc Vrakking, Bernd Schütte*

- A 21.1 14:00 – 14:30 K 1.016  
 High precision hyperfine measurements in bismuth challenge bound-state strong field QED  
*•Rodolfo Sánchez*

- A 23.1 14:00 – 14:30 K 2.019  
 Multiphoton Ionization of Chiral Molecules  
*•Thomas Baumert*

### Sessions

- A 19 14:00 – 15:30 K 0.011  
 Cold atoms V – optical lattices
- A 20 14:00 – 15:45 K 1.011  
 Attosecond Science III
- A 21 14:00 – 15:45 K 1.016  
 Precision Spectroscopy IV – highly charged ions
- A 22 14:00 – 16:00 K 2.016  
 Atomic Clusters II
- A 23 14:00 – 15:45 K 2.019  
 Strong laser fields – I
- A 24 14:00 – 15:45 PA 2.150  
 Cold Molecules and Reactions
- A 25 16:15 – 18:15 Redoutensaal  
 Poster Session I

## Short Time-scale Physics and Applied Laser Physics Division (K)

### Invited Talk

- K 3.1 14:00 – 14:30 MB HS  
 Glass joining by ultra-short pulsed lasers  
*•Kristian Cvecek, Johannes Heberle, Isamu Miyamoto, Michael Schmidt*

### Session

- K 3 14:00 – 16:00 MB HS  
 Laser Systems and Applications

## Molecular Physics Division (MO)

### Invited Talk

- MO 12.1 14:00 – 14:30 PA 2.150  
Towards the study of quantum-state-selected Penning reactions  
*Jonas Grzesiak, Simon Hofsäss, Vivien Behrendt, Frank Stienkemeier, Marcel Mudrich, •Katrin Dulitz*

### Sessions

- MO 9 14:00 – 16:00 K 2.016  
Atomic Clusters II
- MO 10 14:00 – 15:45 K 2.019  
Strong laser fields – I
- MO 11 14:00 – 16:00 PA 1.150  
Theoretical Approaches
- MO 12 14:00 – 15:45 PA 2.150  
Cold Molecules and Reactions
- MO 13 16:15 – 18:15 Orangerie  
Posters 1: Ultrafast Spectroscopy

## Mass Spectrometry Division (MS)

### Invited Talk

- MS 4.1 14:00 – 14:30 R 1.020  
First molecular beam cooled to its lowest quantum states at the Heidelberg Cryogenic Storage Ring  
*•Christian Meyer, Arno Becker, Klaus Blaum, Christian Breitenfeldt, Sebastian George, Jürgen Göck, Manfred Grieser, Florian Grussie, Claude Krantz, Holger Kreckel, Preeti M. Mishra, Oldrich Novotný, Felix Nuesslein, Aodh P. O'Connor, Roland Repnow, Sunny Saurabh, Stefan Schippers, Lutz Schweikhard, Kaija Spruck, Stephen Vogel, Robert von Hahn, Patrick Wilhelm, Andreas Wolf*

### Session

- MS 4 14:00 – 14:45 R 1.020  
New Developments

Tue

## Plasma Physics Division (P)

### Invited Talks

- P 7.1 10:30 – 11:00 A 0.112  
Plasma Edge Physics with 3D Magnetic Boundaries – an Overview  
•*Oliver Schmitz*
- P 8.1 10:30 – 11:00 KI 1.174  
Life in the void: nanoparticle formation in reactive plasmas  
•*Ferdi van de Wetering*
- P 9.1 14:00 – 14:30 A 0.112  
Next generation gases in gas discharge applications.  
•*Christian Franck*
- P 10.1 14:00 – 14:30 KI 1.174  
Self-consistent theory of radiation friction losses in ultraintense laser-plasma interaction  
•*Tatyana Liseykina, Sergey Popruzhenko, Andrea Macchi*

Tue

### Sessions

- P 7 10:30 – 12:40 A 0.112  
Magnetic Confinement I – Helmholtz Graduate School III
- P 8 10:30 – 12:25 KI 1.174  
Complex Plasmas and Dusty Plasmas I
- P 9 14:00 – 16:00 A 0.112  
Atmospheric Pressure Plasmas II
- P 10 14:00 – 16:00 KI 1.174  
Laser Plasmas I
- P 11 16:15 – 18:15 Redoutensaal  
Helmholtz Graduate School – Poster
- P 12 16:15 – 18:15 Redoutensaal  
Magnetic Confinement – Poster
- P 13 16:15 – 18:15 Redoutensaal  
Low Pressure Plasmas – Poster
- P 14 16:15 – 18:15 Redoutensaal  
Astrophysical Plasmas – Poster

## **Quantum Optics and Photonics Division (Q)**

### **Sessions**

Q 28	14:00 – 15:30	K 0.011
	Cold atoms V – optical lattices	
Q 29	14:00 – 16:00	K 0.016
	Quantum Optics and Photonics I	
Q 30	14:00 – 15:30	K 0.023
	Optomechanics II	
Q 31	14:00 – 15:45	K 1.013
	Quantum Effects (QED)	
Q 32	14:00 – 15:45	K 1.016
	Precision Spectroscopy IV – highly charged ions	
Q 33	14:00 – 16:00	K 1.019
	Quantum Information (Concepts and Methods) III	
Q 34	14:00 – 15:45	K 1.020
	Quantum Information (Quantum Communication)	
Q 35	14:00 – 16:15	K 1.022
	Quantum Gases (Fermions) II	
Q 36	14:00 – 15:30	K 2.013
	Ultracold Molecules	
Q 37	14:00 – 16:00	K 2.020
	Quantum Gases (Bosons) IV	
Q 38	16:15 – 18:15	Orangerie
	Poster: Quantum Optics and Photonics I	
Q 39	16:15 – 18:15	Zelt Ost
	Poster: Quantum Optics and Photonics II	
Q 40	16:15 – 18:15	Zelt West
	Poster: Quantum Optics and Photonics III	

## Environmental Physics Division (UP)

### Invited Talks

- UP 6.1 16:30 – 17:00 G 1.011  
 Simple relations for mixing in estuaries  
 •*Hans Burchard*
- UP 7.1 17:30 – 18:00 G 1.011  
 Ice formation and crystallization in mesospheric clouds  
 •*Denis Duft, Mario Nachbar, Thomas Leisner*

### Sessions

- UP 6 16:30 – 17:30 G 1.011  
 Oceanography
- UP 7 17:30 – 18:15 G 1.011  
 Atmosphere – lab studies

## Working Group on Energy (AKE)

### Invited Talks

- AKE 8.1 16:15 – 16:45 RW HS  
 Performance analysis of Lithium-ion-batteries: status and prospects  
 •*Ellen Ivers-Tiffée, Philipp Braun, Michael Weiss*
- AKE 8.2 16:45 – 17:15 RW HS  
 Clean Energy Revolution in Sea Transport  
 •*Christoph Kandziora*
- AKE 9.1 17:15 – 17:45 RW HS  
 Zum optimalen Zubau von Netzkapazität und Erneuerbaren Energien im liberalisierten Strommarkt  
 •*Veronika Grimm*

### Sessions

- AKE 8 16:15 – 17:15 RW HS  
 Energy for Mobility – High Performance Batteries for Vehicles and Clean(er) Marine Transport
- AKE 9 17:15 – 18:15 RW HS  
 Renewable Electricity: Grid and Deployment Aspects in Liberalised Energy Markets

## **Working Group "Young DPG" (AKjDPG)**

### **Session**

AKjDPG 4    12:45 – 13:45    RW HS  
The Future of our Publication System

## **Working Group on Information (AGI)**

### **Invited Talks**

- AGI 2.2    14:30 – 15:00    B 0.017  
OA 2020-DE: Der Nationale Open Access  
Kontaktpunkt  
•*Gernot Deinzer*
- AGI 2.3    15:00 – 15:30    B 0.017  
Das Projekt DEAL: Bundesweite Lizenzierung  
von Angeboten großer Wissenschaftsverlage  
•*Hildegard Schäffler*

### **Sessions**

- AGI 1    12:45 – 13:45    RW HS  
The Future of our Publication System
- AGI 2    14:15 – 16:00    B 0.017  
Open Access: Die Transformation gestalten
- AGI 3    16:30 – 17:30    B 0.017  
Annual General Meeting of the Working Group  
on Information

## **Exhibition of Scientific Instruments and Literature**

09:00 – 17:00    Tents Schlossgarten

## **Evening Talk (Free Entrance)**

- PV VI    18:30 – 19:30    B Audimax  
Physik und Medizin: von einzelnen Atomen im  
Vakuum zu einzelnen Proteinen in lebenden  
Zellen  
•*Vahid Sandoghdar*

