

**Quarterly
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EURAXESS India Newsletter is a quarterly electronic publication. It provides information about conducting research in Europe or with European partners and gives insights for Indian and European researchers who are interested in the European research landscape.

Please email to india@euraxess.net for any comments on this newsletter, contributions you would like to make.

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1 EURAXESS members in focus: Germany

Germany is one of the most attractive locations for mobile researchers. The excellent infrastructure, wide variety of disciplines, well-equipped research facilities and competent staff attract scientists and researchers to Germany from all over the world.

Research-performing institutions and organisations

In Germany, research takes place in a number of different settings including universities and centres for applied sciences, non-university research institutions, in companies and at institutions run by federal or state (Länder) authorities.

There are close to 400 higher education institutions (HEIs) offering a wide range of academic disciplines, including 120 universities, 213 centres of applied sciences and 57 colleges of music and art. Unique to the German higher education system is the close link between learning, teaching and research – a principle which goes back to Wilhelm von Humboldt, the founder of the Universität zu Berlin in 1810, which is today the Humboldt University in Berlin. The [Research Map](#) of the German Rector's Conference details the key research priorities of HEIs in Germany.

Other important research-performing organisations in Germany include the [Fraunhofer-Gesellschaft](#) (FhG) which currently operates 74 institutes and research institutions within Germany, the [Helmholtz Association](#) (HGF), Germany's largest scientific association with about 7,000 foreign scientists working at Helmholtz Centres, the [Leibniz Association](#) (WGL) which connects 96 research institutions that address issues of social, economic and ecological relevance, and the [Max Planck Society](#) (MPG), Germany's most successful research organisation, as 20 Nobel laureates have emerged from the ranks of its scientists since its establishment in 1948.

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Fun facts about Germany

Capital: Berlin

Government: Federal Parliamentary Republic

Population: 81 million

Language: German

65% of the highways (Autobahn) in Germany have no speed limit

University is free for everyone (even non-Germans)

Known for their innovation, German companies collaborate closely with universities, science institutions and non-university research organisations. Germany's industry carries out and funds at least two-thirds of research and development (R&D) activities. The automotive sector, followed by the electrical engineering and mechanical engineering sectors make the largest investments. Companies such as Volkswagen, Siemens and Bayer are known for their high R&D spending.

Since January 2020, companies that are active in R&D and taxable in Germany can benefit from a tax incentive for research. The new R&D allowance for enterprises conducting research is 25% of eligible expenses. The goal behind the tax is to enhance Germany's competitiveness in innovation and to stimulate more R&D activities, particularly by small and medium-sized enterprises, which employ 16 million people in Germany.

Germany's federal ministries fund 40 R&D institutions that conduct research in almost all areas. An example is the [Robert Koch Institute](#) (RKI) in Berlin, which is the government's central scientific institution in the field of biomedicine. Research and prevention of infections is one of RKI's classic fields of work, and the Institute has played a prominent role in the current Covid-19 pandemic.

On the state level, the 16 German *Länder* act as research funding bodies and operate over 160 institutions that conduct research on a broad range of areas. One example is the [German Research Centre for Artificial Intelligence](#).



Bonn University, Source: DLR

R&D strategies and policy framework

Research and innovation funding is concentrated mostly through the [Bulgaria National Science Fund](#) at the Ministry of Education and Science and through the European structural and investment funds.

Germany's research and innovation policy framework document, the High-Tech Strategy (HTS), was first introduced in 2006 and has since been renewed and developed further. The latest version, [HTS 2025](#), consolidates R&I funding across all ministries and concentrates on three crucial fields of action: 1) tackling major challenges for society, 2) strengthening Germany's future competencies, and 3) establishing an open innovation and risk culture. The HTS 2025 strives for concrete goals through 12 missions which require the science community, the private sector as well as civil society to join forces.

Building on the Federal Government's Internationalisation Strategy of 2008, under the leadership of the Federal Ministry of Education and Research (BMBF), a new [Strategy for the Internationalisation of Education, Science and Research](#) was developed and adopted in 2017. The Strategy focuses on five target areas such as "strengthening excellence through global cooperation" and "developing Germany's strength in innovation on the international stage".

The Pact for Research and Innovation, first adopted in 2005, was recently extended and will now run for ten years. Until 2030, the Federal Government and the *Länder* will grant the individual research organisations (DFG, MPG, FhG, HGF, WGL) an annual increase in funding of 3%, giving them long-term financial planning security.

