



DOCTORAL PROGRAMMES GUIDE



500 cooperation agreements and exchange schemes

800 international doctoral candidates

4 000 doctoral candidates

50 000 students

academic year 2014/2015, in round figures

IMPRINT

PUBLISHER

International Office in
cooperation with
Albertus Magnus Graduate
Center (AMGC)
University of Cologne

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The content of this brochure represents the best knowledge of the International Office of the University of Cologne at the time of print, no warranty can be given for any faults or omissions.

The University of Cologne has developed an internationally outstanding research profile with a broad spectrum of disciplines and ample doctoral opportunities. This brochure provides a comprehensive overview of the various graduate schools and research programmes the University of Cologne has to offer. It is your gateway to the University of Cologne as a centre of science and research.

Good ideas since 1388 – true to this motto, the University of Cologne combines innovation with tradition in its research and teaching. The university has retained its unique appeal on both a regional and global scale. Academic excellence, internationality and a wide selection of courses create an energetic and inspiring environment: a modern university right at the heart of Europe. It makes the university one of the best-known and appealing German universities.

In 2012, the federal and state governments distinguished the University of Cologne as one of eleven Universities of Excellence. Within the framework of the award-winning institutional strategy, three new graduate schools (Human Sciences, Law and Geosciences) and the Albertus Magnus Graduate Center, an umbrella organization for all doctoral programmes and all candidates have been established.

The University of Cologne offers numerous opportunities to earn a doctorate: in structured programmes, in the traditional German individual doctorate under supervision as well as in cooperation with non-university research institutions. Feel free to browse through this brochure to learn more about those opportunities.



Dr. Katja Mertin,
Managing Director of the AMGC



Dr. Johannes Müller
International Office, Research Cooperation

EDITORIAL



Photo: Fabian Startz

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➤ UoC RESEARCH PROFILE IN A NUTSHELL

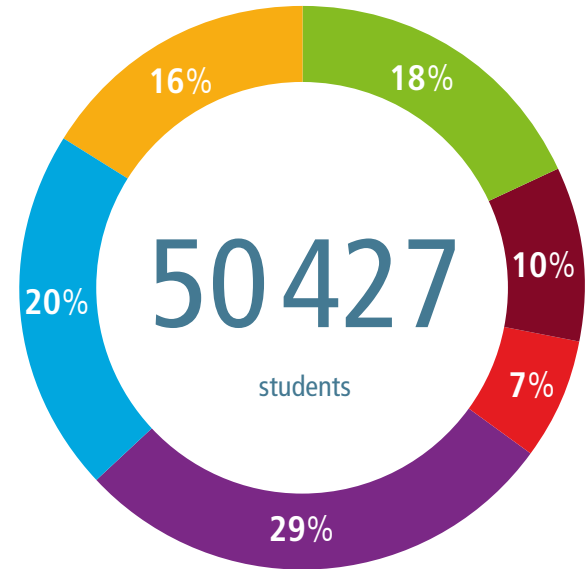
The University of Cologne is one of the largest universities in Germany, offering a broad selection of study programmes. Priding itself on being a dedicated research hub, the UoC and most of its programmes focus on fundamental research. The university is a founding member of "German U15", an association of universities with a particularly high research output. In 2012 UoC was among the 11 universities distinguished by the German Excellence Initiative.

In the Faculty of Medicine, clinical studies are transferring new ideas from bench to bedside, and in the Faculty of Mathematics and Natural Sciences, cross-cutting fundamental research is a priority. Close collaborations between both faculties, for example within the highly visible field of Aging Research, with the surrounding Max Planck Institutes and with the Forschungszentrum Jülich complement the research structures.

Didactics and education studies as well as psychology, rehabilitation sciences and gerontology are the strongholds of the Faculty of Human Sciences. These research areas offer numerous starting points for cooperation with other faculties, especially the Faculty of Medicine, the Faculty of Mathematics and Natural Sciences and the Faculty of Management, Economics and Social Sciences.

The Faculty of Management, Economics and Social Sciences and the Faculty of Law have built an excellent reputation and are among the best research institutions in their respective field. Recently, fundamental research activities in the areas of quantitative and experimental economy and international law have been expanded.

Within the broad field of the Arts and Humanities there are distinguished research areas on the ancient world, medieval studies, literature, non-European cultures – especially regarding the African continent – and contrastive linguistics. The UoC does not offer applied science study programmes such as engineering or architecture, but it envisions a closer collaboration with surrounding universities of applied sciences, particularly in the field of doctoral training.



- Faculty of Management, Economics and Social Sciences
- Faculty of Law
- Faculty of Medicine
- Faculty of Arts and Humanities
- Faculty of Mathematics and Natural Sciences
- Faculty of Human Sciences



➤ ALBERTUS MAGNUS GRADUATE CENTER

The Albertus Magnus Graduate Center (AMGC) is the umbrella organization for all doctoral programmes and graduate schools at the University of Cologne, and the central contact for everyone interested in pursuing a doctorate. Together with the Faculties, graduate schools, research training groups and other institutions, the AMGC works towards a constant improvement of the quality and the framework conditions of doctoral studies at the University of Cologne. In so doing, it explicitly respects the diversity of disciplinary cultures and the different paths to earning a doctorate. The AMGC assists future and current doctoral candidates, both in structured doctoral programmes and under individual supervision.