## **EinsteinSlam**

20:00                  B Audimax

# Wednesday, March 7, 2018

## Plenary Talks

- PV VII      08:30 – 09:15    B Audimax  
Ultrafast nonlinear optics in the mid-infrared:  
Expanding the realm of optical physics  
•*Aleksei Zheltikov*
- PV VIII     09:15 – 10:00    B Audimax  
Quantum metrology gets real  
•*Konrad Banaszek*

## Special Plenary Session with Prize Ceremony

- 10:30 – 13:10    B Audimax
- PV IX                  B Audimax  
Gravitational Wave Astronomy: Listening to  
the sounds of the dark universe!  
•*Karsten Danzmann*  
(*Laureate of the Stern-Gerlach-Medal 2018*)
- PV X                  B Audimax  
New theoretical challenges in quantum optics  
and quantum information  
•*Ignacio Cirac*  
(*Laureate of the Max-Planck-Medal 2018*)
- PV XI                B Audimax  
Focusing Light  
•*Gerd Leuchs*  
(*Laureate of the Herbert-Walther-Prize 2018*)

Wed

## Atomic Physics Division (A)

### Invited Talk

- A 31.1      14:00 – 14:30    K 2.019  
 $H^2+$  and  $HeH^+$ : Two fundamentally important  
molecules in strong laser fields  
*Philipp Wustelt, Max Möller, A. Max Sayler,*  
•*Gerhard G. Paulus*

**Sessions**

- A 26 14:00 – 15:45 K 0.011  
Ultracold Plasmas and Rydberg systems
- A 27 14:00 – 16:15 K 1.011  
XUV/X-ray Science
- A 28 14:00 – 15:45 K 1.016  
Precision Spectroscopy V – highly charged ions
- A 29 14:00 – 15:30 K 2.013  
Precision Measurements and Metrology  
(Atom Interferometry)
- A 30 14:00 – 15:30 K 2.016  
Atomic Clusters III
- A 31 14:00 – 16:00 K 2.019  
Strong laser fields – II
- A 32 14:00 – 15:45 PA 2.150  
Molecules in Intense Laser Fields
- A 33 16:15 – 18:15 Redoutensaal  
Poster Session II

**Short Time-scale Physics and  
Applied Laser Physics Division (K)****Invited Talk**

- K 4.1 14:00 – 14:30 MB HS  
Experimental Results from the Development  
of a Triggered Vacuum Switch (TVS) at the  
Pohang Accelerator Laboratory (PAL)  
*•Klaus Frank, Wung Hoa Park, Suk Ho An, Byung  
Joon Lee*

**Sessions**

- K 4 14:00 – 15:45 MB HS  
Pulsed Power  
– Laser-Beam Matter Interaction
- K 5 15:45 – 16:00 MB HS  
Annual General Meeting of the Short Time-  
scale Physics and Applied Laser Physics  
Division

K 6            16:15 – 18:15    Orangerie  
Poster

## Molecular Physics Division (MO)

### Invited Talk

MO 16.1    14:00 – 14:30    PA 2.150  
Strong-field ionization of laser-aligned molecules  
•*Jochen Küpper*

### Sessions

MO 14        14:00 – 15:30    K 2.016  
Atomic Clusters III

MO 15        14:00 – 15:45    PA 1.150  
Complex Systems in the Gas Phase

MO 16        14:00 – 15:45    PA 2.150  
Molecules in Intense Laser Fields

MO 17        16:15 – 18:15    Orangerie  
Posters 2: Cold Molecules and Clusters

## Mass Spectrometry Division (MS)

### Invited Talk

MS 5.1        14:00 – 14:30    R 1.020  
Nachweis von Beryllium-10 aus exotischen Zerfällen mit Hilfe von Beschleunigermassenspektrometrie (AMS)  
•*Oliver Forstner, Silke Merchel, Johannes Lachner, IS541 Kollaboration*

### Session

MS 5        14:00 – 15:45    R 1.020  
Accelerator Mass Spectrometry 1

## Plasma Physics Division (P)

### Invited Talk

- P 16.1 14:00 – 14:30 KI 1.174  
Diagnostics and application of reactivity of atmospheric plasmas in studies relevant for plasma medicine  
*•Jan Benedikt, Mohamed Mokhtar Hefny, Gert Willems, Pascal Vogel, Clara Karczewski, Julia Bandow, Petr Lukes*

### Sessions

- P 15 14:00 – 16:05 A 0.112  
Helmholtz Graduate School IV – Plasma Wall Interaction
- P 16 14:00 – 16:00 KI 1.174  
Low Pressure Plasmas II
- P 17 16:15 – 18:15 Zelt Ost  
Atmospheric Pressure Plasmas – Poster
- P 18 16:15 – 18:15 Zelt Ost  
Plasma Wall Interaction I – Poster
- P 19 16:15 – 18:15 Zelt Ost  
Codes and Modelling – Poster
- P 20 16:15 – 18:15 Zelt West  
Plasma Wall Interaction II – Poster
- P 21 16:15 – 18:15 Zelt West  
Laser Plasmas – Poster
- P 22 16:15 – 18:15 Zelt West  
Complex Plasmas and Dusty Plasmas – Poster

## Quantum Optics and Photonics Division (Q)

### Sessions

- Q 41 14:00 – 15:45 K 0.011  
Ultracold Plasmas and Rydberg systems III
- Q 42 14:00 – 16:00 K 0.016  
Quantum Optics and Photonics II

Q 43	14:00 – 16:15	K 0.023	
		Nano-Optics (Single Quantum Emitters)	
Q 44	14:00 – 16:00	K 1.013	
		Quantum Effects (Cavity QED)	
Q 45	14:00 – 15:45	K 1.016	
		Precision Spectroscopy V – highly charged ions	
Q 46	14:00 – 16:15	K 1.019	
		Quantum Information (Concepts and Methods) IV	
Q 47	14:00 – 16:00	K 1.020	
		Quantum Information (Quantum Repeater)	
Q 48	14:00 – 16:15	K 1.022	
		Quantum Gases (Fermions) III	
Q 49	14:00 – 15:30	K 2.013	
		Precision Measurements and Metrology (Atom Interferometry)	
Q 50	14:00 – 16:00	K 2.020	
		Quantum Gases (Bosons) V	
Q 51	16:15 – 18:15	Redoutensaal	
		Poster: Quantum Optics and Photonics IV	

Wed

## Environmental Physics Division (UP)

### Sessions

UP 8	14:00 – 15:45	G 1.011	
		Methods – measurement techniques; Atmosphere – trace gases, mesosphere	
UP 9	16:15 – 18:15	Orangerie	
		Poster session	

## Working Group on Energy (AKE)

### Invited Talks

AKE 10.1	14:00 – 14:30	RW HS	
		Sektorenkopplung – Potenziale und Optionen für die nächste Phase der Energiewende	
		•Cyril Stephanos	

AKE 10.2	14:30 – 15:00	RW HS
CO <sub>2</sub> to Value: Single Step Direct Electrocatalytic Reduction of CO <sub>2</sub> Toward CO and Hydrocarbons		
	•Guenter Schmid	
AKE 11.1	15:00 – 15:30	RW HS
Geothermal energy – from conventional to unconventional resources		
	•Egbert Jolie, Ernst Huenges, David Bruhn	
AKE 12.1	15:30 – 16:00	RW HS
Geophysikalische Untersuchungen von Rohstoffen im Meer – Exploration und Nutzungs-perspektiven		
	•Katrín Schwabenberg	
AKE 13.1	16:15 – 16:45	RW HS
Progress in ITER construction and in the preparations for operation		
	•David J Campbell	
AKE 14.1	16:45 – 17:15	RW HS
The Role of Nuclear Power in the World		
	•Ludger Mohrbach	

### Sessions

AKE 10	14:00 – 15:00	RW HS
Sector Coupling and Production of Chemical Feedstock by Electrocatalytic Reduction of CO <sub>2</sub>		
AKE 11	15:00 – 15:30	RW HS
Geothermal Energy from Unconventional (Volcanic) Resources		
AKE 12	15:30 – 16:15	RW HS
Submarine Energy and Mineral Resources		
AKE 13	16:15 – 16:45	RW HS
Nuclear Fusion – The ITER Project		
AKE 14	16:45 – 17:15	RW HS
Nuclear Fission in the International Context		

# Working Group on Physics and Disarmament (AGA)

## Sessions

AGA 1	15:00 – 16:30	B 0.014
		Nuclear Safeguards
AGA 2	16:30 – 17:30	B 0.014
		Verification and Conventional Systems

## Exhibition of Scientific Instruments and Literature

09:00 – 17:00 Tents Schlossgarten

## jDPG Pub Crawl

19:00 Schlossplatz

Wed

**Deutsche Physikalische Gesellschaft** 

**Industrietag 2018**

**„Physik und Licht“**

im Rahmen der DPG-Jahrestagung an der Universität Erlangen

in Zusammenarbeit mit den Arbeitskreisen

„Chancengleichheit“ und „junge DPG“

Der Industrietag bietet interessante und aktuelle Einblicke in einen Themenbereich, der rasant an Bedeutung zunimmt und auch physikalische Grundlagen zur immer stärkeren Vernetzung von Industrie und Gesellschaft bereit hält: Photonik. Physiker mit ganz unterschiedlichen Kompetenzen und fachlichen Erfahrungen sind traditionell in diesem Bereich stark und breit vertreten.