The [Excellence Strategy](#), which was adopted in 2016, builds upon its predecessor programme – the so-called Excellence Initiative which ran from 2007 to 2017, and is planned for the long term. The Strategy aims to strengthen cutting-edge research at universities in two funding lines: ‘clusters of excellence’ and ‘universities of excellence’. Since 2018, the Federal Government and the *Länder* have provided funding of €553 million annually to support cutting-edge research at ten universities of excellence, one excellence network and 57 clusters of excellence.



City of Tuebingen, Source: DLR

R&D spending

Germany has invested more funds in R&D in recent years than ever before. In 2018, a total of €105 billion was invested in R&D by the Federal Government and the private sector. This represents 3.13% of Germany’s gross domestic product (GDP). Germany accounts for 31% of all R&D expenditure in the European Union (based on the EU28). For the year 2025, the Federal Government has set the ambitious target of investing 3.5% of the GDP in R&D.

R&D personnel

In 2018, almost 708,000 individuals were employed in R&D (full-time equivalents) of which more than 63% worked in the private sector. This marks a new peak and an increase of 45% in the last 12 years. Germany lies also well above the EU average in the share of R&D personnel in the total number of employed persons. Over 402,000 worked at German universities as academic staff in 2018. A total of 49,600 of them came from outside of Germany. The number of foreign academic staff doing research at the four largest non-university research institutions (Fraunhofer-Gesellschaft, Helmholtz Association, Leibniz Association, Max Planck Society) in Germany added up to 11,830 in 2017.

Innovation aspects

Germany is one of the leading innovation countries, which is also reflected in the European Innovation Scoreboard, produced by the European Commission, which places Germany in the group of ‘strong innovators’. The Global Innovation Index also puts Germany among the most pioneering countries. Germany is a leader when it comes to patent applications. Almost 400 patents relevant to the world market per million inhabitants were filed in 2017 from Germany.

Funding tools/opportunities

There are various organisations in Germany funding research projects as well as individual researchers.

The largest funding organisations are the [Deutsche Forschungsgemeinschaft \(DFG\)](#), the [German Academic Exchange Service \(DAAD\)](#) and the [Alexander von Humboldt-Foundation \(AvH\)](#).

There are also a number of foundations which support research projects, research institutions as well as individual researchers, such as the [Robert](#)

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan-European effort is currently supported by 42 countries, of which we will profile one in each quarterly e-newsletter.

[Bosch Stiftung](#), the [Volkswagen Foundation](#) or the [German Federal Environmental Foundation \(DBU\)](#), among others.

The following databases are recommended when searching for research funding opportunities:

[DAAD Scholarship Base](#)

[EURAXESS Germany: Jobs & Funding](#)

National Coordination Point at the
German Aerospace Centre, DLR
Project Management Agency,
European and International
Cooperation

Felix Beckendorf, Vitaliy
Bondarenko & Christina Witt:
info@euraxess.de



Contact details and list of important links

Germany is part of the European initiative EURAXESS. Currently, 91 German EURAXESS centres advise international mobile researchers on mobility-related questions.

[EURAXESS Germany](#)

[Federal Ministry of Education and Research \(BMBF\), Education and Research in Figures 2020](#)

[German Rector's Conference \(HRK\), Higher Education Institutions in Figures 2020](#)

[German Centre for Higher Education Research and Science Studies \(DZHW\) / German Academic Exchange Service \(DAAD\), Wissenschaft weltoffen kompakt 2020 English edition](#)

[Research in Germany](#)



2 HOT TOPIC: Covid-19 and researcher mobility in a changing world, new study

Bright news on the international vaccine research front is cast against continuing uncertainty for international researchers in general. Will they soon be able to get on with plans to study and work abroad? New findings published this month in a EURAXESS Worldwide study suggests it takes more than a pandemic to put them off.

The world is breathing a sigh of relief at the news that international teams of scientists have developed, trialled and will soon gain approval to start distributing novel vaccines against the Covid-19 virus. There is hope that the massive disruption the pandemic has caused to lives everywhere will come to an end by Spring 2021 or earlier. But for international researchers whose plans to study and work abroad have been in a state of suspended animation, there is a sense that even that will not be soon enough.

The EURAXESS Worldwide study published on 26 November, called '*Researcher mobility in a changing world*', casts fresh light on how international researchers have been coping during Covid times, and what impact it has on their ability and willingness to pursue research and studies abroad.