SUPPORT FOR DOCTORAL CANDIDATES INFORMATION AND ADVICE

- on the different paths to a doctoral degree
- on application procedures
- on contact persons at the International Office and Faculties, graduate schools and in doctoral programmes
- on support measures for doctoral candidates with children
- in cases of conflict

QUALIFICATION

- workshops and seminars on research-related topics
- skills and orientation for professional development inside and outside academia
- language classes (English, German)

NETWORKING

- Welcome Days for doctoral candidates
- international "Stammtische" in cooperation with the International Office (cultural activities and chatting over drinks & snacks)
- lectures, science slams, fireside chats etc.

CONTACT

Managing Director

Katja Mertin

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E-Mail: kmartin@uni-koeln.de

Coordinator Promoting International Doctorates (IPaK)

Saskia Pfeiffer

Tel.: +49 (0) 221 470 5915

E-Mail: saskia.pfeiffer@uni-koeln.de

www.amgc.uni-koeln.de





Photo: format2d

➤ THE INTERNATIONAL OFFICE

The International Office offers guidance and counselling for international doctoral candidates, both for full-time researchers gaining a degree at the University of Cologne and for short-term doctoral researchers on a research stay in Cologne. We consult regarding the process of application and enrollment and offer support in different questions such as visa, residence permit, work permit, health insurance, scholarships etc. In order to help the doctoral researchers integrate at our university, our office organizes information and orientation sessions, intercultural trainings and workshops. Additionally, doctoral candidates can participate in extracurricular activities like field trips and regulars' tables ("Stammtische").

The International Office works closely together with other university and external institutions, such as the Albertus Magnus Graduate Center (AMGC), the Welcome Centre, Albert's International Assistance, the Faculties, the graduate schools, the City of Cologne, funding institutions and Kölner Studierendenwerk to ensure the comprehensive and optimal support of international doctoral candidates.

Especially the Welcome Centre offers additional support in terms of counselling and in administrative matters.



CONTACT

Application, Admission and Enrollment

Lisa Brüning (Ms.), e.schulze-bruening@verw.uni-koeln.de

Kordula Corvest (Ms.), k.corvest@verw.uni-koeln.de

Counselling (visa, activities for doctoral candidates)

Daniela Simut-Perent (Ms.), d.simut@verw.uni-koeln.de

Welcome Centre

Thomas Korytko (Mr.), t.korytko@verw.uni-koeln.de

Friederike Heuck (Ms.), f.heuck@verw.uni-koeln.de

www.international.uni-koeln.de





Photo: Patric Fouad

Sema Karataş

"The a.r.t.e.s. Graduate School supports me in my research project in every possible way. At the same time it gives me the freedom I need to develop personally and academically."

Sema Karataş

Doctoral candidate, a.r.t.e.s. Graduate School for the Humanities Cologne



Photo: Thomas Josef

Maximilian Genske

"Through its excellent teaching concept and first class research environment, the BCGS enables young physicists to work on a high international level in a very productive scientific atmosphere."

Maximilian Genske

Doctoral candidate at the Bonn-Cologne Graduate School for Physics and Astronomy (BCGS)



Photo: Erim Giresulu

Melek Emine Akyuz (Uçar)

"Aging research at CECAD is an exciting field of research in an aging society. The support I receive at CECAD offers me many scientific prospects as a junior scientist."

Melek Emine Akyuz (Uçar)
*Postdoctoral Researcher, CECAD – Cluster of Excellence
 Doctoral researcher at the University of Cologne from
 Dezember 2009 – April 2015*



Photo: Sebastian Knoth

Hans-Peter Haferkamp

"What makes our Graduate School special is its function as a central service point for all doctoral students of the Faculty. By offering education and funding opportunities to all our doctoral students, we create excellent conditions for research and thesis writing at our faculty."

Professor Hans-Peter Haferkamp
Spokesperson of the Graduate School of the Faculty of Law



Photo: Lisa Beller

➤ A.R.T.E.S. GRADUATE SCHOOL FOR THE HUMANITIES COLOGNE

The a.r.t.e.s. Graduate School for the Humanities Cologne enables academic work at the highest level. It promotes an interdisciplinary approach to the humanities, thus extending the academic dialogue beyond the borders of the specific subject, and aims to contribute to the understanding of knowledge processes in their entirety. a.r.t.e.s. is one of the university's five excellence projects funded by the German Excellence Initiative. It provides optimal conditions for Master students, doctoral candidates and postdocs.

The a.r.t.e.s. Graduate School differentiates between two options for doctoral candidates: the Regular Track doctoral programme, the standard model for doctorates at the Faculty of Arts and Humanities, and the Integrated Track doctoral programme, the structured doctoral programme which includes a scholarship and aims to enable doctoral candidates to complete their doctorate within three years. In addition to the doctoral scholarship in the Integrated Track programme, the a.r.t.e.s. Graduate School for the Humanities Cologne also offers scholarships for a period of six months to candidates for the preparation of their doctoral dissertation.

As another integral component of the Graduate School, the Research Master with its tailored programme is especially suitable for students planning to do a doctorate after their Master's degree.

With the Research Lab, a.r.t.e.s. supports candidates in their direct transition to an academic career. Two postdoc research groups examine the history and philosophy of science as well as questions of anthropology and life sciences.