Im Rahmen des Industrietages werden Physiker über ihre Arbeit mit „Licht“ im weiteren Sinne berichten, wobei die Referenten in ganz unterschiedlichen Unternehmen – DPG-vom etablierten Technologieunternehmen bis zur selbstgegründeten High-Tech-Schmiede – tätig sind.

Insgesamt wird exemplarisch sichtbar, welche beruflichen Perspektiven sich für Physiker in diesem hoch spannenden Bereich ergeben. Im Rahmen einer abschließenden Podiumsdiskussion besteht ausreichend Möglichkeit für Fragen an die Referenten, und zwar auch zu beruflichen Perspektiven im Bereich Photonik. Das anschließende Zusammensein bei „Bier & Brezn“ bietet nicht nur Gelegenheit zu weiteren Fragen, sondern auch zum Knüpfen von Kontakten.

Donnerstag  
8. März 2018  
14:30 – 18:00 Uhr  
Raum BC 00.035

AW

Verbunden  
durch  
Physik

Φ DPG

Φ AKC

# Thursday, March 8, 2018

## Plenary Talks, Evening Talks, Lunch Talk

PV XII	08:30 – 09:15	B Audimax
	From rotons to quantum droplets: Dipolar quantum gases echo He superfluid phenomena	
	• <i>Francesca Ferlaino</i>	
PV XIII	09:15 – 10:00	B Audimax
	Device-independent quantum cryptography	
	• <i>Renato Renner</i>	
PV XIV	13:00 – 13:45	K 2.020
	Erneuerbare Energien und elektrisches Energiesystem – ein Platz für Physiker?	
	• <i>Bernd Utz</i>	

## Symposium Resonant Energy Transfer and Interatomic Coulombic Decay (SYET)

### Invited Talks

SYET 1.1	11:00 – 11:30	RW HS
	The quantum design of photosynthesis	
	• <i>Rienk van Grondelle</i>	
SYET 1.2	11:30 – 12:00	RW HS
	On systems with and without excess energy in environment:	
	ICD and other interatomic mechanisms	
	• <i>Lorenz Cederbaum</i>	
SYET 1.3	12:00 – 12:30	RW HS
	Molecular QED of Resonance Energy Transfer: Pair and Many-Body Theory	
	• <i>Akbar Salam</i>	
SYET 1.4	12:30 – 13:00	RW HS
	The Experimental Investigation of Interatomic/Intermolecular Coulombic Decay	
	• <i>Uwe Hergenhahn</i>	

### Session

SYET 1	11:00 – 13:00	RW HS
	Resonant Energy Transfer and Interatomic Coulombic Decay	

# Symposium Applications and New Trends of Plasmatechnology – An Overview (SYPT)

## Invited Talks

- SYPT 1.1 10:30 – 11:00 M 00.910  
Pseudospark Research in Southern California  
•*Martin Gundersen*
- SYPT 1.2 11:00 – 11:30 M 00.910  
Features of a hollow-cathode discharge in pseudospark switches  
•*Yuri Korolev*
- SYPT 1.3 11:30 – 12:00 M 00.910  
Overview of R&D Activities on Vacuum and Gas Discharges and Their Applications in South Korea  
•*Sang Hoon Nam*
- SYPT 1.4 12:00 – 12:30 M 00.910  
Plasma Stripper, Plasma Window, Plasma Gun as Applications of Discharge Plasmas  
•*Joachim Jacoby*
- SYPT 2.1 14:00 – 14:30 M 00.910  
Plasmaphysical Basics of Vacuum Switching Devices for High Currents and Voltages  
•*Norbert Wenzel*
- SYPT 2.2 14:30 – 15:00 M 00.910  
Discharge inception and breakdown in weakly and strongly electronegative gas in HV switchgear applications  
•*Martin Seeger*
- SYPT 2.3 15:00 – 15:30 M 00.910  
Plasma Technological Research for Electrical Engineering and Medicine  
•*Dirk Uhrlandt*
- SYPT 2.4 15:30 – 16:00 M 00.910  
Progress in Understanding Arc-Electrode Interaction  
•*Jürgen Mentel*

Wed

**Sessions**

- SYPT 1    10:30 – 12:30    M 00.910  
Application and New Trends of Plasmatechnology – Part I
- SYPT 2    14:00 – 16:00    M 00.910  
Application and New Trends of Plasmatechnology – Part II

**Symposium Quantum Coherence  
in Quantum Technology (SYQC)****Invited Talks**

- SYQC 1.1    14:00 – 14:30    RW HS  
The resource theory of quantum coherence  
•*Martin B Plenio*
- SYQC 1.2    14:30 – 15:00    RW HS  
Interferometric visibility and coherence  
•*Andreas Winter*
- SYQC 1.3    15:00 – 15:30    RW HS  
Quantum coherence and interference patterns  
•*Florian Mintert*
- SYQC 1.4    15:30 – 16:00    RW HS  
Experiments on directly measuring quantum coherence and using it for quantum sensing  
•*Chuan-Feng Li*

**Session**

- SYQC 1    14:00 – 16:00    RW HS  
Quantum Coherence in Quantum Technology

**Atomic Physics Division (A)****Invited Talks**

- A 39.1    14:00 – 14:30    K 1.016  
News from the "Proton Radius Puzzle"  
•*Randolf Pohl*

A 40.1	14:00 – 14:30	K 2.019
	Electron vortices	
	<i>Dominik Pengel, Stefanie Kerbstadt, Lars Englert, Tim Bayer, •Matthias Wollenhaupt</i>	
A 40.2	14:30 – 15:00	K 2.019
	Magnetic Quantum Number in Strong Field Ionizaton	
	<i>•Sebastian Eckart, Maksim Kunitski, Martin Richter, Alexander Hartung, Jonas Rist, Florian Trinter, Kilian Fehre, Nikolai Schlott, Kevin Henrichs, Lothar Ph. H. Schmidt, Till Jahnke, Markus Schöffler, Kunlong Liu, Ingo Barth, Jivesh Kaushal, Felipe Morales, Misha Ivanov, Olga Smirnova, Reinhard Dörner</i>	

### Sessions

A 34	10:30 – 12:15	K 0.011
	Cold atoms VI – traps	
A 35	10:30 – 12:15	K 1.022
	Ultracold Atoms I	
A 36	10:30 – 12:00	K 2.013
	Precision Measurements and Metrology (Gravity and Miscellaneous)	
A 37	10:30 – 12:15	PA 2.150
	Clusters IV	
A 38	12:45 – 13:45	K 0.011
	Annual General Meeting of the Atomic Physics division	
A 39	14:00 – 16:00	K 1.016
	Precision Spectroscopy VI – neutrals and ions	
A 40	14:00 – 16:00	K 2.019
	Strong laser fields – III	
A 41	16:15 – 18:15	Orangerie
	Poster Session IIIa	
A 42	16:15 – 18:15	Zelt Ost
	Poster Session IIIb	

