



## Scholarship Program of the German State of North Rhine-Westphalia for students from Israel

**Call 2015**

### **Scholarship places at institutions of higher education in North Rhine-Westphalia**

(current version, as of December 9th 2014)

Please choose the scholarship place(s) you seek to apply for;  
fill in the corresponding identification number (#) from the following list into the  
application form which you can download from

<http://www.uni-duesseldorf.de/NRW-Nahost-Foerderprogramme>

<b><u>DISCIPLINES (MULTIPLE ENTRIES POSSIBLE)</u></b>	<b>3</b>
<b>CONTACTS AND FURTHER INFORMATION</b>	<b>6</b>
<b><u>BIELEFELD UNIVERSITY (BI)</u></b>	<b>7</b>
<b><u>BIELEFELD UNIVERSITY OF APPLIED SCIENCES (FH BI)</u></b>	<b>9</b>
<b><u>RUHR-UNIVERSITY BOCHUM (BC)</u></b>	<b>13</b>
<b><u>UNIVERSITY OF BONN (BN)</u></b>	<b>18</b>
<b><u>BONN-RHEIN-SIEG UNIVERSITY OF APPLIED SCIENCES (BRS)</u></b>	<b>19</b>
<b><u>TU DORTMUND UNIVERSITY (DO)</u></b>	<b>22</b>
<b><u>HEINRICH-HEINE-UNIVERSITY DUESSELDORF (DS)</u></b>	<b>24</b>
<b><u>UNIVERSITY OF DUISBURG-ESSEN (DE)</u></b>	<b>28</b>
<b><u>RESEARCH CENTER JUELICH (FZJ)</u></b>	<b>30</b>
<b><u>UNIVERSITY OF COLOGNE (KL)</u></b>	<b>38</b>
<b><u>UNIVERSITY OF MUENSTER (MS)</u></b>	<b>41</b>
<b><u>MUENSTER UNIVERSITY OF APPLIED SCIENCES (MFH)</u></b>	<b>45</b>
<b><u>UNIVERSITY OF PADERBORN (PB)</u></b>	<b>47</b>
<b><u>UNIVERSITY OF WUPPERTAL (WU)</u></b>	<b>50</b>

## ***Disciplines (multiple entries possible)***

Architecture / Art / Design	<ul style="list-style-type: none"><li>• FH BI 2</li><li>• FH Bi 3</li></ul>
Biology / Life Sciences / Geography / Environmental Science / Agriculture	<ul style="list-style-type: none"><li>• BC 4</li><li>• BRS 1</li><li>• DS 2</li><li>• FZJ 3</li><li>• FZJ 4</li><li>• MS 3</li></ul>
Business (Administration) / Economics	<ul style="list-style-type: none"><li>• FH BI 1</li><li>• KL 3</li></ul>
Chemistry / Chemical Engineering / Biochemistry / Pharmacy	<ul style="list-style-type: none"><li>• BI 1</li><li>• BC 4</li><li>• FZJ 4</li><li>• MS 1</li><li>• MS 3</li></ul>
Computer Science / Informatics / Information Sciences	<ul style="list-style-type: none"><li>• DS 2</li><li>• FZJ 2</li><li>• FZJ 5</li><li>• FZJ 6</li><li>• PB 3</li></ul>
Cultural Studies / Literature / Philology / Linguistics	<ul style="list-style-type: none"><li>• DO 2</li><li>• BC 1</li><li>• DS 1</li><li>• DS 3</li><li>• KL 4</li><li>• MS 2</li><li>• MS 5</li></ul>

