Leopoldina
Nationale Akademie
der Wissenschaften

Leopoldina news

1|2018

Deutsche Akademie der Naturforscher Leopoldina –
German National Academy of Sciences

Halle (Saale), 8 February 2018

10 years German National Academy of Sciences

Editorial

Dear members and friends of the Leopoldina,

The need for balanced scientific evaluation in political and societal debates is apparent in the world around us. Amid the flood of information, it becomes increasingly difficult to determine which materials are trustworthy and which are unreliable. Ten years ago when the Leopoldina was appointed the German National Academy of Sciences and entrusted with the task of providing scientific advice for politics and society together with its partner academies, the immensity of the impact of digitisation and globalisation on the formation of opinions could not have been foreseen. Over these past ten years, we have often succeeded in shaping public discourse with clear statements and shedding light on complex debates through scientific knowledge. For this, sincere thanks are due to the members of the Leopoldina and all our partners. They consistently bring their expertise to bear in working groups and public discussions, and make it available to decision-makers.

For an academy with centuries of history, ten years may pass in the blink of an eye; however, in the last decade the Leopoldina has taken on demanding tasks as a National Academy and undergone an eventful development. The ten year anniversary of the National Academy offers an opportunity to reflect and take stock. The adjacent article offers a first glimpse of this. And at the same time, we are setting our sights on the future: What are the pressing questions for the future where politics and the public sphere will need scientific advice? Which topics and debates will require balanced statements particularly urgently? How will the scientific community find the right way to be heard in an information-based society?

With this in mind, I am looking forward to an exciting anniversary year.

Policy advisor and international voice

10 years German National Academy of Sciences

The German Academy of Natural Scientists Leopoldina was appointed the National Academy of Sciences in 2008. The Federal President of Germany Horst Köhler signed the letter of appointment in the presence of the Federal Minister of Education and Research, Annette Schavan, the Leopoldina President, Volker ter Meulen, and the Minister President of Saxony-Anhalt, Wolfgang Böhmer (f.l.t.r). Photo: Markus

G7 summit preparations, collective statements and international symposia – as a national academy, the Leopoldina collaborates with the Académie des sciences and the Royal Society on a regular basis. With this cooperation, the academy fulfils one of the international tasks, which came with the appointment as National Academy of Sciences on 14 July 2008. Following the resolution of the Joint Science Conference (GWK) of Germany and its federal states, it received the mandate to offer policymakers scientific advice.

The policy advice is based on the common expertise gained in the Standing Committee with the Union of the German Academies of Sciences and Humanities and acatech – the German National Academy of Science and Engineering. With the acquisition of new tasks, the number of staff members quadrupled in ten years, new departments were set up, and a new headquarters was established in Halle in 2012, after the Berlin office was opened in 2009 already. The Leopoldina has produced over 130 statements, recommendations and discussion papers over the last ten years, many of which were in conjunction with partner academies and other national and international research organisations. The statements on energy transition and bioenergy, preimplantation genetic diagnosis (PGD) and palliative care, as well as the opportunities and limits of genome editing sparked considerable discussion.

Significant milestones in the international work of the past decade include the scientific advice for the G7 and G20 summits which was prepared in 2015 and 2017 with the Leopoldina at the helm. Looking ahead, fundamental medical-ethical questions will be a central topic this year, as well as questions around living together in a digital society. (ak)

THE LEOPOLDINA ...

... is the world's oldest continuously existing academy for medicine and the natural sciences. It was founded in 1652 in the city of Schweinfurt, recognized in 1677 and endowed with the Imperial Privilege in 1687. Since 1878 the Leopoldina is settled in Halle (Saale) in Germany. The academy today has around 1,500 members from 30 countries.

10 YEARS NATIONAL ACADEMY OF SCIENCES

Friends of the Leopoldina Academy met in Schweinfurt

Transitioning our mobility towards e-mobility is a central concern for industry, politics and the public sphere. This issue facing society as a whole was the focus of the annual event of the Friends of the Leopoldina Academy e. V. held in early November 2017.