Photo: Fabian Sturtz

Faculty
Spokesperson
Managing Director
Phone
E-Mail
Scholarships

Arts and Humanities
Prof. Andreas Speer
Dr. Artemis Klidis-Honecker
+49 221 470-1259
artes-info@uni-koeln.de

A maximum of 10 scholarships per year is available in the Integrated Track of the a.r.t.e.s. Graduate School. a.r.t.e.s. also awards scholarships to students for a period of one semester to prepare their doctoral dissertation between the end of the Master and the commencement of doctoral research.

predominantly German
Dr. phil.

Language
Academic Degree

www.artes.uni-koeln.de



➤ GRADUATE SCHOOL OF HUMAN SCIENCES

The Graduate School of Human Sciences is the institutional framework for all doctoral programmes at the Faculty of Human Sciences, facilitating goal-oriented and successful doctoral projects in the field of Human Sciences. The graduate school fosters both subject-specific and interdisciplinary exchange, the integration of young researchers into the scientific community and their preparation for future careers.

True to its motto "Managing Diversity and Transition", the graduate school covers a variety of fields which are grouped along three main interdisciplinary aspects:

- demographic change, society and health
- social change, inter-cultural education and inclusion
- experience, behaviour and learning across the life span

Its support strategy covers, among others:

- collective supervision by regular meetings of three research classes
- a study programme including courses and workshops aiming at scientific qualification as well as at the transfer of soft skills
- grants for conference participation and research stays abroad and scholarships for the completion of doctoral projects



Faculty Research Areas

Human Sciences
Education, special education, psychology,
rehabilitation, fine arts and music

Spokesperson Managing Director Phone

Prof. Susanne Zank

E-Mail

Dr. Caroline Gaus

Scholarships

+49 221 570 80 210

Graduiertenschule-HF@uni-koeln.de

There are travel and congress grants and a limited number of completion scholarships available, no full grants.

Language Academic Degree

predominantly German
Dr. phil.

www.graduiertenschule.hf.uni-koeln.de



➤ GRADUATE SCHOOL OF LAW

Excellence in teaching and research alike has always been a priority of the Faculty of Law at the University of Cologne. Doctoral candidates significantly contribute to cutting-edge research within the Faculty. The graduate school serves as an administrative and supporting hub for all doctoral students of the Faculty of Law, thereby following the concept "one for all", which is still unique in Germany.

The graduate school provides a research environment of excellent quality, including an introductory course and workshops, the support of networking activities among doctoral candidates and several grants (no full grants). Moreover, the graduate school does its best to create an equal playing field, providing specific support to doctoral researchers with children. With its wide range of funding possibilities and other facilities, the graduate school sets out to provide the optimal conditions for well-structured research and thesis writing. It encourages doctoral candidates to become active members of the academic and scientific community. At the same time, the graduate school respects the principle of personal supervision by a specialist doctoral advisor.

The Graduate School of Law is part of the Excellence Initiative at the University of Cologne and is partially funded by the federal and state government.



Photo: Ziemaling GbR

Faculty
Research Areas
Spokesperson
Managing Director
Phone
E-Mail
Scholarships

Language
Academic Degree

Law

German, European, US and International Law
Prof. Hans-Peter Haferkamp

Dr. Martin Piazena

+49 221 470-6858

jura-graduierenschule@uni-koeln.de

There is a limited number of travel and congress grants available, no full grants.

predominantly German

Dr. jur.

www.gs.jura.uni-koeln.de



➤ THE COLOGNE GRADUATE SCHOOL IN MANAGEMENT, ECONOMICS AND SOCIAL SCIENCES

The Cologne Graduate School in Management, Economics and Social Sciences constitutes the integrated programme of the "WiSo Faculty", i.e. the Faculty of Management, Economics and Social Sciences at the University of Cologne. Initiated in 2008, it is dedicated to excellence in teaching and research and hosts a variety of research units (many of them DFG funded) such as Design and Behavior, Psychoeconomics and Motivation, Self-Control and Economic Behavior.

CGS is a key component of the Faculty's strategy to

- strengthen the interdisciplinary collaboration between Management, Economics and Social Sciences
- improve doctoral candidates' training and supervision
- increase the Faculty's research output

CGS encompasses researchers from Management, Economics, Sociology, Political Sciences, Econometrics/Statistics, Economic Psychology and Energy Economics/Politics.

All doctoral researchers who obtain their degree at the WiSo Faculty are part of the CGS, attend its courses and benefit from its infrastructure.



Faculty
Research Areas
Spokesperson
Managing Director
Phone
E-Mail
Scholarships

Language
Academic Degree

WiSo Faculty
Management, Economics and Social Sciences

Prof. Dirk Sliwka

Dr. Dagmar Weiler

+49 221 470-6070

office-cgs@wiso.uni-koeln.de

Each year, a limited number of scholarships is offered to the very best graduates in Management, Economics and the Social Sciences. These CGS-Fellows are recruited internationally across the three main and related disciplines. predominantly English
Dr. rer. pol.



www.cgs.uni-koeln.de

➤ INTERNATIONAL MAX PLANCK RESEARCH SCHOOL ON THE SOCIAL AND POLITICAL CONSTITUTION OF THE ECONOMY (IMPRS-SPCE)

Research at the IMPRS-SPCE explores the relationship between the modern economy and its social and political foundations. Building on a long tradition in sociology and political science, the school aims to combine and develop the approaches of new economic sociology, comparative political economy, organization studies and history.