Educational Science / Didactics	<ul style="list-style-type: none"> <li>• DE 1</li> <li>• DE 2</li> <li>• WU 2</li> </ul>
History / Archaeology / Anthropology	<ul style="list-style-type: none"> <li>• BI 2</li> <li>• BC 2</li> <li>• DS 3</li> <li>• KL 1</li> <li>• KI 4</li> <li>• MS 2</li> <li>• MS 5</li> </ul>
Law	<ul style="list-style-type: none"> <li>• KL 2</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• FH BI 4</li> <li>• FZJ 2</li> <li>• FZJ 6</li> <li>• PB 2</li> </ul>
Mechanical Engineering / Process Engineering / Material Engineering / Electrical Engineering / Biotechnology	<ul style="list-style-type: none"> <li>• FH BI 4</li> <li>• FZJ 1</li> <li>• FZJ 5</li> <li>• MS 3</li> <li>• MS 4</li> <li>• MFH 1</li> <li>• MFH 2</li> <li>• PB 1</li> <li>• PB 3</li> </ul>
Media Studies / Communication Science / Journalism / Film Studies	<ul style="list-style-type: none"> <li>• KL 3</li> </ul>
Medicine / Health Sciences	<ul style="list-style-type: none"> <li>• BC 4</li> <li>• BN 1</li> <li>• FZJ 2</li> </ul>

	<ul style="list-style-type: none"> <li>• FZJ 3</li> <li>• MS 3</li> </ul>
Philosophy / Theology / Religious Studies	<ul style="list-style-type: none"> <li>• BI 2</li> <li>• BC 1</li> <li>• BC 5</li> <li>• MS 2</li> <li>• MS 5</li> </ul>
Physics / Geophysics / Nanotechnology / Astronomy	<ul style="list-style-type: none"> <li>• BI 1</li> <li>• DO 1</li> <li>• DS 2</li> <li>• FZJ 1</li> <li>• FZJ 2</li> <li>• FZJ 4</li> <li>• MS 1</li> <li>• MS 4</li> <li>• MFH 2</li> <li>• PB 2</li> <li>• WU 3</li> <li>• WU 4</li> </ul>
Psychology / Cognitive Science / Neuroscience	<ul style="list-style-type: none"> <li>• BC 1</li> <li>• BC 6</li> <li>• DE 3</li> <li>• FZJ 3</li> </ul>
Social Sciences / Sociology / Politics	<ul style="list-style-type: none"> <li>• BI 2</li> <li>• BC 3</li> <li>• MFH 2</li> <li>• WU 1</li> </ul>
Spatial Planning / Civil Engineering	<ul style="list-style-type: none"> <li>• FH BI 2</li> </ul>

## ***Contacts and further information***

**Heinrich-Heine-University Duesseldorf**

International Office

Universitaetsstrasse 1

D-40225 Duesseldorf

Germany

Dr. Guido Quetsch

Phone: +49 (0)211 / 81 14092

Fax: +49 (0)211 / 81 11334

Email: [nrw-scholarship@hhu.de](mailto:nrw-scholarship@hhu.de)

# Bielefeld University (BI)

Bielefeld - the "university of short ways" and of "interdisciplinary intertwinement"! Whereas elsewhere the departments and institutes are spread all over the city, Bielefeld has its entire university in one building. This way, students may even utilize their lecture breaks and peek into other classes or lectures. In the library, the sections of related departments, e.g., physics and chemistry are found right next to each other. Due to the compactness of the building, it could be equipped with a computer network, even traversing department boundaries, e.g., mathematics and physics, at an early stage. Nowhere else is interdisciplinarity practiced in this way; there's even a special-purpose Center for Interdisciplinary Research, "ZiF". In particular, the use of expensive equipment such as transmission electron microscopes is shared between the biology and physics departments, the math department's visualization lab is open to people of other disciplines, as well. Physicists and chemists closely collaborate in some laboratories. There is a joint study program called "Natural Sciences and Information Technology" in cooperation with the Technical Faculty. Young scientists come to Bielefeld from all parts of the globe to participate in our research activities. There exist close contacts with the research centers DESY at Hamburg and CERN (elementary particle physics) at Geneva as well as with BESSY (molecular and surface physics) at Berlin and ESRF at Grenoble, among others. There are a multitude of cooperations with research institutions and universities, domestic and foreign.

Bielefeld University offers the opportunity of taking a German language course at "PunktUm".