Speaking in the town hall of the city of Schweinfurt, Prof. Dr. Ralf Wehrspohn, Director of the Fraunhofer Institute for Microstructure of Materials and Systems in Halle (Saale), gave an introduction to the topic and highlighted the current problem areas. Prof. Dr. Holger Hanselka, President of the Karlsruhe Institute of Technology, then outlined the state of research with regard to different drive concepts. His presentation was complemented by Dr. Stephan Demmerer's contribution. As the Head of Product Strategy for E-Mobility at ZF Friedrichshafen AG, he explained the potential e-mobility offers and highlighted its use and application for hybrid vehicles in particular.

The concluding panel discussion focussed on autonomous driving. Jan von Lackum and Martin Wilhelm joined the speakers, providing perspectives from the city of Schweinfurt in their capacities as City Councillor and Head of the Unit for Public Security as well as Chief of Police.

The annual event followed the annual general meeting of the Friends of the Leopoldina, which served as the setting for the awards ceremony for the 2017 Johann-Lorenz-Bausch Fellowship, presented to Dr. Floriana Giallombardo. The cultural scientist from the University of Palermo will present her research on the botanist and doctor Paolo Boccone (1633 – 1704) at the Leopoldina on 3 April.

(ng)

Floriana Giallombardo (3. f.r.) receives the 2017 Johann-Lorenz-Bausch Fellowship at the annual general meeting of the Friends of the Leopoldina Academy. Her research focuses on the work of the Italian natural scientist and former member of the Academy, Paolo Boccone.

Photo: Pressebüro Stefan Pfister/Schweinfurt

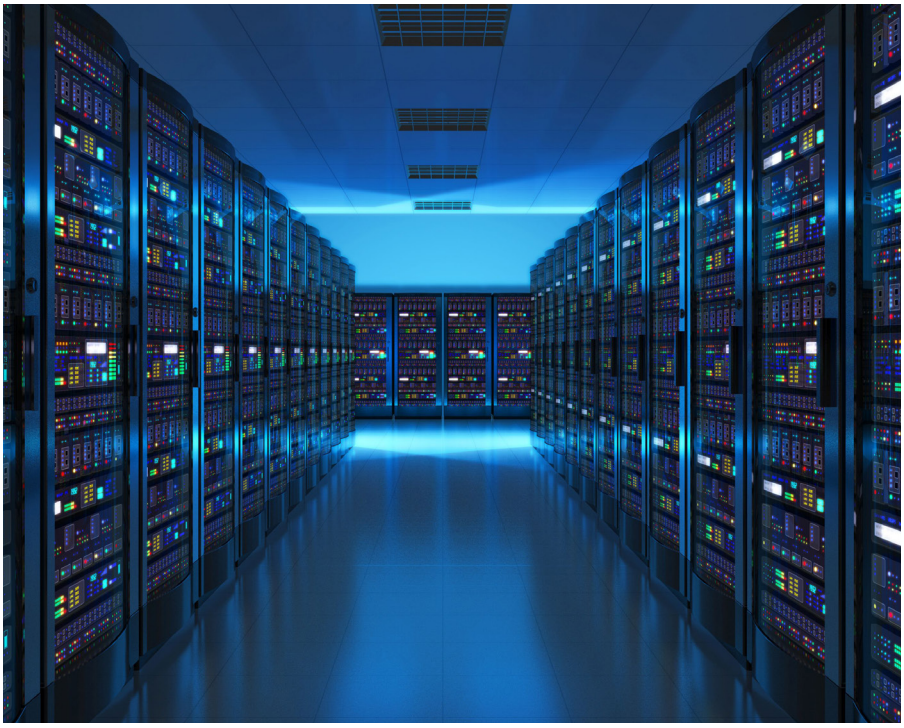
FRIENDS OF THE LEOPOLDINA

How safe is Europe? Perspectives of security policy in the discussion

In a world dominated by complexity and change, no one can precisely predict what the future holds. Furthermore, planning timeframes are often contingent on day-to-day political business and election cycles. All over the world, this shifts the focus away from long-term developments.