# **Short Time-scale Physics and Applied Laser Physics Division (K)**

## **Invited Talks**

K 7.1	10:30 – 11:00 MB HS A global model for radio frequency magnetron sputtering processes • <i>Dennis Engel, Laura Kroll, Ralf Peter Brinkmann</i>
K 7.2	11:00 – 11:30 MB HS The Multipole Resonance Probe as a powerful diagnostic tool for industrial plasma processes • <i>Moritz Oberberg, Stefan Ries, Christian Wölfel, Jens Harhausen, Dennis Pohle, Christian Schulz, Oliver Schmidt, Wladislaw Dobrygin, Ilona Rolfs, Ralf Peter Brinkmann, Peter Awakowicz</i>
K 7.3	11:30 – 12:00 MB HS Prospects for the enhancement of PIAD processes by monitoring of optical thickness and plasma parameters • <i>Jens Harhausen, Rüdiger Foest, Margarita Baeva, Detlef Loffhagen, Olaf Stenzel, Steffen Wilbrandt, Christian Franke, Norbert Kaiser, Ralf Peter Brinkmann</i>
K 7.4	12:00 – 12:30 MB HS Stabilisierung von Rate und Schichtdickenuniformität im IBS-Prozess über adaptiv geregelte Prozessparameter • <i>Florian Carstens, Henrik Ehlers, Detlev Ristau</i>
K 7.5	12:30 – 13:00 MB HS Structural and optical properties of virtual materials • <i>Holger Badorreck, Marco Jupé, Detlev Ristau</i>

## **Session**

K 7	10:30 – 13:00 MB HS Internal Symposium Optic Coatings and Plasma Technology
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## Molecular Physics Division (MO)

### Invited Talks

- MO 18.1 10:30 – 11:00 PA 2.150  
Untersuchungen zur Coulomb-Wechselwirkung bei polyanionischen Metallclustern  
*Madlen Müller, Franklin Martinez, Norman Iwe, Klara Raspe, Steffi Bandelow, Josef Tiggesbäumer, Lutz Schweikhard, Karl-Heinz Meiwes-Broer*

- MO 20.1 14:00 – 14:30 PA 1.150  
Energy and charge transfer processes in helium nanodroplets  
*•Marcel Mudrich*

### Sessions

- MO 18 10:30 – 12:15 PA 2.150  
Clusters IV
- MO 19 12:30 – 13:15 PA 2.150  
Annual General Meeting of the Molecular Physics Devision
- MO 20 14:00 – 15:45 PA 1.150  
Resonant Energy Transfer and Interatomic Coulombic Decay I
- MO 21 14:00 – 15:45 PA 2.150  
Advanced Time-Resolved Spectroscopy
- MO 22 16:15 – 18:15 Zelt West  
Posters 3: Experimental and Theoretical Techniques and High Resolution Spectroscopy

Wed

## Mass Spectrometry Division (MS)

### Invited Talks

- MS 6.1 10:30 – 11:00 R 1.020  
High precision radiocarbon analysis of annual tree-ring samples  
*•Lukas Wacker, Stephanie Arnold, Silvia Bollhalder Lück, Marcus Christl, Hans-Arno Synal*

MS 6.4	11:30 – 12:00	R 1.020
A Gas Ion Source and its extension by Laser Ablation for Online Radiocarbon Analyses		
• <i>Christiane Yeman, Lukas Wacker, Bodo Hattendorf, Marcus Christl, Caroline Welte, Hans-Arno Synal</i>		

### Sessions

MS 6	10:30 – 12:00	R 1.020
Accelerator Mass Spectrometry 2		
MS 7	14:00 – 14:30	R 1.020
Annual General Meeting of the Mass Spectrometry Division		
MS 8	14:30 – 15:30	R 1.020
Accelerator Mass Spectrometry 3		
MS 9	16:15 – 18:15	Redoutensaal
Poster 1		
MS 10	16:15 – 18:15	Orangerie
Poster 2		

## Plasma Physics Division (P)

### Invited Talks

P 23.1	10:30 – 11:00	A 0.112
Advanced Materials for a Damage Resilient Divertor for DEMO		
• <i>Jan Willem Coenen, Johann Riesch, Hanns Gietl, Yiran Mao, Leonard Raumann, Rudolf Neu, Christian Linsmeier</i>		
P 24.1	10:30 – 11:00	KI 1.174
Transient plasma photonic crystals as novel optical devices for high-intensity lasers		
• <i>Götz Lehmann, Karl-Heinz Spatschek</i>		

### Sessions

P 23	10:30 – 12:00	A 0.112
Plasma Wall Interaction II		
P 24	10:30 – 12:00	KI 1.174
Laser Plasmas II		

P 25	12:00 – 13:00	A 0.112
Annual General Meeting of the Plasma Physics Division		
P 26	14:00 – 16:30	A 0.112
Magnetic Confinement II – Helmholtz Graduate School V		
P 27	14:00 – 15:55	KI 1.174
Complex Plasmas and Dusty Plasmas II		

## Quantum Optics and Photonics Division (Q)

### Sessions

Q 52	10:30 – 12:15	K 0.011
Cold atoms VI – traps		
Q 53	10:30 – 12:30	K 0.016
Quantum Optics and Photonics III		
Q 54	10:30 – 12:45	K 0.023
Nano-Optics (Single Quantum Emitters and Plasmonics)		
Q 55	10:30 – 12:30	K 1.013
Quantum Effects		
Q 56	10:30 – 12:30	K 1.019
Quantum Information (Coherence and Entanglement)		
Q 57	10:30 – 12:15	K 1.022
Ultracold Atoms I		
Q 58	10:30 – 12:00	K 2.013
Precision Measurements and Metrology (Gravity and Miscellaneous)		
Q 59	10:30 – 12:45	K 2.020
Quantum Gases (Bosons) VI		
Q 60	12:45 – 13:30	K 2.013
Annual General Meeting of the Quantum Optics and Photonics Division		
Q 61	14:00 – 16:00	K 1.016
Precision Spectroscopy VI – neutrals and ions		

Q 62      16:15 – 18:15    Redoutensaal  
Poster: Quantum Optics and Photonics V

## Working Group on Industry and Business (AIW)

### Invited Talks

- AIW 2.1    14:30 – 15:00    BC 00.035  
Quarzglas für High-End Photonik  
•*Achim Hofmann*
- AIW 2.2    15:00 – 15:30    BC 00.035  
Licht in der Augenheilkunde – abbilden, messen, heilen  
•*Martin Hacker*
- AIW 3.1    16:00 – 16:30    BC 00.035  
Wenn man nicht gegen den Verstand verstößt, kann man zu überhaupt nichts kommen  
•*Michael Mei*
- AIW 3.2    16:30 – 17:00    BC 00.035  
Optische Datenübertragung am Limit?  
•*Stefan Späler*

### Sessions

- AIW 1      10:00 – 13:00    BC 00.035  
AIW-Mitgliederversammlung
- AIW 2      14:30 – 15:30    BC 00.035  
AIW-Industrietag I
- AIW 3      16:00 – 17:00    BC 00.035  
AIW-Industrietag II
- AIW 4      17:00 – 18:00    BC 00.035  
Podiumsdiskussion
- AIW 5      18:00 – 19:00    BC 00.035  
Gemütlicher Ausklang mit Networking bei Bier & Brezn

# Working Group on Physics and Disarmament (AGA)

## Invited Talks

- AGA 3.1 10:00 – 11:00 B 0.014  
The Long Road: From Eisenhower's 1953 "Atoms for Peace" to the IAEA Low Enriched Uranium Bank in Kazakhstan  
•*Tariq Rauf*
- AGA 3.2 11:00 – 12:00 B 0.014  
SILEX Laser Enrichment Technology and Its Proliferation Implications  
•*Ryan Snyder*
- AGA 4.1 14:00 – 15:00 B 0.014  
The North Korean Threat from the US Perspective  
•*David Wright*
- AGA 4.2 15:00 – 16:00 B 0.014  
To be continued? – Was 2017 the Grand Finale for the North Korean Missile Program?  
•*Markus Schiller*
- AGA 5.1 16:30 – 17:30 B 0.014  
Analysen zum Nachweis der nordkoreanischen Nukleartests  
•*Jens Ole Ross, Lars Ceranna, Michaela Frei, Peter Gaebler, Nicolai Gestermann, Ilona Grünberg, Gernot Hartmann, Christoph Pilger, Andreas Bollhöfer, Clemens Schlosser, Andreas Barth*

Wed

## Sessions

- AGA 3 10:00 – 12:30 B 0.014  
Nuclear Nonproliferation
- AGA 4 14:00 – 16:00 B 0.014  
North Korean Crisis 1
- AGA 5 16:30 – 18:30 B 0.014  
North Korean Crisis 2
- AGA 6 18:30 – 19:30 B 0.014  
Annual General Meeting of the Working Group on Physics and Disarmament