The three-and-a-half-year curriculum is divided into two phases. The coursework in the first year ensures that students enter the phase of writing their dissertation with firm methodological skills and a solid theoretical background. Activities in the second and third year provide a structure of guided independence, allowing students to concentrate on their research and providing feedback through exchange with peers, advisors and other scholars.

A four-month stay at a foreign research university exposes students to a different research environment and adds to the internationalization of their research experience. The IMPRS-SPCE aims to have a high share of international students. All coursework and literature is entirely in English. The Max Planck Institute for the Study of Societies (MPIfG) was rated "excellent" by the German Science and Humanities Council (Wissenschaftsrat) in April 2008. Only four out of 57 institutions received the top rating for their graduate training.



Faculty Research Areas

Spokesperson
Managing Director
Phone
E-Mail
Scholarships

Language

Academic Degree

WiSo Faculty
Sociology, Political Science and Organization
Studies
Prof. Jens Beckert
Dr. Ursula Trappe
+ 49 221 2767-0
imprs@mpifg.de
Admission to the graduate school includes a full
grant, fully equipped office space and access to
MPIfG and University of Cologne research facilities.
Deadline for applications is February 28.
Courses are held in English or German. Knowledge
of German is not mandatory for completing the
programme.
Dr. rer. pol.



imprs.mpihg.de

➤ COLOGNE GRADUATE SCHOOL OF AGEING RESEARCH

The Cologne Graduate School of Ageing Research offers a structured three-year doctoral programme with a full scholarship that is jointly organized by the University of Cologne's "Excellence Cluster on Stress Responses in Ageing-Associated Diseases" (CECAD) and the "International Max Planck Research School of AGE" (IMPRS AGE), composed of the Max Planck Institute for Biology of Ageing, the Max Planck Institute for Metabolism Research and the Center of Advanced European Studies and Research (caesar).

More than fifty research groups with internationally recognized scientists cover diverse research areas in the fields of genetics, cell biology, biochemistry, bioinformatics, systems biology and translational medicine. Close links among our research groups foster interdisciplinary collaboration and promote the development of novel research approaches. New Core Facilities with state-of-the-art technologies provide excellent infrastructure for training and research. The doctoral programme is comprised of seminars and courses in ageing research, scientific writing and presentation training as well as unique career development opportunities. The Cologne Graduate School of Ageing Research strives to promote the scientific independence by immersing candidates in high quality research and encouraging critical thinking skills, lively exchange with other scientists and active participation in the programme. The communication and courses of the programme are conducted in English.



Faculty Research Areas

Mathematics and Natural Sciences
Genetics, cell biology, biochemistry, biophysics,
bioinformatics, systems biology and translational
medicine

Spokesperson

Prof. Adam Antebi
Prof. Carien Niessen

Coordinators

Dr. Daniela Morick
Dr. Doris Birker

Phone

+49 221 37970-304

E-Mail

info@ageing-grad-school.de

Scholarships

three-year, full funding

Language

predominantly English

Academic Degree

Dr. rer. nat., Dr. nat. med.

www.ageing-grad-school.de



➤ THE GRADUATE SCHOOL FOR BIOLOGICAL SCIENCES (GSfBS)

The GSfBS is open for all doctoral candidates in biological sciences striving for a Dr. rer. nat. It serves as an umbrella organization for specialized graduate programmes in the life sciences. The GSfBS fosters excellent scientific connections between research groups in the basic science research institutes in the Faculties of Mathematics and Natural Science as well as Medicine and the Max Planck Institutes.

QUALIFICATION

- MSc/doctoral programme
- annual progress reports with thesis committee
- science related skills courses
- workshops for wider professional skills development
- language classes (English, German)

INFORMATION AND ADVICE

- on the different paths to a doctoral degree
- for applicants
- contact persons in specific doctoral programmes
- for practical matters like university enrollment, visa, insurance, accommodation
- in cases of conflict

NETWORKING

- student-organized conferences "Crossroads in Biology" and "Cologne Women In Science Symposium"
- PhD days, Alumni days, speakers lunches



Faculty
Research Areas
Spokesperson
Managing Director
Phone
E-Mail
Postings

Language
Academic Degree

Mathematics and Natural Sciences
Biological Sciences
Prof. Jürgen Dohmen
Dr. Isabell Witt
+49 221 470-1683
Isabell.witt@uni-koeln.de
[http://www.gs-biosciences.uni-koeln.de/
application_postings.html](http://www.gs-biosciences.uni-koeln.de/application_postings.html)
English
Dr. rer. nat.



www.gs-biosciences.uni-koeln.de

➤ THE GRADUATE SCHOOL FOR MATHEMATICS

The Graduate School for Mathematics is the central hub for all activities related to doctoral studies at the Mathematical Institute at the University of Cologne. Together with its research partners, the graduate school offers seminars, colloquia, special lectures and summer schools for doctoral candidates. Students also organize their own fellow seminar. Most of those activities are held in English, occasionally also in German.

A basic component in the training of doctoral candidates are the sixteen weekly research seminars with talks given mainly by invited speakers. They also participate in the activities of the supervisors' university work groups, both locally and in transregional and international cooperations. The supervisors have excellent international connections and the doctoral candidates are encouraged to travel to work and study with international experts. Special events are the lecture series given by renowned guests and the numerous international conferences and summer schools organized in Cologne. Besides its own guest programme, the graduate school also takes advantage of the guests coming to the Hausdorff-Center and the Max Planck Institute for Mathematics in Bonn. The research fields represented at the graduate school cover all major areas in mathematics.