Against this backdrop, and in view of military-technological developments, terrorist networks, global economic interdependence, political unrest and demographic developments, how should we think about the question of safety in Europe? This is the central question of the 12th Leopoldina Lecture, organised by the German National Academy of Sciences and the Volkswagen Foundation and set to be held on 28 February in the Herrenhausen Palace Conference Centre. The spotlight will be on risk research and futures studies. What are the possibilities and limitations of these fields, and what methodological tools does science have to offer?

(yb)



The globalized world is dominated by networks. The Leopoldina Lecture deals with the implications of new security challenges.

Photo: Olesksiy Mark / Fotolia

LEOPOLDINA-LECTURE (GERMAN)

Indian-German exchange across disciplines

Leopoldina and Indian National Science Academy continue their collaboration

The 2017 symposium of the Indian National Science Academy (INSA) and the Leopoldina was held at the end of November in Hyderabad (India) under the title of "The Challenge to Learn". The symposium was organised under the scientific direction of Prof. Dr. Brigitte Röder ML, University of Hamburg, and INSA member Prof. Dr. Dorairajan Balasubramanian ML, L V Prasad Eye Institute in Hyderabad. They were supported by Prof. Dr. Jozsef Fiser, Budapest (Hungary), and Prof. Dr. Neeraj Jain, Delhi (India). The renowned L V Prasad Eye Institute (LVPEI) was the local partner.

Representatives from a wide range of scientific disciplines met in the Indian city of Hyderabad for the symposium organised by the Indian Academy and the Leopoldina. Photos: LVPEI, LV Prasad Eye Institute

The symposium brought together European and Indian scientists from a range of disciplines including neurobiology, psychology and computational neurosciences. Scientist exchanged information on their research activities and engaged in sometimes lively discussion with the large audiences. In addition to this, young scientists from both countries had the opportunity to present their current work in a poster presentation and discuss it directly with experienced researchers.

A Leopoldina-INSA Lecture followed at the start of December in Bangalore. The format of these lectures sees renowned members from both academies presenting their subject area to an interested audience in each other's countries. This should raise the visibility of both of the academies, as well as of German science in India and Indian science in Germany.

The President of the Leopoldina, Prof. Dr. Jörg Hacker ML, gave a speech on the topic "How to Combat Infectious Diseases – the Role of Science Academies" at the Indian Institute of Technology in Bangalore on 4 December. In his talk, he also emphasised the "Science20" process, where for the first time in 2017, the national academies of the G20 countries advised their heads of state and government during their preparations – Leopoldina took the leading role, actively supported by INSA.

The Leopoldina has worked closely together with INSA since 2007. The two academies regularly hold symposia on topics relevant to society as well as lectures in Germany and India.

(rn)

Air pollution and health from a global perspective

Polluted air is among the most significant environmental risks for human health. The World Health Organisation (WHO) estimates that a significant proportion of the global population is affected by harmful air pollution, and that around three million people die each year as a consequence. The global causes of this pollution are manifold and range from lacking ventilation options in rooms to increasing mobility and industrialisation to climate change and volcanic eruptions.

In November 2017, the Leopoldina and the Academy of Science of South Africa (ASSAf) organised the international symposium "Air Pollution and Health: New Research Perspectives for a Growing Global Crisis" in Düsseldorf, which aimed to discuss the current health risks posed by global air pollution as well as paths to reduction and prevention.

Researchers from Brazil, Russia, China, India, South Africa and Germany discussed the impact of global air pollution on human health.

Photo: Eric Lichtenscheidt

The participants came from Germany, Brazil, Russia, India, China and South Africa. Sophie Bonjour Gumy from the Department of Public Health, Environmental and Social Determinants of Health at the WHO Headquarters in Geneva gave the evening keynote. At the end of the symposium, a research workshop was held in co-operation with the IUF – Leibniz Research Institute for Environmental Medicine. This provided a platform for the speakers at the symposium to explore the options for future research partnerships.