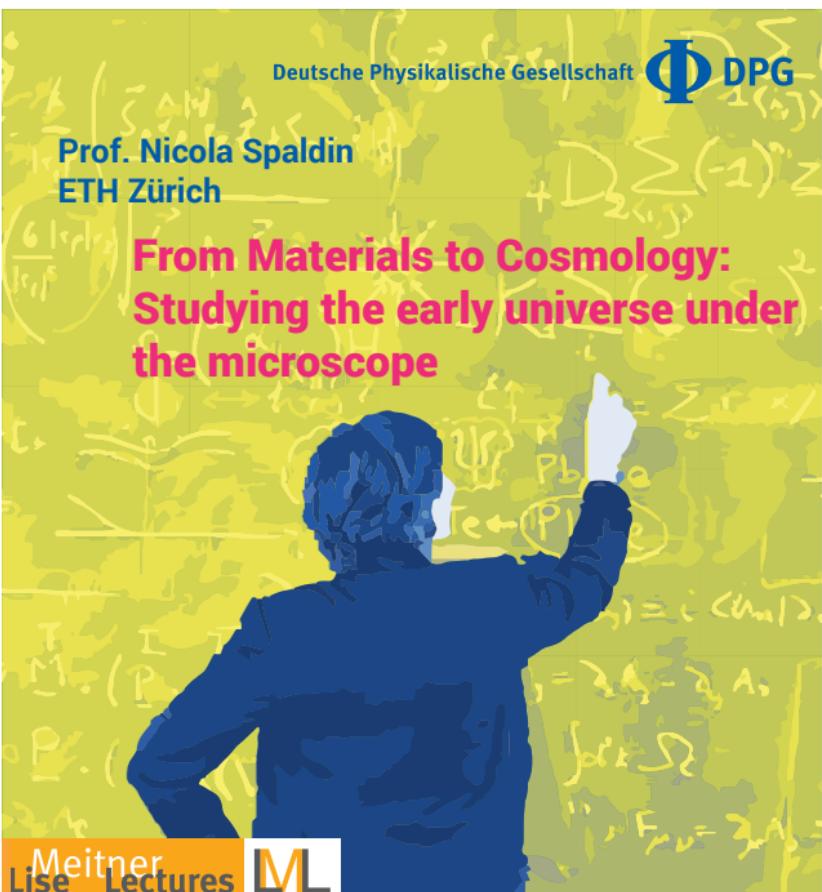
- PV XV      18:30 – 19:30    B Audimax  
Lise-Meitner-Lecture: From Materials to Cosmology: Studying the early universe under the microscope  
•*Nicola Spaldin*
- PV XVI     20:00 – 21:00    B Audimax  
Max-von-Laue Lecture: Scientific Work in Support of Bans on Nuclear Testing: Lessons for Science Advice  
•*Paul G. Richards*

### **Exhibition of Scientific Instruments and Literature**

09:00 – 17:00    Tents Schlossgarten

### **jDPG Pub Crawl**

21:00                Schlossplatz (see p. 19)



Öffentlicher Vortrag  
Friedrich-Alexander-Universität Erlangen-Nürnberg  
Kollegienhaus  
Universitätsstraße 15  
91054 Erlangen

Der Eintritt ist frei.

Donnerstag  
08.03.2018, 18:30 - 19:30 Uhr  
Audimax

Bild Spaldin

[www.lise-meitner-lectures.de](http://www.lise-meitner-lectures.de)

# **Friday, March 9, 2018**

## **Plenary Talks**

- PV XVII      08:30 – 09:15    B Audimax  
Quantum Key Distribution – An Overview  
•*Harald Weinfurter*
- PV XVIII     09:15 – 10:00    B Audimax  
The Role of Spin in the Photo-induced Ultrafast Dynamics of Transition Metal-based Chromophores  
•*James McCusker*

## **Symposium Micromachines (SYMM)**

### **Invited Talks**

- SYMM 1.1    13:30 – 14:00    RW HS  
Some experimental contributions to the study of thermodynamics in quantum systems.  
•*Ian Walmsley*
- SYMM 1.2    14:00 – 14:30    RW HS  
Levitated Nanoparticle Micromachines  
•*Nikolai Kiesel*
- SYMM 1.3    14:30 – 15:00    RW HS  
Autonomous quantum machines and time-keeping  
•*Marcus Huber*
- SYMM 1.4    15:00 – 15:30    RW HS  
An autonomous thermal machine for amplification of coherence  
•*Juan MR Parrondo, Gonzalo Manzano, Ralph Silva*

### **Session**

- SYMM 1      13:30 – 15:30    RW HS  
Micromachines

Fri

# Symposium 25 Years of Recollision Physics (SYRP)

## Invited Talks

- SYRP 1.1 10:30 – 11:00 RW HS  
Attosecond seeding of high energy rescattered electrons  
•*Kenneth Schafer*
- SYRP 1.2 11:00 – 11:30 RW HS  
The molecular selfie – atomic-scale imaging with a single electron  
*Benjamin Wolter, Michael G. Pullen, Anh Thu Lee, Matthias Baudisch, Katharina Doblhoff-Dier, Arne Senftleben, Michael Hemmer, Claus Dieter Schröter, Joachim Ullrich, Robert Moshammer, Stefanie Gräfe, Oriol Vendrell, Chii Dong Lin, Jens Biegert*
- SYRP 1.3 11:30 – 12:00 RW HS  
Multidimensional attosecond spectroscopy  
•*Nirit Dudovich*
- SYRP 1.4 12:00 – 12:30 RW HS  
Recollision-based high-harmonic generation from solids  
•*Giulio Vampa*

## Session

- SYRP 1 10:30 – 12:30 RW HS  
Symposium 25 Years of Recollision Physics

# Atomic Physics Division (A)

## Sessions

- A 43 10:30 – 11:50 K 0.011  
Cold atoms VII – micromachines
- A 44 10:30 – 12:30 K 1.016  
Precision Spectroscopy VII (nuclear systems)
- A 45 10:30 – 12:30 K 1.022  
Ultracold Atoms II
- A 46 10:30 – 12:15 K 2.013  
Precision Measurements and Metrology (Optical Clocks)

## **Molecular Physics Division (MO)**

### **Sessions**

- MO 23      10:30 – 12:00    PA 1.150  
Resonant Energy Transfer and Interatomic Coulombic Decay II
- MO 24      10:30 – 12:15    PA 2.150  
Experimental Techniques

## **Quantum Optics and Photonics Division (Q)**

### **Sessions**

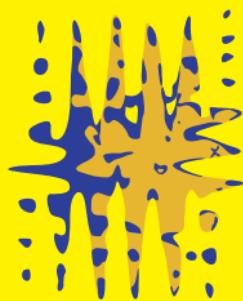
- Q 63      10:30 – 11:50    K 0.011  
Cold atoms VII – micromachines
- Q 64      10:30 – 12:30    K 0.016  
Quantum Optics and Photonics IV
- Q 65      10:30 – 12:15    K 0.023  
Nano-Optics and Biophotonics
- Q 66      10:30 – 12:30    K 1.013  
Quantum Effects (Entanglement and Decoherence)
- Q 67      10:30 – 12:30    K 1.016  
Precision Spectroscopy VII (nuclear systems)
- Q 68      10:30 – 12:30    K 1.019  
Quantum Information (Concepts and Methods) V
- Q 69      10:30 – 11:30    K 1.020  
Post-Deadline Session
- Q 70      10:30 – 12:30    K 1.022  
Ultracold Atoms II
- Q 71      10:30 – 12:15    K 2.013  
Precision Measurements and Metrology (Optical Clocks)

Fri

# Working Group on Physics and Disarmament (AGA)

## Sessions

- |       |  |         |
|-------|--|---------|
| AGA 7 | 09:30 – 10:30                                    | B 0.014 |
|       | Nuclear Disarmament Verification                 |         |
| AGA 8 | 10:30 – 11:30                                    | B 0.014 |
|       | Nonproliferation and Research Reactor Conversion |         |



# 22.

# DEUTSCHE PHYSIKERINNENTAGUNG

German Conference of Women in Physics

**27. – 30.09.2018, Oldenburg**



- Symposium „Topologie in der Physik – von Skyrmionen bis hin zu Schwarzen Löchern“
- Vorträge der Gustav-Hertz-Preisträgerin Lavinia Heisenberg und der Hertha-Sponer-Preisträgerin Karin Everschor-Sitte
- Wissenschaftliche Vorträge und Postersitzung
- Laborführungen
- Veranstaltungen zu Berufs- und Karriereplanung und zur Vereinbarkeit von Familie und Beruf
- Kostenlose Kinderbetreuung
- SchülerInnenprogramm
- Rahmenprogramm mit Stadtführung