To register as a doctoral candidate in mathematics at the University of Cologne, you need a supervising professor who agrees to advise you during the entire process of gaining a doctorate. Most professors will agree to supervise a doctoral thesis in English.



Faculty
Research Areas
Spokesperson
Managing Director

E-Mail
Scholarships
Language
Academic Degree

Mathematics and Natural Sciences

Mathematics

Prof. George Marinescu

n/a

+49 221 470-2661

graduertenschule_mi@math.uni-koeln.de

n/a

predominantly English

Dr. rer. nat.



www.mi.uni-koeln.de/gschool

➤ GRADUATE SCHOOL OF GEOSCIENCES (GSGS)

The Graduate School of Geosciences (GSGS) provides a structured research and learning environment for doctoral students in geosciences at the University of Cologne. It fosters interdisciplinary exchange in geoscience research and strengthens relations among the participating disciplines. The main aim of the GSGS is to foster excellent doctoral research by offering special benefits and support to its members. It establishes regional and international cooperation in graduate education and research.

An important goal of the GSGS is to attract excellent doctoral candidates from abroad. It offers “start-up honours grants” to very promising potential doctoral candidates aimed at supporting talented young researchers while they apply for external funding in their research field of interest. Through direct support by experienced researchers, they learn how to write research proposals.

The GSGS offers fellowship grants to excellent doctoral student members of the GSGS whose funding has expired, or is about to expire, and who are either in the final phase of their doctoral project or have just defended their thesis.



Faculty
Research Areas
Spokesperson
Managing Director
Phone
E-Mail
Scholarships
Language
Academic Degree

Mathematics and Natural Sciences
Geosciences
Prof. Tibor Dunai
Dr. Karin Boessenkool
+49 221 470-5925
gradschool-geosci@uni-koeln.de
Start-up and completion grants
predominantly English
predominantly Dr. rer. nat.

www.geosciences.uni-koeln.de/graduate_school



➤ CLUSTER OF EXCELLENCE ON PLANT SCIENCES (CEPLAS)

CEPLAS holds a unique position within the German Excellence Initiative as the only cluster focusing exclusively on plant sciences. It is a joint effort of the University of Cologne, Heinrich Heine University Duesseldorf, the Max Planck Institute for Plant Breeding Research and the Forschungszentrum Jülich.

Researchers of these institutions are pursuing inventive strategies for sustainable plant production. The goal of this initiative is to develop state-of-the-art methods for a second green revolution on the basis of innovative basic research and established know-how in plant research. CEPLAS focuses on cutting-edge science as well as the promotion of young scientists by novel study modules and individual training programmes.

CEPLAS offers a structured doctoral programme for German and international young researchers. Admission includes a three-year employment contract to cover the costs of living. CEPLAS provides a highly interactive, stimulating research environment that fosters creative and independent thinking. Doctoral researchers can apply for travel grants to attend conferences and workshops and to conduct research in a laboratory abroad for a period of up to three months.



Faculty Research Areas

Mathematics and Natural Sciences
Annual and perennial life histories
C4 photosynthesis
Plant-microbe interactions
Metabolic interactions

Spokesperson Managing Director

Prof. Ute Höcker
Dr. Esther Jawurek
+49 221 470-4877
gradschool@ceplas.eu

Phone

E-Mail

Scholarships

Language

Academic Degree

Full grants and travel grants are available
predominantly English
Dr. rer. nat.

www.ceplas.eu



➤ BONN-COLOGNE GRADUATE SCHOOL OF PHYSICS AND ASTRONOMY (BCGS)

The Bonn-Cologne Graduate School of Physics and Astronomy (BCGS) is a joint programme of graduate studies between the universities of Bonn and Cologne. The programme leads students with a Bachelor's degree through an MSc phase to doctoral studies. Students with MSc degrees are admitted directly to the doctoral stage.

The BCGS provides mentoring and research internships, scholarships and travel funds, and a vibrant research environment at the spearhead of modern physics. Research areas at the two departments of Bonn and Cologne span almost the entire range of current physics – from astrophysics, biophysics and condensed matter research to particle physics, quantum optics and string theory.

Doctoral candidates are usually paid a salary and contribute to teaching at the undergraduate or Master's level. For full scholarships for the Master's course, shortlisted applicants are invited to Bonn and Cologne for interviews in early spring every year. Stipends (on top of the standard salary as a teaching assistant) are awarded to doctoral candidates with an excellent performance during their first year.



Faculty
Research Areas
Spokesperson
Managing Director
Phone
E-Mail
Scholarships

Language
Academic Degree

Mathematics and Natural Sciences
Physics
Prof. Johannes Berg
Dr. Petra Neubauer-Guenther
+49 221 470 3554
gradschool.physics@uni-koeln.de
Full scholarships for MSc program (application
deadline Jan. 15), salary as teaching assistant,
travel grants and additional partial scholarships
English
Dr. rer. nat.

www.gradschool.physics.uni-koeln.de



➤ HELMHOLTZ INTERDISCIPLINARY DOCTORAL TRAINING IN ENERGY AND CLIMATE GRADUATE SCHOOL (HITEC)

The Helmholtz Interdisciplinary Doctoral Training in Energy and Climate (HITEC) is a Helmholtz Graduate School of the Forschungszentrum Jülich and the five partner universities Aachen, Bochum, Cologne, Düsseldorf and Wuppertal focusing on energy and climate research. The range of topics at HITEC reflects the research areas at the Jülich Institute of Energy and Climate Research and its university partners: energy technology, development of technological solutions for issues of renewable, fossil and nuclear energy research as well as atmospheric research.