It is clear from the study that they are largely undeterred in their plans to carry on with a stint abroad as soon as conditions open up. Over 85% of the nearly 1224 researchers surveyed said that international mobility was a "must" or "very helpful" as a career building block and the vast majority (75%) said their preferred destination remains unchanged.

Despite the many varied Covid-19 restrictions facing international researchers, very few have completely dropped their plans to further their research and career abroad. Most want to carry on even if it means

potentially long delays, and Europe has become more attractive as a host destination, compared with pre-pandemic conditions.

All regions of the world are represented in the study, but the highest share of responses came from Europe, and in particular the Slovak Republic, Italy, Germany and Denmark (n=126, 115, 73 and 55 respectively). Outside Europe, India (85) and Vietnam (51) returned the most completed surveys.

A quarter of the respondents' nationalities does not correspond with where they list as their work location. "Obviously this means they are currently not working in their home countries," the report's authors helpfully explain. Of the 788 respondents with at least one previous research stay abroad, again Europe was the most popular destination, followed by North America.

According to the study team, a large majority of the respondents say their motives for international mobility involve the pursuit of long-term career objectives in academic research. In fact, the vast majority of responses were provided by researchers from universities and research institutes and their long-term career objectives not surprisingly orientate around "academic research". More than half listed their age as between 20 and 35, which is a strong correlation to earlier career stages and over 78% possess a Master's degree or below.

Towards EU-centric mobility

Chapter 3 of the study report drills down to possible avenues for improving EU-centric mobility in the context of Covid-19. These include reinforcing the financial and political commitment to tackling the pandemic and, presumably, others like it, which the EU [Recovery Plan](#) and dedicated [Covid-19 ERA Research Calls under Horizon 2020](#) as well as the [ERAvsCovid Action Plan](#)'s ten priorities all clearly seek to achieve.

An unequivocal outcome of the Covid-19 pandemic, according to a majority of researchers is that they expect "profound changes" in how their work will be organised in the future and what conditions they will need to succeed.

The findings also point to the need to explore new formats for making research communication truly interactive and "live", and to address the specific needs and interests of different researcher categories within EURAXESS Worldwide target groups, both regional and sectoral. The importance of extended interactive dialogue with these groups of researchers is also stressed in the study. This translates into a need for more creative use of media and communications tools, and more targeted follow-up with universities, research institutions and policy-makers.

Indeed, in an increasingly interconnected world, through its information and services EURAXESS Worldwide offers researchers an unrivalled opportunity to interact on a global scale. As a networking tool it supports researchers working outside Europe who wish to connect or stay connected with Europe. Through networking, information-sharing and 'happenings', researchers can help to boost European research and scientific cooperation with the rest of the world.

According to the team, the survey findings will help EURAXESS Worldwide to communicate more effectively with researchers, especially with those contemplating an international stint. The results will also signal where

changes may be needed to strategies and policies aimed at addressing the special conditions facing researchers today, and how the Network can better serve the [deepening and widening ambitions of the European Research Area](#).

More information

Learn about the 'Researcher mobility in a changing world' [survey process](#).

Consult the [final report](#) on the [EURAXESS Worldwide web-site](#).

Read the Communication (COM(2020) 628 final), '[New ERA for Research and Innovation](#)'.

The report's findings are also being disseminated throughout the EURAXESS Worldwide's regional hubs: ASEAN (focusing on Singapore, Thailand, Indonesia, Malaysia, and Vietnam), Australia and New Zealand, Latin America and the Caribbean (focusing on Brazil, Argentina, Chile, Mexico, and Colombia), China, India, Japan, Korea, and North America (USA and Canada).

EURAXESS Worldwide wishes to thank Dr Michael Braun (EURAXESS Worldwide ASEAN Regional Representative for Vietnam and Thailand), with the collaboration of MINH DANG BUI - MRES - Economics - FBE- Macquarie University (Vietnam) for their contributions to the study and report.

3 In focus: Interview with Bodhisattva Chattopadhyay, First researcher to receive the European Research Council grant on the topic of Global Science Fiction



Bodhisattva Chattopadhyay is Associate Professor in Global Culture Studies at the Department of Culture Studies and Oriental Languages, University of Oslo. He is Principal Investigator of the European Research Council StG-project “CoFutures: Pathways to Possible Presents” (grant agreement no. 852190). He runs the UiO games research lab *The Holodeck*. Among other things, Chattopadhyay is Imaginary College Fellow at the Center for Science and the Imagination, Arizona State University, a 2020 World Fantasy Award winner and editor-in-chief of *Fafnir: Nordic Journal of Science Fiction and Fantasy Research*, and series co-editor of Routledge *Studies in Global Genre Fiction*. His research website is: <http://cofutures.org>.