Weitere Informationen und Anmeldung unter  
[www.physikerinnentagung.de](http://www.physikerinnentagung.de)



# **Index of Exhibitors Erlangen 2018**

Location: Schlossgarten, Exhibitions Tents west (left) and east (right) close to Kollegienhaus

*Opening Hours Exhibition: Tuesday - Thursday, 9:00 - 17:00*

<b>Exhibitor</b>	<b>Tent</b>	<b>Stand- No.</b>
<b>Agilent Technologies Sales &amp; Services GmbH &amp; Co. KG</b> Lyoner Straße 20, 60528 Frankfurt/M. <i>Vakuumpumpen, Vakuummessgeräte, Lecksucher</i>	West	11
<b>AHF analysentechnik AG</b> Kohlplattenweg 18, 72074 Tübingen <i>Optische Filter und Lichtquellen</i>	West	54
<b>Ametek, TMC GmbH</b> Rudolf-Diesel-Straße 16, 40670 Meerbusch <i>Optische Tische, aktive und passive Schwingungsisolations- systeme</i>	East	30
<b>AMS Technologies AG</b> Fraunhoferstr. 22, 82152 Martinsried <i>AMS Technologies is a leading solution provider and distributor of high-tech components, systems and equipment. Our focus at DPG: active optical components (light sources), passive optical components (fiber-based products, optics, optomechanics), cooling solutions and power electronics.</i>	East	38
<b>attocube systems AG</b> Königinstraße 11 A, Rückgebäude EG, 80539 München <i>Nanopositionierer, Tieftemperatur-Mikroskopie, Kryostaten</i>	West	27
<b>Coherent ROFIN-SINAR Laser GmbH</b> Berzeliusstraße 87, 22113 Hamburg <i>Lasersysteme, Lasermaterialbearbeitungsmaschinen, Strahl- diagnostik und optische Komponenten für Wissenschaft und Industrie</i>	East	37
<b>CryoVac GmbH &amp; Co. KG</b> Heuserweg 14, 53842 Troisdorf <i>Kryostate für optische, elektrische, magnetische Messungen – kundenspezifische Designs, Temperaturmess- und Regelgeräte</i>	West	25

## **Deutsche Forschungsgemeinschaft (DFG)**

**Fachgruppe Physik, Mathematik,  
Geowissenschaften**

53170 Bonn

*Information und Beratung zu den Förderprogrammen der DFG*

**West 01**

## **Edwards Ltd.**

**East 36**

Burgess Hill, West Sussex, RH15 9TW, United Kingdom

*Vakuumpumpen, ölgeschmiert; Vakuumpumpen, trockenverdichtend (Membran-, Scroll-, Schraube-, Wälzkolben); Turbo-molekularpumpen, Öldiffusionspumpen; Ionengetterpumpen, Totaldruck-Messgeräte; Leckdetektoren; Ventile; Bauteile; Abgas-Systeme; Vakuumservice*

## **Hamamatsu Photonics Deutschland GmbH West 21+22**

Arzbergerstraße 10, 82211 Herrsching

*Photomultiplier Tubes & Modules, MCP, Hybriddetektoren, MPPC, MPPC Module und weitere Halbleiterdetektoren*

## **HMW Hauner GmbH & Co. KG West 08**

Gewerbering 36, 91341 Röttenbach

*Metalle, Legierungen, Verbindungen für Forschung und Entwicklung*

## **HORIBA Jobin Yvon GmbH West 09**

Neuhofstraße 9, 64625 Bensheim

*Ihr Partner für instrumentelle Analytik und innovative Spektroskopie*

## **Hositrad Deutschland East 31**

Lindnergasse 2, 93047 Regensburg

*CF, KF, ISO, UHV-Vakuumbauteile, Elektrische Durchführungen, Massenspektrometer, Laser Viewports, UHV Manipulatoren*

## **Hübner GmbH & Co. KG East 45**

Heinrich-Hertz-Straße 2, 34123 Kassel

*Laser Combiner, Laser, DPSS Laser, Diodenlaser, durchstimmbare Laser*

## **Ingenieurbüro Dr. Walter Luhs East 56**

Freiburger Straße 33, 79427 Eschbach

*Pr:YLF Laser, Jod-Spektroskopie, Raman Laser, Praktikumsversuche, Katalog 2018*

## **Institute of Physics Publishing West 04**

Temple Circus, Temple Way, Bristol, BS1 6BE, UK

*Publishers of journals, magazines, community websites*

**ISEG Spezialelektronik GmbH** East 35  
Bautzner Landstraße 23, 01454 Radeberg / Rossendorf  
*Hochspannungsversorgungen, Hochspannungsnetzgeräte, HV-DC/DC-Konverter*

**LASER 2000 GmbH** West 29  
Argelsrieder Feld 14, 82234 Weßling  
*Laser & Strahlquellen, Optik & Optomechanik, Optische Messtechnik, Laserschutz, LWL-/Netzwerktechnik*

**Laser Quantum GmbH** East 39  
Max-Stromeyer-Straße 116, 78467 Konstanz  
*fs ti:sapphire lasers with repetition rates from 80 MHz to 10 GHz, THz-TDS systems, ASOPS engine, pump lasers for ti:sapphire oscillators, high power cw lasers at 532, 660, 1064 nm for laser cooling*

**LEUKOS Ester Technopole** East 53  
37 rue Henri Giffard, 87280 Limoges, France  
*Supercontinuum Laser*

**LIOP-TEC GmbH** West 14  
Industriestraße 4, 42477 Radevormwald  
*Optomechanik, Dye Laser*

**LK-Instruments** East 48  
Welzheimer Straße 49, 71554 Weissach im Tal  
*Elektronische und optische Messtechnik, kundenspezifische Lösungen, Prototypenbau, www.lk-instruments.com*

**LOT-QuantumDesign GmbH** West 03  
Im Tiefen See 58, 64293 Darmstadt  
*Magnetometer, supraleitende Magnetsysteme, Elektronik-Komponenten, CCD-, ICCD, EMCCD-Detektoren, Spektrographen*

**M Squared Lasers Ltd** West 27+28  
West of Scotland Science Park, Maryhill Road,  
Glasgow, G20 0SP, United Kingdom  
*Award winning photonics technology company developing advanced laser platforms (DUV - THz and CW - fs) to further scientific research. M Squared also collaborates with leading universities, institutions and industries globally*

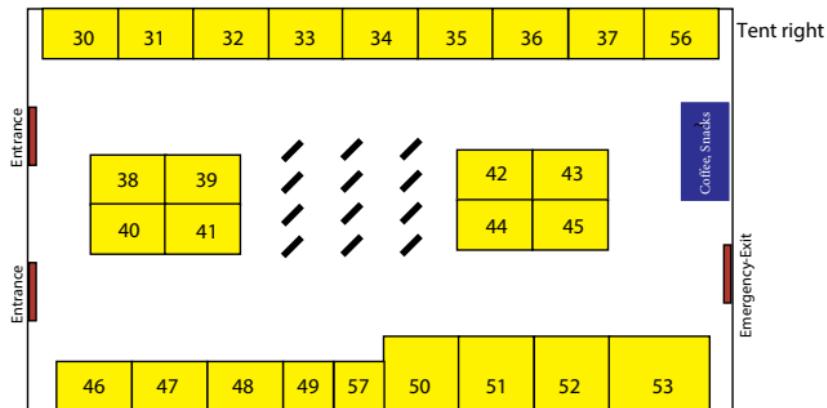
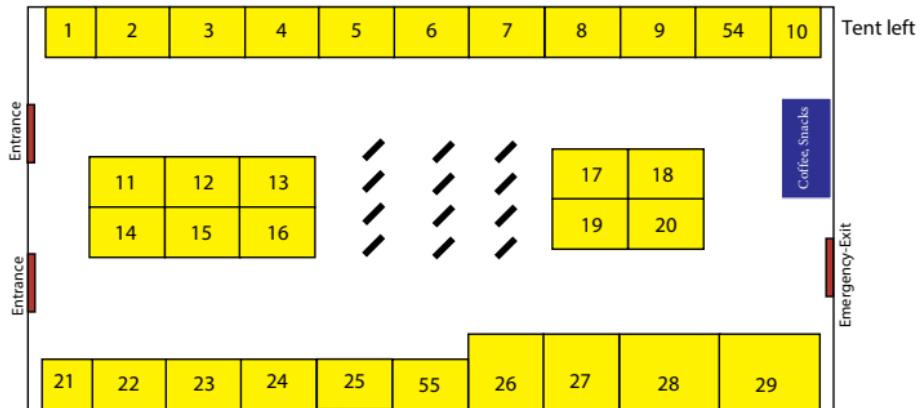
**Menlo Systems GmbH** West 17+19  
Am Klopferspitz 19a, 82152 Martinsried  
*Optical Frequency Combs and Ultrastable CW Lasers for Metrology, Femtosecond Lasers, Microjoule Lasers, Phase Stabilization of Few-Cycle Pulses, Ultrafast Detectors, Terahertz Time Domain Solutions, Antennas and Components*