Prof. Dr. Jean Krutmann ML (Düsseldorf) took on the scientific coordination of both events. The Leopoldina and ASSAf have been cooperating on a joint series with a thematic focus on "Environment and Health" since 2015. (jn)

Researchers discuss ramifications of mining

South Africa and Germany pool their expertise

The discussion of innovative approaches which enable the economically and ecologically sustainable use of exhausted mines was the focus of an international conference held in Johannesburg (South Africa) at the end of November 2017. The conference was the continuation and consolidation of the Science-Business-Society Dialogue conference that was first held by the academies in 2016. It is closely linked to the aim of encouraging greater exchange between key players from the sciences, economy, society and politics.

In view of the high number of exhausted mines in southern Africa – 6,000 in the Republic of South Africa alone – and the imminent closure of the coal mines in the Ruhr region in Germany in 2018, the topic is highly relevant and topical for both countries.

The consequences of mining, for example the acid mine water from flooded gold mines in the greater Johannesburg area, are changing the environment and having an impact society. These considerable challenges can be addressed with the help of the experience on the ground and German expertise. Participants at the conference, who came from a range of mining nations, discussed the potential for using closed mines, especially for the generation and storage of renewable energy. It is worth noting that for the first time, the conference involved discussion papers from all five research groups currently investigating the feasibility of underground pumped hydroelectric storage in Australia, Finland, Germany and South Africa. In addition, successes and setbacks in remediating contaminated mining sites were analysed from a national (German uranium and coal mining) as well as regional (UNESCO's study on Africa) and global perspective (International Atomic Energy Agency, IAEA).

Leopoldina past-president Volker ter Meulen (left) was among the key players who engaged in intensive exchange regarding the consequences of mining around the world.

Photo: Brenda Biddulph, Monsoon Photography

The conference also explored the social and legal conditions for managing contaminated mining sites. The conference, which was organised by the Leopoldina and the Academy of Science of South Africa (ASSAf) with the involvement of the Network of African Science Academies (NASAC), and was financed by the German Federal Ministry for Education and Research, was brought to a close with the issuing of a joint statement. (ag)

CONFERENCE STATEMENT

Career paths for young African scientists

The Global State of Young Scientists study (GloSYS) carried out by the Global Young Academy (GYA) is now moving into its third phase. Between March and July of this year, more than 80 interviews will be performed with young scientists in 14 African countries as well as outside the continent. It aims to create a data basis for the central objective of the GloSYS Africa Project: The compilation of evidence-based approaches to improving support for young scientists in Africa in their research and career development.

To do this, the GloSYS will investigate the work contexts and challenges facing young researchers in Africa and around the globe. Questions of mobility, gender equality, the working environment, as well as support and mentoring opportunities are central areas of inquiry.

The research team met at the Leopoldina in Halle in mid-January to prepare the third phase of the project. As part of a workshop, the project leader from the GYA and a group of research staff compiled criteria in order to guarantee effective collection and evaluation of data. The results of the GloSYS study are expected in late 2018. Following this, there are plans to carry out the GloSYS study in another region. (mn)

The GloSYS Africa research team met in mid-January at the Leopoldina in Halle (Saale).

Photo: Kevin Bolte, GYA Office

Final stage of the Leopoldina's Goethe Edition

Conversation with Prof. Dr. Friedrich Steinle ML on the importance of the final index for the project

The Leopoldina Edition of Johann Wolfgang Goethe's writings on natural science is nearing completion. The funding from the Fritz Thyssen Foundation for the final phase expired at the end of January 2018. We spoke to Prof. Dr. Friedrich Steinle ML (Berlin), who, together with Prof. Dr. Irmgard Müller ML (Bochum), is directing the compilation of a detailed index to the volumes in the project's final stage.

Friedrich Steinle.
Photo: private

The Leopoldina Edition has been a project of the century. What is the history of the project?
Steinle: Goethe is best known as a poet. Most editions focus on his literary works and don't include his natural science works, or include only a limited selection. The idea behind our edition is to collect and comment on all of the natural science writings by Goethe, who was also a member of the Leopoldina.