Congratulations on becoming the first researcher to receive the European Research Council grant on the topic of Global Science Fiction. Please tell us about your project.

Thank you! My project is on contemporary future fictions, primarily the Global South and margins of the global North: which would cover everything from Afro/Africanfuturism, Latinxfuturism, Indigenous futurism, Gulf- and Arabfuturism, South Asian futurisms, Sinofuturisms, etc. I look at how these new futurisms respond to issues such as climate change and demographic change. My project is also transmedial: it explores literature, the arts, films and television, video games, and any and all other media forms. I also have a crazy team in place. There are a lot of moving parts, so it would be better to check out my research website: <https://cofutures.org>

Science fiction is not the most known and common field among social science and humanities research. What do you think about the present and future state of your research field?

Science fiction (SF) is everywhere, but I would add that it is not a “humanities” field as such. You can come from any discipline to SF: you can be a literary scholar, a linguist, historian, an anthropologist, a data scientist, a physicist, a pedagogy expert, or anything else. SF is a way of thinking with the future – it is not bound to a disciplinary category. Nor is it bound to a single media like a “literary text”: it could be a text but it could just as easily be a video game or it could be a style of dancing. SF is transmedial and transdisciplinary.

Perhaps that is one of its problems, and why it has had such a hard time fitting into mainstream notions of what humanities or social science research should be, and why it has had more luck in more creatively experimental fields such as artistic research, or even experimental STEM fields. This is not only because of some anticipatory power that SF has when it comes to the state of the world (which it often does), but also because SF has the ability to inspire new ways of worldmaking and thinking. I think of SF as the site where our hopes and anxieties for the future are articulated. It is a visionary experiment. The realities of tomorrow are first visualized in science fictional dreaming. A large chunk of our scientists have been inspired by SF, as have many of our designers, architects, engineers, etc. In my team alone I work with scientists, engineers, architects, medical personnel, as well as folks from more traditional humanities fields.

Governmental bodies, NGO think tanks and university centers around the world in many major fields use SF as a means to innovate, anticipate and strategize on everything from the latest design product to the more extreme scenarios of climate catastrophes or terrorist attacks. New forms of knowledge making are taking shape, new societal technicities are forming as we speak. New worlds are being born. SF is a good way to think through both technology and its effects, as well as how society in general functions with the horizon of the future, so I often find myself in good company amongst scientists who think the *really* long term. But we also have excellent humanities and social science scholars here in Europe or the US who work closely with SF. The field of SF studies within academia is growing, and the importance of SF is being recognized across different fields.

I would have said the future of the field is extremely bright, but instead, I will say something more controversial: the future depends on our ability to think with SF strategies. If you aren't in the SF field and haven't done it yet, find your local SF community and talk to the people. Learn more. Hire an SF writer or researcher or strategist in your team. There are many of us out there. You would actually be doing yourself a favour if you are lucky enough to get one. I think the ERC, which is interested in the absolutely cutting edge when it comes to blue sky research, recognized this importance by awarding this grant. And this strategic importance of SF is also why major global organizations or industries outside the core academic sector are without exception working with or building collaborative teams with SF writers, researchers, and thinkers.

What would you say are the most benefits of having an ERC grant?

I cannot speak to the general here, only to the specifics I have observed. In terms of infrastructure, the grant allowed me to assemble a top-notch international, multilingual team, as well as have a dedicated research lab. Then there is the prestige of the ERC, which allows one to build networks and outreach activities far more quickly than otherwise, as well as do really interdisciplinary work, since within a relatively resource-strapped academic environment, a good budget frees you to work on something radically different and something truly groundbreaking.

On a personal note, I also hope the EU will actively support the ERC with even larger funding and many other grant schemes. The world is suffering from huge information gaps and knowledge illiteracy, and science itself is under attack in vicious misinformation campaigns fuelled by regressive politics of different hues which social media has only made more extreme. The research goals and methods of the ERC are extraordinary and push us ever closer to a better, more knowledge oriented futures. We need more of it.

What did you learn about Norwegian research environments that differ from those in India?