[www.uni-bielefeld.de](http://www.uni-bielefeld.de)

**Contact:** Dr. Thomas Luettenberg,  
Dezernat III  
Head/ International Office  
Universitaetsstr. 25, D-33615 Bielefeld  
Phone: +49-(0)521/106-4088,  
E-mail: [thomas.luettenberg@uni-bielefeld.de](mailto:thomas.luettenberg@uni-bielefeld.de)

**# BI 1**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program</b> (B = Bachelor; M = Master; P = PhD)
Faculty of Physics	Prof. Dr. Armin Goelzhaeuser	2	Physics, Chemistry	B, M
<b>Time frame:</b>	April – December			
<b>Institute's focal research areas</b>	Supramolecular Physics, Chemical Nanolithography, Carbon Nanomembranes			

**# BI 2**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Bursars' degree program</b> (B = Bachelor; M = Master; P = PhD)
Institute for Science and Technology Studies (IWT)	Prof. Dr. Martin Carrier	1	Sociology, Philosophy, History	M
<b>Time frame:</b>	June – December			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>• Science and Technology Studies; Philosophy of Science, History of Science, Public Understanding of Science;</li> <li>• History, Philosophy and Social Studies of Science</li> </ul>			



# Bielefeld University of Applied Sciences (FH BI)

Faculties: Design, Architecture and Civil Engineering, Technics (new), Engineering and Mathematics, Social Sciences, Business and Health

Courses mainly in German as language of instruction

Winter semester 2014/2015: about 9.400 students enrolled, including 240 international students

German language courses for guest students are organized either within the faculty itself or in cooperation with a further education college or private language institute

<http://www.fh-bielefeld.de/>

**Contact:**

Grit Dörfel, Head of International Office,

Bielefeld University of Applied Sciences,

Kurt-Schumacher-Str. 6, 33615 Bielefeld, Germany

Phone: +49-521/106-7710

Fax: +49-521/106-7794

E-Mail: [grit.doerfel@fh-bielefeld.de](mailto:grit.doerfel@fh-bielefeld.de)

## # FH BI 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Business and Health, Department of Business	Prof. Dr. Uwe Roessler	2	Business Administration, Business Information Systems, Business Law, Business Psychology, International Studies in Management	B, M  Teaching language: German/English (depends on the course)  Working language: German and English  Personal consultation by professors and teachers in English  Papers can be written in English
<b>Time frame:</b>	September 1 <sup>st</sup> – December 20 <sup>th</sup>			
<b>Institute's focal research areas</b>	<p>There is not a specialization in one Research Field. The Faculty is Business with focus on General Business Administration, Information Systems, Law, Psychology, and International.</p> <p>The stipendiary should participate in our course programme and it is possible that he/she can work at a special subject in cooperation with one of our professors.</p> <p>In the Department of Nursing and Health there would also be the possibility to work in the field of healthcare, nursing (practice);</p> <p>Professional consulting and teaching in the instruction of health care professions;</p> <p>Management of pedagogic institutions in the health care sector.</p>			

## # FH BI 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Architecture and Civil Engineering	Prof. Dr.-Ing. Johannes Weinig	2 for English speaking students (M), 5 for German speaking students (BA)	Civil engineering or architecture	B Architecture, B Civil Engineering (classes only in German) M Architecture, M Civil Engineering (Classes & projects in English possible)
<b>Time frame:</b>	September 14 <sup>th</sup> – December 20 <sup>th</sup>			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>- Surveying methods and skills</li> <li>- Construction of plain light buildings (e.g. sports halls or stadiums)</li> <li>- Water engineering and water management</li> <li>- Micro- and ultra-filtration methods</li> <li>- Construction, Energy, Environment:               <ul style="list-style-type: none"> <li>- water engineering including water preparation,</li> <li>- energetic building restoration with alternative energy concepts</li> </ul> </li> </ul>			

## # FH BI 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Design	Prof. Dr. Roman Bezjak	2	Photography and media  Design and communications design  Fashion	B, M  Classes in German language  Personal consultation by professors and teachers in English  Papers can be written in English
<b>Time frame:</b>	September – December 20 <sup>th</sup>			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>- Fotography and media</li> <li>- Book design</li> <li>- Collections design (fashion)</li> </ul>			