<b>MG Optical Solutions GmbH</b>	<b>East</b>	<b>57</b>
Industriestraße 23, 86919 Utting/Ammersee		
<i>Laser Servo and Controller, Spectroscopy, DBR-Laser, Wavelength Meter and Spectrum Analyzer</i>		
<b>MOG Labs Europe</b>	<b>West</b>	<b>20</b>
Goethepark 9, 10627 Berlin		
<i>RF-Synthesizer, Cateye-ECD-Laser, ECDL-Controller, Wavemeter, optical amplifier</i>		
<b>MRC Systems GmbH</b>		
<b>Medizintechnische Systeme</b>	<b>East</b>	<b>50</b>
Hans-Bunte-Straße 10, 69123 Heidelberg		
<i>Laser-Strahlstabilisierungen für Strahllagen, schnelle Positionsdetektoren, Laserspiegel-Aktuatoren (0.5 – 4-Zoll-Spiegel), stabilisierte Fasereinkopplung, Shutter, kundenspezifische Lösungen</i>		
<b>Muquans Institut d'Optique d'Aquitaine</b>	<b>East</b>	<b>44</b>
Rue Françoise Mitterrand, 33400 Talence, France		
<i>Quantum sensing, laser-cooled atoms, quantum gravimeter, ultra-stable lasers</i>		
<b>Newport Spectra-Physics GmbH</b>	<b>East</b>	<b>52</b>
Guerickeweg 7, 64291 Darmstadt		
<i>Laser, Oriel Produkte, feinm. Komponenten, motor. Positionierer, Schwingdämpfung</i>		
<b>Owis GmbH Feinmechanische und</b>	<b>West</b>	<b>12</b>
Im Gaisgraben 7, 79219 Staufen i. Br.		
<i>Strahlführungssysteme, Positioniersysteme</i>		
<b>PCO AG</b>	<b>West</b>	<b>18</b>
Donaupark 11, 93309 Kelheim		
<i>pco.panda, pco.dicam, sCMOS-Cameras, High Speed Cameras</i>		
<b>Pfeiffer Vacuum GmbH</b>	<b>West</b>	<b>07</b>
Berliner Straße 43, 35614 Asslar		
<i>Vakuumpumpen und -komponenten</i>		
<b>Physik Instrumente (PI) GmbH &amp; Co. KG</b>	<b>East</b>	<b>42</b>
Auf der Römerstraße 1, 76228 Karlsruhe		
<i>Miniaturantriebe, Hexapod, Nanopositionierung</i>		
<b>Qioptiq Photonics GmbH &amp; Co. KG</b>	<b>West</b>	<b>26</b>
Königsallee 23, 37081 Göttingen		
<i>Die Mikrobank: Das Cage-System für opto-mechanische Präzisionssysteme, Q-Sets: Opto-mechanische Gesamtlösungen für Standard-Probleme im Optiklabor, Präzisionsoptiken, Beschichtung von Optiken (UV-VIS-IR)</i>		

<b>Quantel</b>	<b>West</b>	<b>15</b>
2 Bis avenue du Pacifique, BP 23, 91940 LES ULIS cedex, France		
<i>Laser (fiber laser, Nd:YAG Laser, tunable laser, Laserdioden), pulsed and cw</i>		
<b>qutools GmbH</b>	<b>West</b>	<b>02</b>
Kistlerhofstraße 70 Geb. 88, 81379 München		
<i>Produkte zur Quanteninformationsverarbeitung, z.B. verschränkte Photonenpaarquellen und Time-to-digital converter</i>		
<b>Radiant Dyes Laser Acc. GmbH</b>	<b>East</b>	<b>47</b>
Friedrichstraße 58, 42929 Wermelskirchen		
<i>Dye Laser cw &amp; gepulst, Ti:Sa Laser cw &amp; gepulst, Excimer Laser, Optomechanik, Laserzubehör</i>		
<b>SAES Getters S.p.A.</b>	<b>West</b>	<b>55</b>
Viale Italia, 77, 20020 Lainate (Milan), Italy		
<i>UHV NEG-Pumpen, Alkalimetall-Dispenser, Hochvakuum-pumpen, Getter</i>		
<b>Schäfter + Kirchhoff GmbH</b>		
<b>Optics, Metrology and Photonics</b>	<b>West</b>	<b>06</b>
Kieler Straße 212, 22525 Hamburg		
<i>Faseroptik-Komponenten, Faser-Messtechnik</i>		
<b>SEKELS GmbH</b>	<b>West</b>	<b>10</b>
Dieselstraße 6, 61239 Ober-Mörlen		
<i>Magnetische Werkstoffe und Systeme</i>		
<b>Single Quantum B.V.</b>	<b>West</b>	<b>23</b>
van der Waalsweg 8, 2628CH Delft, The Netherlands		
<i>Single Quantum superconducting nanowire single photon detector</i>		
<b>Sirah Laser- &amp; Plasmatechnik GmbH</b>	<b>East</b>	<b>43</b>
Heinrich-Hertz-Straße 11, 41516 Grevenbroich		
<i>Durchstimmbare Lasersysteme: gepulste ns-/ps Farbstoff-Lasersysteme, cw-Farbstoff-Lasersysteme, gepulste ns- und cw-Ti:Saphir-Lasersysteme, cw-Frequenzverdoppler, Farbstoffe, Optik</i>		
<b>SOLITON Laser- und Meßtechnik GmbH</b>	<b>East</b>	<b>34</b>
Talhofstraße 32, 82205 Gilching		
<i>Laser, optische Messtechnik, Sensoren, Laserzubehör</i>		
<b>Springer-Verlag GmbH</b>	<b>East</b>	<b>49</b>
Tiergartenstraße 17, 69121 Heidelberg		
<i>Wissenschaftliche Bücher und Zeitschriften</i>		

<b>Stable Laser Systems Inc.</b>	<b>East</b>	<b>46</b>
4946 63rd St, Boulder, CO 80301, USA		
<i>Stable Laser Systems sells hardware and systems for laser frequency stabilization</i>		
<b>Swabian Instruments GmbH</b>	<b>West</b>	<b>05</b>
Frankenstraße 39, 71701 Schwieberdingen		
<i>Time Tagger 20, 8 channel streaming time-to-digital converter with &lt;60 ps resolution, Pulse Streamer 8/2, synchronous digital pattern and arbitrary waveform generator</i>		
<b>Technische Informationsbibliothek Hannover (TIB)</b>	<b>East</b>	<b>51</b>
Welfengarten 1B, 30167 Hannover		
<i>Wissenschaftliche Fachliteratur</i>		
<b>TEM Messtechnik GmbH</b>	<b>East</b>	<b>32+33</b>
Großer Hillen 38, 30559 Hannover		
<i>Laserelektronik, Messtechnik, Entwicklung</i>		
<b>THORLABS GmbH</b>	<b>West</b>	<b>13+16</b>
Hans-Boeckler-Straße 6, 85221 Dachau		
<i>Optische &amp; optomechanische Komponenten, Test &amp; Measurement Systeme, opt. Tische &amp; Vibrationskontrolle, Nanopositionierungen, opt. Fasern, Lichtquellen, Imaging, Mikroskopie &amp; Life Science Komponenten</i>		
<b>TOPTICA Photonics AG</b>	<b>East</b>	<b>40+41</b>
Lochhamer Schlag 19, 82166 Gräfelfing / München		
<i>Tunable Diode Lasers with New Digital Control Electronics, Amplified and Frequency- Converted Diode Lasers, Femtosecond/ Picosecond Fiber Lasers, Wavelength Meters</i>		
<b>Zurich Instruments AG Marketing and Sales</b>	<b>West</b>	<b>24</b>
Technoparkstrasse 1, 8005 Zurich, Switzerland		
<i>Lock-in amplifiers, phase-locked loops, arbitrary waveform generator, impedance analyzers, digitizers, boxcar averagers</i>		