The three-year training programme is based on a modular concept that accompanies the doctoral thesis. Students can select from a variety of HITEC events on specialist topics and methods. HITEC will also include training courses in transferable skills specially developed for HITEC students, e.g. presentation techniques or scientific writing. Supervision of the doctoral candidates is complemented by internal mentoring to guide their career development and by external mentoring to improve their international networking in science and industry.

Networking and exchange is HITEC's guiding principle in order to broaden the candidates' perspectives beyond their individual thesis projects and to help build a future expert community.



Faculty
Research Areas
Spokeperson
Managing Director
Phone
E-Mail
Scholarships
Language
Academic Degree

Mathematics and Natural Sciences
Energy and climate
Prof. Uwe Rau
Dr. Bärbel Köster
+49 2461 61-1595
b.koester@fz-juelich.de
Special calls for application
English
predominantly Dr. rer. nat., Dr.-Ing.



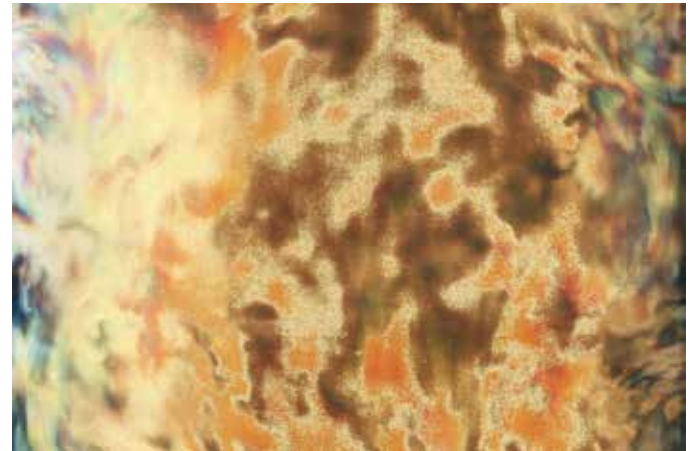
www.hitec-graduate-school.de

➤ INTERNATIONAL HELMHOLTZ RESEARCH SCHOOL OF BIOPHYSICS AND SOFT MATTER

The International Helmholtz Research School of Biophysics and Soft Matter (IHRS BioSoft) provides excellent research opportunities for doctoral projects. The aim of the complementary research training is to advance integration and exchange between physics, chemistry and biology.

Students benefit not only from lectures, seminars and lab courses given by experts in the field, but also from courses in transferable skills. The curriculum and the international and interdisciplinary atmosphere foster both professional qualification and personal development. In addition, fellow doctoral candidates have the opportunity to experience the environment provided by the research centres Forschungszentrum Jülich and caesar Bonn that are associated with the major German research organizations Helmholtz Association and Max Planck Society, respectively.

- The International Helmholtz Research School BioSoft offers three-year doctoral projects and financial support.
- The research school is open to highly-qualified and motivated applicants from all over the world.
- Applicants should hold a Master's degree in biology, chemistry, physics or related subjects.
- Applications are accepted at all times.



Faculty Research Areas Spokesperson

Mathematics and Natural Sciences
Biology, chemistry and physics
Prof. Gerhard Gompper
Prof. Rudolf Merkel

Managing Director Phone E-Mail Scholarships Language Academic Degree

Dr. Thorsten Auth
+ 49 2461 61 1735
biosoft@fz-juelich.de
Financial support is available
English
Dr. rer. nat.

www.ihrs-biosoft.de



➤ INTERNATIONAL MAX PLANCK RESEARCH SCHOOL ON UNDERSTANDING COMPLEX PLANT TRAITS

The IMPRS on “Understanding complex plant traits using computational and evolutionary approaches” is organized by the Max Planck Institute for Plant Breeding Research together with its partners from the University of Cologne and Heinrich Heine University Düsseldorf. The constellation of participating institutions provides excellent training conditions and expertise in plant genetics, plant biochemistry, structural biology, cell biology and bioinformatics.

The training includes regular seminars, yearly retreats, supervision by a thesis committee, and soft skill and practical courses on modern laboratory techniques. The programme is taught in English and open to students from all countries holding a Master’s degree. Currently, the IMPRS has about forty doctoral candidates, half of which come from countries outside of Germany. At the end of the programme, a written thesis and a successful thesis defence (“Disputation”) qualify for a Dr. rer. nat. (corresponding to a PhD) degree.

Admission is entirely dependent on scientific merit and achievement. The call for online applications usually opens in December and closes in January. The programme commences in autumn.