## # FH BI 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Engineering and Mathematics	Prof. Dr. Klaus Rüdiger	2	Electrical Engineering, Mechanical Engineering, Industrial Engineering Mechatronics, Computational Engineering Renewable Energies, Applied Mathematics, Biotechnology	B, M  Classes in German language  Personal consultation by professors and teachers in English  Papers can be written in English
<b>Time frame:</b>	September – December 20 <sup>th</sup>			
<b>Institute's focal research areas</b>	<p>Bielefeld University of Applied Sciences offers the subjects listed above.</p> <p>The scholar should work on a specific topic relevant to their Bachelor-or Master course in their home country with one of our professors. It could be a project for a term paper or relevant work for the Bachelor or Master thesis.</p>			

# Ruhr-University Bochum (BC)

Ruhr University Bochum (RUB), about 41,000 students, 4,500 foreign students; modern and innovative university with a wide range of study courses and excellent research institutions, located in one of the most culturally interesting regions in the heart of Europe.

University homepage: [www.rub.de](http://www.rub.de)

International Office: [www.international.rub.de](http://www.international.rub.de)

German language courses start each October (winter term) and April (summer term) and are free of charge for all RUB students.

RUB homepage: [http://www.rub.de/index\\_en.htm](http://www.rub.de/index_en.htm)

International: <http://international.rub.de/index.html.en>

**Contact:**

Ms. Jonna Haensel-Neumann  
Ruhr-Universitaet Bochum  
Studierendenhaus (SH), Raum 1/193  
Universitätsstr. 150, D-44780 Bochum

Phone +49-234-32-25425,  
Fax +49-234-32-14684,  
E-mail: [Jonna.Haensel@uv.ruhr-uni-bochum.de](mailto:Jonna.Haensel@uv.ruhr-uni-bochum.de)

## # BC 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Philosophy of Language and Cognition  Mercator Research Group Structure of Memory (Philosophy & Neuroscience)	Prof. Dr. Markus Werning	2	Philosophy  Linguistics  Cognitive Science	B, M
<b>Time frame:</b>	May – December			
<b>Institute's focal research areas</b>	Philosophy of Language and Mind, Epistemology, Semantics, Philosophy of Neuroscience and Psychology  EEG, Computational Modelling			

## # BC 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Archaeological Science	Dr. Patric Kreuz	3	Archaeology of the Graeco-roman eastern Mediterranean / Near East; Phoenician archaeology	B, M
<b>Time frame:</b>	May – July			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>- Jordan and the Decapolis in the Graeco-roman period;</li> <li>- The Herodian kingdom;</li> <li>- Archaeology of the Phoenician diaspora</li> </ul>			

### # BC 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M= Master; P= PhD)
Hans Kilian und Lotte Köhler Centrum für sozial- und kulturwissenschaftliche Psychologie und historische Anthropologie	Dr. Christian Gudehus	1	Social Science	M
<b>Time frame:</b>	September – December			
<b>Institute's focal research areas</b>	<p>Possible Fields of Research</p> <ul style="list-style-type: none"> <li>- Social and Cultural Psychology</li> <li>- Social Theory</li> <li>- Memory Studies</li> <li>- Violence and Aggression Research</li> <li>- Postcolonial and Gender Studies</li> <li>- Qualitative Research Methods</li> </ul> <p>Depending on the Qualification of the Applicant:</p> <ul style="list-style-type: none"> <li>- Developing a research project for the Master/PhD Thesis</li> <li>- Work on the Master/PhD Thesis</li> <li>- Preparation of a research project (e.g., writing a proposal)</li> <li>- Teaching</li> <li>- A workshop/conference may be organized in advance and held during the applicant's stay</li> </ul>			

#### # BC 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department of Anatomy and Molecular Embryology	Prof. Beate Brand-Saberi	2	Biology, Biochemistry, Genetics, Medicine	M
<b>Time frame:</b>	May – December			
<b>Institute's focal research areas</b>	Developmental and Stem Cell Biology Cell Migration, Tomor Biology, Cytoskeleton			