The first volume was published back in 1947 …
Steinle: Exactly, and then the editorial approach was revised at the start of the 1950s. At that point, the biologist and philologist Prof. Dr. Dorothea Kuhn ML became involved. She supervised the project for several decades as the editor-in-chief. The last of a total of 29 volumes was published in 2011. The many changes over the history of the project have left their mark; the shifts in editorial principles make the edition difficult to use to this day. The database, due to be published online soon, and the printed index are the key to making the edition accessible to users.

What will become possible with the index database?
Steinle: First and foremost, the database makes it possible to search through all volumes of the entire edition. There is one index of all the people referenced, and a second index containing all the locations mentioned. Goethe's references to his literary works will also be compiled in a separate index, as well as all works by other authors which appear in his writings.

The historical-critical edition of "Goethe's Writings on Natural Science" is an important scientific and historical long-term project for the Leopoldina. The publishing of the detailed index draws the project to a close after 80 years.
Photo: Thomas Meinicke

Are the indexes of animals, plants and minerals particularly important?
Steinle: They give rise to new insights and questions: Which people does Goethe mention regularly, and which locations play a major role? Which natural objects were the focus of his work? It is now possible to study such questions. Furthermore, the index clearly shows the extent of Goethe's knowledge of the natural sciences. The index of people reads a bit like a "who's who" of the natural scientists of his time. To my knowledge, nobody had fully recognised this up till now.

What moved you personally to take on the direction of this project?
Steinle: I have always been interested in Goethe's natural research, particularly the Theory of Colours, and my personal connection to Dorothea Kuhn also played a role. When I was asked to take on the project, I didn't have to think about it for long. A pivotal factor for me was that my esteemed colleague Irmgard Müller also came on board. We have shared the responsibility the whole time.

Which difficulties did you encounter with regard to the database?
Steinle: The level of complexity involved in compiling such an index only emerged gradually. Should plants or place names be listed according to their modern or historical designations? That was just one of many difficult questions which had to be addressed. We ultimately decided on a balanced inclusion of the historical variations in spellings, where accessibility for the reader was always at the fore.

What was the most memorable moment for you as editor?
Steinle: My conversations with Ms Kuhn left a lasting impression; she had a much deeper awareness of the project in its entirety than I did. This overview allowed her to classify Goethe's individual works with great ease. Her characteristic modesty has

INTERVIEW CONDUCTED BY
PROF. DR. RAINER GODEL

Sophie Charlotte Salon: A journey through the diversity of language

A red-green glow stick, a fortune cookie and the evening's programme printed on edible paper – equipped with these items, numerous guests were welcomed to the Sophie Charlotte Salon held in room 230 at the Berlin-Brandenburg Academy of Sciences and Humanities on 20 January. Here, the ten new members of the Junge Akademie (Young Academy; JA) organised three sessions as part of the "Plurality of Language" umbrella topic, showcasing language in all its diversity – from academic language to plain language and even sign language.

Questions relating to the translatability and intelligibility of language used the example of forming political opinions to bridge the gap between academia and the general public. The audience was also encourage to participate, for example by voting with their glow sticks on questions from the fortune cookies such as "Does a picture say more than a thousand words?", or by offering content suggestions for the improvisational theatre group. "The topic of language was not only a content item on the programme for the evening," emphasises co-organiser Anna Lisa Ahlers, a sinologist and political scientist at the University of Oslo (Norway) and member of the Junge Akademie. "We also wanted to encourage communication and enter into conversation with the people attending." Christian Stein, another JA member, created a room devoted to the topic of "Code Poetry" – or digital literature: "In the interplay between human perceptions of meaning and machine execution, something happens which reveals what language has become today in a completely unique and fascinating way", says Christian Stein. (ar)

The Junge Akademie contributed in this year's Salon Sophie Charlotte which discussed the power of language. Photo: BBAW

BOARD FOR STUDY CENTRE

How does science help to break down prejudices? How does science instil trust in its results and methods? What is scientific progress? In the future, the Leopoldina Centre for Science Studies will be addressing these and similar questions with increased interest.