Faculty Research Areas

Mathematics and Natural Sciences
Plant genetics, plant biochemistry, structural biology, cell biology and bioinformatics

Spokesperson Coordinator

Prof. George Coupland

Phone

Dr. Johanna Spandl

E-Mail

+49 221 5062 - 124
phd-office@mpipz.mpg.de

Funding/Financing

Doctoral candidates receive a competitive salary

Language

English

Academic Degree

Dr. rer. nat.



www.mpipz.mpg.de/imprs

➤ THE INTERNATIONAL MAX PLANCK RESEARCH SCHOOL (IMPRS) FOR ASTRONOMY AND ASTROPHYSICS

The IMPRS for Astronomy and Astrophysics is a cooperation of the Max Planck Institute for Radioastronomy and the universities of Cologne and Bonn. It offers a broad spectrum of observational and theoretical topics ranging from galactic and extragalactic astrophysics, cosmology and fundamental physics to instrumentation. Students of the IMPRS have access to state-of-the-art space and ground borne facilities in the optical, the infrared and radio range, as well as other wavelengths.

The IMPRS for Astronomy and Astrophysics offers a competitive doctoral programme in English on the basis of a structured curriculum, including advanced lectures, professional skills seminars, colloquia, "students-only" workshops and academic exchange with experts from all over the globe. The quality of the thesis work is monitored and by thesis advisory committees. Travel grants allow participation in conferences and summer schools as well as observing campaigns.



Faculty
Research Areas
Spokesperson
Managing Director
Phone
E-Mail
Scholarships
Language
Academic Degree

Mathematics and Natural Sciences
Astronomy and astrophysics
Prof. J. Anton Zensus
Dr. Rainer Mauersberger
+49 228 525-218
imprs@mpifr-bonn.mpg.de
Fully funded research contracts available
English
Dr. rer. nat.

www.mpifr-bonn.mpg.de/en/imprs



➤ INTERDISCIPLINARY PROGRAMME HEALTH SCIENCES (IPHS)

The IPHS offers a flexible curriculum adapted to the particular educational background and specific research interest of non-medical graduates and all graduates outside the fields of biology, biochemistry and molecular biology (those see Interdisciplinary Program Molecular Medicine or Graduate School for Biological Sciences). Candidates are assisted by the principal investigator of the research project and two individual scientific mentors.

IPHS provides unique training opportunities for international students holding a Master's degree or equivalent in a field related to the Health Sciences. Applications are accepted throughout the year. You are encouraged to apply for external scholarships through the DAAD or other funding organizations. Please note that the IPHS does not provide funding.

After successful completion of the programme, the Faculty of Medicine confers the title PhD to the graduates.



Faculty
Research Areas
Spokeperson
Managing Director
Phone
E-Mail
Scholarships
Language
Academic Degree

Medicine
Health Sciences
Prof. Rudolf Wiesner
Dr. Vera Bergmeier
+49 221 478 98435
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none
predominantly English
PhD

www.ukoeln.de/IMI8C



➤ INTERDISCIPLINARY PROGRAMME MOLECULAR MEDICINE (IPMM)

The University of Cologne has a long-standing academic tradition and a world-wide reputation for top-level biomedical research. The IPMM is a joint programme of the Faculty of Medicine and the Faculty of Mathematics and Natural Sciences. The three-year doctoral programme reflects the increasing importance of interdisciplinarity and provides comprehensive research training in an atmosphere of scientific excellence.

The programme is open to outstanding research-oriented medical and life science graduates. The IPMM is an interdisciplinary programme in the area of molecular medicine covering both research and complementary skills. The curriculum offers sufficient flexibility to be adapted to particular educational backgrounds and specific research interests. Participants are supervised by a principle investigator and individually mentored by two senior scientists.

After completion of the programme, participants are awarded the degree Dr. nat. med., equivalent to the German Dr. rer. nat.



Faculty Research Areas Spokesperson

Medicine and Mathematics and Natural Sciences

Molecular Medicine

Prof. Günther Schwarz

Prof. Mats Paulsson

Managing Director

Dr. Vera Bergmeier

Dr. Debora Grosskopf-Kroiher

+49 221 478 98435

vera.bergmeier@uk-koeln.de

Phone

E-Mail

Scholarships

none

Language

predominantly English

Academic Degree

Dr. nat. med.



www.zmmk.uni-koeln.de/ipmm

➤ GRADUATE SCHOOL OF EDUCATION

The University of Cologne is one of the biggest teacher educating universities in Germany and attracts many students from across Europe. More than 14,000 students pursue an education degree and are enrolled in a teacher education programme. The Graduate School of Education was founded in 2011, together with the Centre for Teacher Education (ZfL). The graduate school focuses on implementation research, inclusion and professionalization in education.

Education research at the University of Cologne reflects upon the diverse and complex social challenges facing future teachers. Research projects at the Graduate School of Education deal with the description, analysis and reflection of the dynamics of teaching and learning in a knowledge-based society. Questions reach far beyond a mere transfer of knowledge and include ethical and social challenges.

The Graduate School of Education, linking teaching methodology with interdisciplinary educational science and research projects, is able to closely relate educational theory and first-hand practice periods due to its connection to the Centre for Teacher Education.

Even though colloquia are usually held in German, the graduate school's programme is open for international doctoral candidates.



Faculty Research Areas

Cross-faculty
Implementation research, inclusion,
professionalization in education

Spokesperson Managing Director Phone

Prof. Stefan Herzig
Dr. Gaby Schwager-Büschges
+49 221 470 8614

E-Mail Scholarships

gaby.schwager@uni-koeln.de
A limited number of scholarships is available; a call for applications is published on the website. Application for admission without financial support is possible at any time.

Language Academic Degree

predominantly German
Dr. sc. ed.; Dr. phil.; Dr. rer. pol.



www.zfl.uni-koeln.de/graduiertenschule



The Student Service Center. Located at the Cologne green belt.