#### # BC 5

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M= Master; P= PhD)
Institute for Philosophy II	Prof. Dr. Tobias Schlicht Prof. Dr. James Wilberding	2	Theoretical Philosophy: Mind, Logic, Language, Epistemology Ancient Philosophy	M
<b>Time frame:</b>	May – December			
<b>Institute's focal research areas</b>	The institute is specialized in Philosophy of Language, Mind and Science. It is also offering Logic and Epistemology and a program in Ancient Philosophy			



**# BC 6**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M= Master; P= PhD)</b>
Dept. Of Neuropsychology	Prof. Dr. Boris Suchan	2	Neuropsychology, Cognitive Neuroscience	B, M
<b>Time frame:</b>	April – July; October - December			
<b>Institute's focal research areas</b>	<p>We have many research topics. We are interested in the processing of faces and bodies in the human brain. We are also interested in the involvement of the medial temporal lobe in the formation of long term memory and also in perception.</p> <p>As techniques, we are using EEG and fMRI. Please take a look at our homepage to get an impression of our research topics (<a href="http://www.ruhr-uni-bochum.de/neuropsych/">http://www.ruhr-uni-bochum.de/neuropsych/</a>).</p>			

# University of Bonn (BN)

Rheinische Friedrich-Wilhelms-Universität, which belongs to the top Universities in Germany in terms of student's enrolment with particular high international participation, of high quality scientific projects and publications, multifaceted teaching activities. Currently several interdepartmental and interfaculty curricula are involved in innovative educational programs such as "Application of Biotechnology in Medicine" which are open for further interdisciplinary and international co-operations supported by several national foundations and European Union. Since several years, the University of Bonn actively participate in bilateral exchanging programs with Israel. The accumulated experience for both sides is highly positive. The created scientific and personal contacts are of durable nature.

Students from Israel could be integrated in interdisciplinary and interfaculty projects as well as particular English spoken Bachelor or Master Curricula at the below listed institutes, which have pride of their ample interdisciplinary cooperations, long standing involvements in international co-operations and programs supported by reputed scientific laboratories and institutions in Israel e.g. Weizmann-Institute, several Centres of Excellence, "Technion" (Haifa).

[www.uni-bonn.de](http://www.uni-bonn.de)

## Contact:

Sandra Groeger

Poppelsdorfer Allee 53

53115 Bonn

E-mail: [Sandra.groeger@uni-bonn.de](mailto:Sandra.groeger@uni-bonn.de)

## # BN 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department of Radiology  Medical Faculty,  Division of "Molecular / Experimental Radiology"	Prof. Dr. Olga Golubnitchaja	1	Early / Predictive molecular diagnostics,  Targeted prevention, Individualised patient profiling, Personalised Medicine	B, M
<b>Time frame:</b>	August – October			
<b>Institute's focal research areas</b>	<p>Development of disease specific molecular markers for predictive diagnostics and personalized therapy;</p> <p>Application of clinical transcriptomics and proteomics;</p> <p>Expression profiling of human blood;</p> <p>Clinical evaluation of individual predisposition to breast cancer, leading causes of blindness, and chronic complications secondary to Diabetes mellitus type 2. Technological approaches: Clinical proteomics, "Expression Array", "Comet Assay", Zymography, "Real-Time"-PCR</p> <p>Participation in the EPMA World Congress, September , EU-Parliament, Brussels, <a href="http://www.epmanet.eu">www.epmanet.eu</a></p>			

# Bonn-Rhein-Sieg University of Applied Sciences (BRS)

The Bonn-Rhine-Sieg University of Applied Sciences (BRS U) was established in 1995 as a national university funded by the government.

BRS U specializes in business administration, natural sciences, computer science, social security management, technical journalism and engineering. The focus areas for BRS U are applied research and development, technology transfer using international and interdisciplinary approaches. There is an emphasis on internships and practical applications in industry and research and joint research projects with numerous companies and institutions.

As English or another foreign language is a required subject for all students, the university has established a central Language Centre which designs, coordinates and carries out foreign language instruction on all three campuses. These specific-purpose courses are taught predominantly by native speakers, and state-of-the-art IC technologies are often implemented, primarily through the use of new language labs and self-access centres in both Rheinbach and Sankt Augustin. Especially for foreign students, "German as a foreign language" is offered including the TestDaf Exam.