A historical-scientific perspective is crucial: We can only understand the present by taking a closer look at past developments. But it is also necessary to enter into interdisciplinary dialogue with scientists who have to contend with such questions in their current work – as well as in the advisory practice of the German National Academy of Sciences Leopoldina.

At the start of 2018, the Presidium appointed a new advisory board for the Centre for Science Studies which is dedicated to this task. The 19 members of the advisory board include representatives from all four of the Academy's classes; the board is chaired by Prof. Dr. Alfons Labisch ML (Düsseldorf).

CENTRE FOR SCIENCE STUDIES

Recipe for success: Interdisciplinary cooperation and structural freedom

What happens when a biologist, a philosopher and an astrophysicist discuss questions relating to scientific policy, the arts or society? The results of this experiment can be observed with a range of different players at the Junge Akademie. "The perspectives offered by the various subjects open up new horizons and almost automatically encourage reflection on individual viewpoints", says Kristina Murholt, spokesperson for the research group RG Science Policy and Professor of Philosophy at Leipzig University confidently.

One of our consistent aims is to gain visibility outside the academic bubble and spark debate with society. "Our superordinate academies – the German National Academy of Sciences Leopoldina and the Berlin-Brandenburg Academy of Sciences and Humanities – allow us great structural freedom in the way we work, which is not necessarily a given for all young academies. The diverse range of topics and methods used in the research groups shows that this trust is well placed", says Kristina Musholt. The RG Science Policy in particular, currently the Junge Akademie's research group with the most members, can look back over a long list of projects: In addition to more traditional symposia and panel discussions, debates also play a vital role. For example, debate continues on an article on department structure, which was published in October 2017. Dr. Christian Hof, another a spokesperson for the research group, who works at the Senckenberg Biodiversity and Climate Research Centre, explains that many people are convinced of the advantages of the department structure. "However the focus of the discussion is actually whether the reorganisation to a department structure is actually possible on a cost-neutral basis. And should that even be the aim? Financing positions for doctoral candidates entirely from third-party funding has also given rise to a lot of critical feedback." Discussions with the different status groups have now been planned at universities. "It is precisely these questions that are up for further debate", says Christian Hof. (ar)

Kristina Murholt and Christian Hof are spokespersons from the RG Science Policy at the Junge Akademie. Photos: S. Harley, J. Kratschmer

People

Three members of the Leopoldina were awarded the Leibniz Prize 2018 from the German Research Foundation (DFG). The DFG announced the names of a total of 11 prize winners in December. The Leibniz Prize is one of the most influential German research prizes and is worth 2.5 million euros per award. The immunologists **Veit Hornung ML** and **Eicke Latz ML** were awarded the prize for their work on innate immune responses and specifically for their seminal papers on cytosolic sensing. Computer scientist **Bernhard Schölkopf ML** was celebrated for his research and contributions to the theory and success of machine learning. His research includes support vector machines (SVMs) which enable the classification of input data.

Katrin Böhning-Gaese ML, Director of the Senckenberg Biodiversity and Climate Research Centre and Professor at the Goethe University Frankfurt is the new Vice President of the Leibniz Association.

Jan Born ML, Director of the Institute of Medical Psychology and Behavioural Neurobiology at the University of Tübingen, was awarded the 2017 Oswald-Külpe-Prize. The Institute for Psychology at the University of Würzburg awards the prize in memory of its founder, Külpe, the intellectual father of the Würzburg School of Psychology. Born was honoured on the strength of his contributions to sleep and memory research. He has been able to show how memories continue to be formed during sleep.

The plant biologist **Joanne Chory ML**, Director at the Salk Institute in La Jolla (USA), was awarded the Breakthrough Prize in Life Sciences. She received the award for her discovery of how plants optimise their growth, development and cell structure in order to transform sunlight into chemical energy.