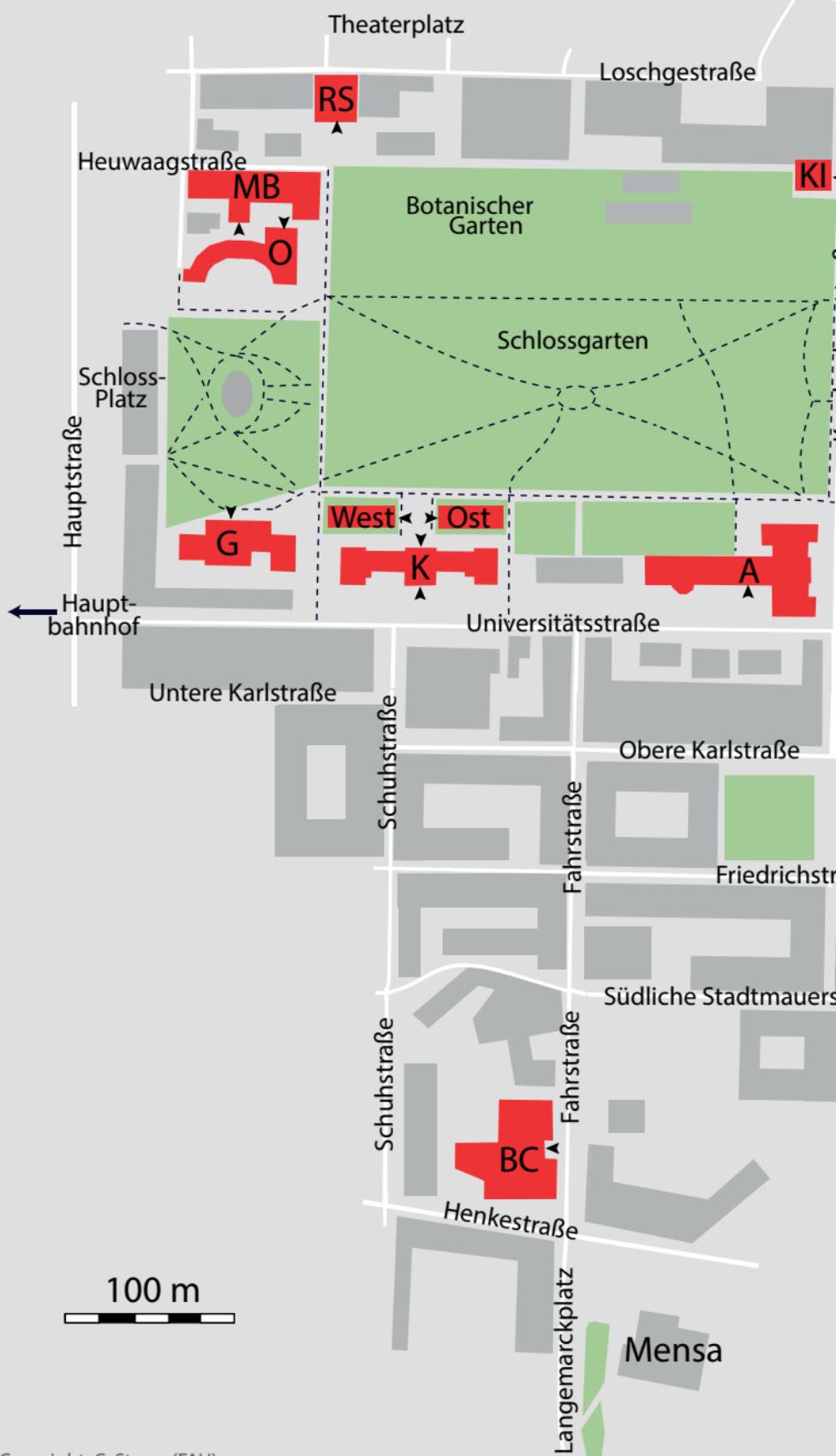
# Exhibition Map

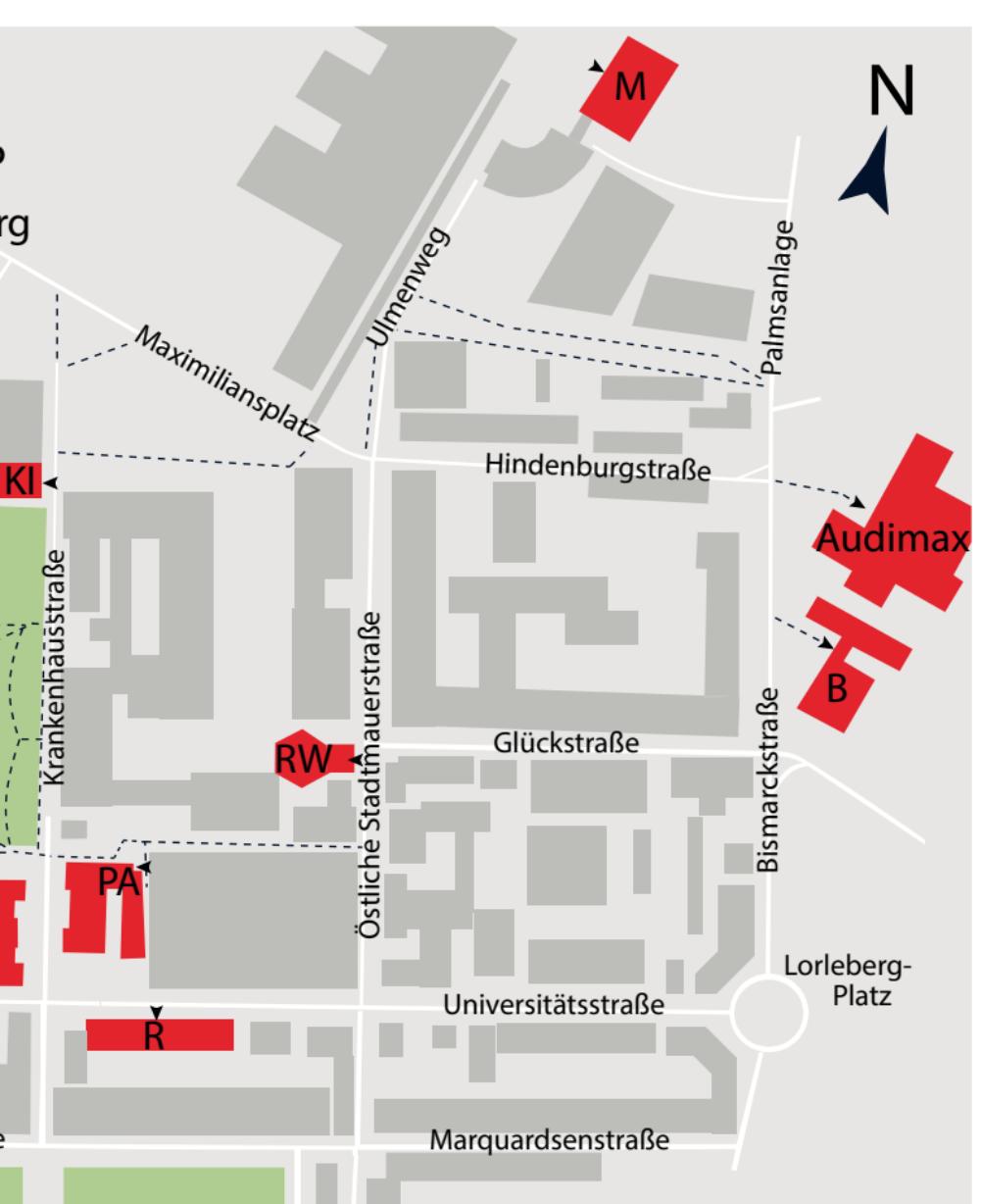


Exhibition

# 82. Jahrestagung der DPG und DPG-Frühjahrstagung SAMOP

## Friedrich-Alexander-Universität Erlangen-Nürnberg





A	Anatomie
B	Bismarckstraße
BC	Biochemie
G	Geologie
K	Kollegienhaus
KI	Kinderklinik
M	Medizin-Hörsäle
MB	Mikrobiologie
O	Orangerie
Ost	Zelt Ost
PA	Pathologie
R	Rechtsmedizin
RS	Redoutensaal
RW	Rudolf-Wöhrl Hörsaal
West	Zelt West
►	Gebäudeeingang



***we stabilize  
YOUR LASER***

- BEAM POINTING
- WAVELENGTH
- INTENSITY
- REP-RATE

***Stände 32/33  
Zelt rechts***

***TEM Messtechnik GmbH***

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