The campuses in Sankt Augustin, Rheinbach and Hennef are well-equipped with modern laboratories, and technical equipment. BRS U has approximately 120 Professors of which many receive research grants and other 280 teaching staff. There are about 120 support staff including technical and administrative employees. BRS U currently has around 5500 students and the Department of Natural Sciences recruits about 200 undergraduate in Bachelor programs and about 30 students in a Master program each year in two study courses: Applied Biology (as an international study course), Chemistry with Material Sciences (as a German study course), and Forensic Sciences (taught in German and English).

[www.h-bonn-rhein-sieg.de](http://www.h-bonn-rhein-sieg.de)

**Contact:** Ms. Lea Mund  
Hochschule Bonn-Rhein-Sieg  
(Bonn-Rhine-Sieg University of Applied Sciences)  
International Office – Welcome Centre  
Grantham-Allee 20  
53757 Sankt Augustin  
Germany  
Tel +49 (0) 2241/865-671  
Fax +49 (0) 2241/865-8671  
E-Mail: lea.mund@h-brs.de

## # BRS 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Department of Natural Sciences	Prof. Dr. Edda Tobiasch	2	Biology	M, P
<b>Time frame:</b>	July 1 <sup>st</sup> / August 1 <sup>st</sup> – November (any time period within this time frame is possible, but it must be at least 10 weeks)			
<b>Institute's focal research areas</b>	<p><b>The work deals with</b> stem cell differentiation and signal transduction.</p> <p><b>Overview:</b></p> <p>Recent progress in our understanding of stem cell differentiation and cell transplantation has opened new therapeutic avenues in the treatment of human diseases involving chronic or acute tissue-specific cell loss. Consequently, experimental cell replacement strategies have been attempted involving adult stem cells with the aim of developing therapies.</p> <p>Human mesenchymal stem cells which are isolated from adipose tissue have the advantage of potential autologous transplantation ability. There is evidence that they can be differentiated in chondrogenic, osteogenic, adipogenic and myogenic lineages. Inductions of the cells into multiple mesenchymal lineages already resulted in the expression of several lineage-specific genes, proteins and specific metabolic activity.</p> <p>We aim at investigating fat-derived MSC, as potential donor cells, for their ability to differentiate in the osteogenic and beta cell direction for future treatment of diabetes and large bone defects and in the adipogenic direction to investigate the influence of the differentiating fat cell in the development of atherosclerosis.</p> <p>In another project ecto-mesenchymal stem cells derived from dental follicles of wisdom teeth are used to improve dental implant stability.</p> <p>The last study involves Hox genes for the characterization of stem cells derived from various human body parts during differentiation.</p> <p>More information on the subjects can be found on the homepage:  <a href="http://fb05.fh-bonn-rhein-sieg.de/tobiasch.html">http://fb05.fh-bonn-rhein-sieg.de/tobiasch.html</a></p> <p><b>The work encompasses the following topics for potential scholarship holder:</b></p> <ul style="list-style-type: none"> <li>• Differentiation and characterisation of adult, human mesenchymal stem cells</li> <li>• Determination of the role of the differentiating adipocyte in the pathogenesis of diabetes mellitus type 2</li> <li>• P2 and Hox signalling in human stem cells</li> <li>• Biocompatibility testing of nano-structured polymers as scaffolds for 3D tissue engineering</li> <li>• Stem cell interaction with natural and artificial scaffolds</li> </ul> <p><b>The group is composed</b> of the lab leader, a scientist, two PhD students, and several Master- and Bachelor students working on their theses. One of the PhD students will take care for the guest student.</p>			

# TU Dortmund University (DO)

The TU Dortmund University was established in 1968 and comprises 16 Faculties, Collaborative Research Centres, Graduate Schools & Graduate Colleges, and a number of affiliated institutes as well as other associated and science institutes like Fraunhofer Institutes and the Max Planck Institute for Molecular Physiology (MPI). The number of students in the fall term WS14 /15 amounted to almost 32.000. The staff consists of 350 professors, 1.900 academics and about 1.300 non-academic staff.