The Director of the Max Planck Institute of Quantum Optics and Head of the Department for Theory, **Ignacio Cirac ML**, is the recipient of the Max Planck Medal of the German Physical Society (DPG) for his outstanding contributions to quantum information and quantum optics. Cirac's research focuses primarily on the simulation of the behaviour of quantum many-body systems with ultracold atoms in optical lattices, which can serve as models for solid state crystals, for example. Through this work, Cirac would like to gain a better understanding of macroscopic solid-state properties such as magnetism and superconductivity.

Markus Gross ML, Professor of Computer Science at the Swiss Federal Institute of Technology Zürich (ETH), has been accepted into the National Academy of Engineering of Korea. Founded in 1995, the Korean Academy of Engineering aims to advance technological development to improve the quality of human life.

The astrophysicist **Günther Gustav Hasinger ML**, Director of the Institute for Astronomy at the University of Hawaii (USA), has been appointed Director of Science by the Council of the European Space Agency (ESA).

The chemist **Martina Havenith-Newen ML** has been accepted into the European Academy of Sciences and Arts. This pays tribute to her scientific achievements and contribution as Director of the Centre for Molecular Spectroscopy and Simulation of Solvent-Mediated Processes, as well as spokesperson for the Cluster of Excellence RESOLV "Ruhr explores solvation" at the Ruhr University Bochum. Founded in 1988, the European Academy of Sciences and Arts is committed to promoting education, science and research around the globe.

At the annual general meeting of the Leibniz Association, **Matthias Kleiner ML** was re-elected President for a further period of office. An engineering scientist, Kleiner has directed the Leibniz Association since 2014. His second term in office will run until 2022.

The honorary senator of the Bielefeld Universtiy, **Katharina Kohse-Höinghaus ML,** was elected full member of the European Academy of Sciences (EurASc).

Gerd Leuchs ML, Head of the Institute for Optics, Information and Photonics at the University of Erlangen-Nürnberg and Director of the Max Planck Institute for the Science of Light, was awarded the 2018 Herbert Walther Award from the German Physical Society (DPG) and the Optical Society of America (OSA). Leuchs has received the award in recognition of his wide-ranging and pioneering scientific contributions to quantum optics and atomic physics.

New members of Class IV

Heiner Fangerau ML, Düsseldorf, Heinrich Heine University Düsseldorf, Department of the History, Philosophy and Ethics of Medicine (History of Science and Medicine Section)

Rainer Goebel ML, Maastricht, Netherlands, Maastricht University, Faculty of Psychology and Neuroscience, Department of Cognitive Neuroscience (Psychology and Cognitive Sciences Section)

Peter M. Gollwitzer ML, New York, USA, New York University, Department of Psychology (Psychology and Cognitive Sciences Section)

Tatjana Hörnle ML, Berlin, Humboldt University of Berlin, Faculty of Law (Cultural Sciences Section)

Thomas König ML, Mannheim, University of Mannheim, Chair of Political Science II (Economics and Empirical Social Sciences Section)

Michael Pawlik ML, Freiburg, Albert Ludwig University of Freiburg, Institute for Criminal Law, Criminal Procedural Law und Legal Philosophy (Cultural Sciences Section)

Natalie Sebanz ML, Budapest, Hungary, Central European University, Department of Cognitive Science (Psychology and Cognitive Sciences Section)

Rudolf Stichweh ML, Bonn, University of Bonn, Forum for International Research (Cultural Sciences Section)

Deceased members

Hans Georg Zachau ML

16 May 1930 – 17 December 2017 | Munich
Genetics / Molecular biology and cell biology

Hans Georg Zachau had been Chair of the Institute for Physiological Chemistry at the University of Munich since 1999. Zachau's research focussed on the biochemistry of nucleic acids. He succeeded in being one of the first people to explain the primary structure of the nucleic acid tRNA. His research work on chromatin, repetitive DNA and immunoglobulin genes in humans and mice earned him numerous awards. In 1992, he was appointed Chancellor of Germany's Pour le Mérite Order for Sciences and Arts. Hans Georg Zachau became a member of the Leopoldina in 1967.