I have very limited experience when it comes to research in an Indian environment. Broadly speaking, I would say the main difference is in lack of resources. It might be different or even more extreme in some STEM fields that are even more resource intensive, but for humanities and social sciences, most researchers lack access to basic research materials: recent



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books, recent journal articles, etc, when it comes to conducting research. There are new books from top presses that cost over twenty thousand Indian rupees. To unlock paywalled journal articles of a few pages you might end up spending several thousands of rupees. It's a nightmare. I continually help my researcher friends in India with research materials that they don't have access to.

This basic information inequality is much less visible if you conduct your research in a place like Norway. So if you work here in Norway or generally in the EU, the information inflow and access to information and cutting edge research data is a lot better. But EU is also a leader when it comes to the outflow, both for research publications, information and data in terms of FAIR principles. I would like to highlight the stellar role played by the EU and the ERC as forces for democratizing information and knowledge access with their push for open-access (OA) everywhere, most recently with their OA research platform where we can publish all our articles OA. Our University of Oslo and the Norwegian Research Council have excellent initiatives for OA as well. Positive futures have to be built on top of open knowledge, so I hope the EU and the ERC continues to push further in this direction.

However, beyond this, I would also mention that the grant landscape is pretty harsh, so merely working in an EU or Norwegian environment does not guarantee access to research resources either beyond a point. You need a good grant to be able to conduct cutting edge research, especially for anything particularly resource intensive.

What would you say the biggest challenge in the ERC application process was? How did you overcome it?

The biggest challenge is the psychological pressure from the naysayers: the people who tell you it can't be done. There will be people who will tell you it's not possible, it's too tough, that you need to be a genius, that maybe you are too young, maybe you are too little published, maybe your idea isn't great, etc. Not all of this will be malicious, some of it will be due to people's own insecurities that they tend to project on to others. But most of us have enough demons in our own heads telling us that it can't be done, and imposter syndrome is a reality for many in our academic fields, perhaps true even more for women than men. We don't need external folk telling us it can't be done. And I can already tell any prospective applicant that if you are trying for anything really big, there will be many of these naysayers. You might be your own biggest naysayer. Be open to criticism when it comes to your application or even your idea, but shut out anything that says it can't be done or you can't do it. I don't think I "overcame" it by myself. I had my hive, my colleagues, my SF community, and my friends and family to help me and lift me up every step of the way. So all my thanks to them. It's not magic. The people who get these grants are also human.

Beyond the psychological, the biggest challenge is perhaps the administrative/practical side of the application process. For their outstanding support given to me through every step of the process and beyond, I would like to give a shout-out here to my department and faculty at Oslo, from our ERC advisors, our administrative coordinators, our finance officer, our research leader, who helped me through everything that was practically oriented, and who continue to help me. Thank you!

Could you kindly share some tip to future applicants to the ERC Starting Grants?

If you have a big idea, be confident, but don't skimp on the learning. Don't skimp on the learning especially if you have a big idea. *Just don't skimp on the learning.* Be open to the fact that someone else might have thought it before you, or that someone else has done something that already makes your idea redundant. If that is so, think of another idea, the world isn't running out. Ideas, and good ideas, take time to develop. The good idea doesn't have to come right after your PhD, it can even take a decade. But learn about the discipline like the back of your hand. Read through last twenty-thirty years of journal articles from all the journals of your field if you can, and trawl through academia and research gate, and generally the web, and find everything that seems even remotely relevant. You can't make a breakthrough if you don't even know what you need to break from. Then learn about the application process and the application format. There are plenty of successful applications out there you can find online that you can read and learn from. Find them, read them, see what works. Learn more! I really cannot emphasize learning enough!

Thank you Bodhi!

4 In case you missed it...

Find latest EU Research and Innovation News and open Calls on our EURAXES India [website](#).

About us

EURAXESS India is a networking tool for European researchers active in India and for Indian and international researchers wishing to collaborate with and/or pursue a career in Europe. EURAXESS India provides information about research in Europe, European research policy, opportunities for research funding, for EU-India and international collaboration and for trans-national mobility. **Membership is free.**

Visit us at india.euraxess.org and join the EURAXESS India community.

EURAXESS Worldwide has dedicated teams in the following countries and regions ready to assist you: ASEAN (focus on Singapore, Thailand, Indonesia, Malaysia, and Vietnam), Australia & New Zealand, Latin America and the Caribbean (focus on Brazil, Argentina, Chile, Mexico, and Colombia), China, India, Japan, Korea, and North America (USA and Canada).