Photo: format24



➤ COLLABORATIVE RESEARCH CENTRES (CRS) AT THE UoC

➤ FACULTY OF ARTS AND HUMANITIES:

- CRC 806 - Our Way to Europe: Culture-Environment Interaction and Human Mobility in the Late Quaternary

➤ FACULTY OF MATHEMATICS AND NATURAL SCIENCES:

- CRC 624 - Templates: From the Design of Chemical Templates towards Reaction Control
- CRC 635 - Posttranslational Control of Protein Function
- CRC 680 - Molecular Bases of Evolutionary Innovations
- CRC 956 - Conditions and Impact of Star Formation - Astrophysics, Instrumentation and Laboratory Research
- CRC / Transregio 32 - Patterns in Soil-Vegetation-Atmosphere Systems
- CRC/Transregio 12 - Symmetries and Universality in Mesoscopic Systems

➤ FACULTY OF MEDICINE:

- CRC 670 - Cell-Autonomous Immunity
- CRC 829 - Molecular Mechanisms Regulating Skin Homeostasis
- CRC 832 - Molecular Basis and Modulation of Cellular Interactions in the Tumour Microenvironment
- Transregio 134 Essverhalten - Homöostase und Belohnungssysteme



➤ MARIE CURIE INITIAL TRAINING NETWORKS

- DiXiT: Digital Scholarly Editions Initial Training Network
- CodeAge: Chronic DNA Damage in Ageing
- ITaRS: Initial Training for Atmospheric Remote Sensing

➤ EMMY-NOETHER RESEARCH GROUPS

- Understanding and the Apriori (Dr. B. Jackson and Dr. M. Balcerak Jackson)
- Neuronal Control of 6-legged Locomotion (Dr. S. Gruhn)
- Mitochondrial Protein Synthesis Defects: From Molecular Basis to Therapeutic Approach (Dr. T. Wenz)
- In Vivo Characterization of the Protein Kinase MK2 as a Potential Target Molecule for a New Chemotherapy-Sensitizing Cancer Therapy (Dr. C. Reinhardt)
- Dynamics of neuronal circuits (Dr. C. R. Smarandache-Wellmann)
- Structural and functional studies of cytoskeleton regulation (Dr. M. Lammers)
- Comparative cellular and molecular approaches to epithelial morphogenesis in insects (K. Panfilio, PhD)
- Quantum critical transport in electronic systems and spin liquids (Dr. L. Fritz)
- Noncoding RNA and Energy Homeostasis (CECAD / MPI, Dr. J. Kornfeld)



Photo: Thomas Josef

➤ MAX-PLANCK RESEARCH GROUPS

- Max Planck Research Group: Functional Cancer Genomics (Dr. R. Thomas)
- Max Planck Research Group: Neuromodulation & Neurorehabilitation (Dr. C. Grefkes)
- Max-Planck-Research Group Skin Homeostasis and Ageing (Dr. S. Wickstroem)

FURTHER RESEARCH GROUPS

- Research Training Group - Neural Circuit Analysis on the Cellular and Subcellular Level (Prof. A. Büschges)
- Max Eder Research Group: Laboratory for Lymphocyte Signalling and Oncoproteome (Dr. M. Herling)
- Molecular and Nanoscale Catalysts for Hydrogen Storage - MaNCatal-H2 (Dr. M. Pechtli)
- Skin Immune Responses (Dr. M. Fabri)
- CECAD Junior Group (Dr. B. Schumacher)
- CECAD Junior Group (Dr. A. Trifunovic)
- CECAD Junior Group (Dr. M. Uhlirova)
- Liebig Research Group: Biocatalytic Desymmetrizations – Synthesis Efficiency via Active Reactants (Dr. J. Deska)
- Research Group: Dermatogenetics, at the Cologne Centre for Genomics (Dr. H.-C. Hennies)
- Research Group: Molecular Infectiology (Dr. N. Papadopoluou)
- Research Group: Extracellular Matrix Mediated Regulation of Signaling (Dr. G. Sengle)

- Research Group: Polarity in Skin Homeostasis and Disease (Dr. S. Iden)
- Research Group: Regulation of Lineage Commitment in Mammalian Skin (Dr. C. Niemann)
- Research Group: Molecular Pathogenesis of Selected Inherited Disorders (Dr. B. Wollnik)
- Research Group: Function and Regulation of PML Nuclear Bodies (Dr. G. Praefcke)
- Research Group in Musicology: The Karajan Discourse. On the Societal and Musical Staging of a Conductor's Myth (Dr. H. Hein)
- Mouse Genetics and Obesity-associated Cancer (Dr. T. Wunderlich)
- Junior Research Group in Mathematical Physics (Dr. T. Quella)
- Leibniz independent junior research (Dr. A. Alldridge)
- Analysis of nod like receptor (NLR) mediated innate immunity in mammalian cells (Dr. T. Kufer)
- Inflammation, cell death and phagosomal processing in the innate immune response against intracellular bacterial pathogens (Dr. N. Robinson)
- Mechanisms and regulation of centrosome assembly (Dr. J. Gopalakrishnan)
- Systems Biology of Chromatin (Dr. A. Papantonis)
- Developmental genomics (Dr. A. Rada-Iglesias)
- Population Genetics of Social Insects (Dr. M. Hasselmann)

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