Reinhold Schwarz ML

25 July 1929 – 1 December 2017 | Rostock
Gynaecology and paediatrics

The gynaecologist Reinhold Schwarz was Director of the Gynaecology Department at the University Medical Centre in Rostock until 1997. He was also the Deputy Medical Director of the Medical Centre from 1993 to 1996. Alongside gynaecological oncology, Schwarz' scientific focus was on radiotherapy as well as physiology and pathophysiology of the cardiovascular system during pregnancy. Furthermore, he published texts for training and development which became standard works the field. Schwarz played a significant role in merging the former Regional Association for Gynaecology and Obstetrics for the three northern districts of Rostock, Schwerin and Neubrandenburg with the Association for Northwest Germany to form today's North-German Society of Gynaecology and Obstetrics. Schwarz was elected a member of the Leopoldina in 1983.

Leopoldina Fellowship Programme

New research fellows

Dr. Paolo Costa, most recently holder of the Chair for Organic Chemistry at the Ruhr University in Bochum, will be spending 24 months at the Centre for Advanced Materials Research at the University of Ottawa in Canada, working with Prof. Juan Cesar Scaiano.

Dr. Annabelle Doerr of the Walter Eucken Institute e. V. at the Albert Ludwig University of Freiburg will be spending 24 months at the Center for Labor Economics in the Department of Economics at the University of California in Berkeley, CA, USA, under Prof. David Card.

Dr. Jannik Donner of the Helmholtz Centre for Infection Research in Braunschweig will be spending 24 months at the Research Institute of the McGill University Health Centre in Montreal, Canada under Prof. Dr. Dao Nguyen.

Dr. Tobias Gensch of the Institute of Organic Chemistry at the University of Münster will be working with Prof. Matthew Sigman for 24 months in the Department of Chemistry at the University of Utah in Salt Lake City, USA.

Dr. Philip Kaib of the Max Planck Institute for Coal Research in Müllheim will be spending 24 months at the Department of Chemistry at Princeton University, New Jersey, USA, working with Prof. Dr. David W. C. MacMillan.

Dr. Christoph Kerzig of the Institute for Chemistry at the Martin Luther University Halle-Wittenberg in Halle (Saale) will be carrying out his project in the working group led by Prof. Dr. Oliver S. Wenger in the Department of Chemistry at the University of Basel, Switzerland, over the course of 24 months.

Dr. Nils Ludwig, a doctoral candidate at the Clinic for Cranio-Maxillo-Facial Surgery at Hannover Medical School, will spend 24 months in the group led by Prof. Dr. Theresa L. Whiteside at the University of Pittsburgh Cancer Institute in Pittsburgh, Pennsylvania, USA.

Dr. Moritz Malischewski of the Institute for Chemistry and Biochemistry at the Free University of Berlin will be working at the Parisian Institute for Molecular Chemistry at the Pierre and Marie Curie University, Sorbonne Universities in Paris, France, under Prof. Dr. Valérie Marvaud for 12 months.

Dr. Matthias Roos of the Institute for Physics at the Martin Luther University Halle-Wittenberg in Halle (Saale) will be conducting his project research in the Department of Chemistry at the Massachusetts Institute of Technology in Cambridge/MA, USA, under Prof. Dr. Mei Hong for 24 months.

Leopoldina employees

James Curtiss took on the role of Press Officer at the Global Young Academy at the end of November 2017. **Paul Meißner** was welcomed to his role as project employee in the Leopoldina library in December 2017. Als Office Assistant unterstützt **Geert Luteijn** has been supporting the Global Young Academy team since January 2018 in his role as Office Assistant. **Kathrin Todt-Wolff** also started work in January as a member of the library staff.

Leopoldina
Nationale Akademie
der Wissenschaften

Imprint

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Abbreviations: ML = Member of the Leopoldina