The TU Dortmund University supports interdisciplinary cooperation between its fields of study. To combine and analyze the strengths and activities a program of thematic "research bands" has been developed. The "bands" allow cross-referencing beyond the bounds of single departments, faculties and disciplines.

The TU Dortmund University has set itself an ambitious goal: research, teaching and courses of study are to be given an even more consistently international orientation over the coming years. In addition to its integration within the region, with all its structural changes, the university is deliberately focusing on a second aspect: Within the scope of a comprehensive network of international university partnerships and research co-operations, the TU Dortmund University will strengthen its position among the global players in the field of science.

The university already offers extensive support measures for foreign students. With the regular orientation program "Come2Campus", the Office for International Relations helps international "freshmen" to cope with the new living and learning conditions. Together with the city of Dortmund, the university strives to improve the services provided for foreign students.

A further way of improving the general conditions for successful completion of courses of study for international students is to increase the number of lectures held in English. Building the network connecting the TU Dortmund University with partner institutions in Europe and all over the world has been a priority for decades. A huge number of co-operations among students, academics, institutes and departments, as well as world-wide university partnerships, opens up global thinking for the region and makes the university's achievements and competence available to the scientific community worldwide.

[www.tu-dortmund.de](http://www.tu-dortmund.de)

TU Dortmund University offers a 4-week intensive German class prior to each semester, i.e. in the months of March and September. During the semester students can take part in German as a foreign language classes offered by our Language Center. More information:

[http://www.aaa.unidortmund.de/cms/en/International\\_Students/Exchange\\_Students\\_\\_ERASMUS\\_/German\\_Language\\_Course/index.html](http://www.aaa.unidortmund.de/cms/en/International_Students/Exchange_Students__ERASMUS_/German_Language_Course/index.html)

*Students have to be enrolled to take part in these courses.*

**Contact:** Dr. Barbara Schneider  
TU Dortmund University / International Office  
Emil-Figge-Str. 61, D-44227 Dortmund,  
  
Phone: +49-(0)231/755-5331  
E-mail: [barbara.schneider@tu-dortmund.de](mailto:barbara.schneider@tu-dortmund.de)

## # DO 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)
Experimental physics	Prof. Dr. Dr. Rhode  Thorben Menne	1	Physics	M
<b>Time frame:</b>	May – August 15th			
<b>Institute's focal research areas</b>	<p>Scientific Program and Experimental Purpose: The astroparticle physics group working at TU Dortmund offers the possibility to gain insight and knowledge in neutrino astronomy for students from North America and Great Britain. The utilization of neutrinos as a probe for astrophysical processes is a relatively young field in astroparticle physics having its beginning in the 1980s. Since then, the field of neutrino astronomy has evolved rapidly. Nowadays there are several neutrino telescopes running or under construction with the IceCube detector being by far the biggest one at the moment. The IceCube detector is a cubic kilometer neutrino telescope located at the geographic South Pole operating 1.5 kilometers under the Antarctic ice. Institutes around the globe contribute to the success of this challenging experiment. IceCube consists of more than 5000 photomultipliers and records about 78 TB of raw data per day. The energy range goes from 10 GeV up to multiple PeV and gives deep insight to many different aspects of stroparticle physics. In the high energy range IceCube detects ultrahigh-energetic extraterrestrial neutrinos, which may come from Active Galactic Nuclei (AGN) and Gamma Ray Bursts (GRBs). As these astrophysical neutrinos are expected to be created by the interaction of protons accelerated by a black hole with the surrounding matter, the detection of such neutrinos would shed light on processes taking place in the ultimatevicinity of black holes. At lower energies IceCube mainly detects neutrinos and leptons being created in the atmosphere. Therefore it's an excellent instrument to investigate the spectrum and composition of cosmic rays. Furthermore IceCube is involved in the search for physics beyond the standard model in the fields of dark matter and sterile neutrinos. With neutrino astronomy being a relatively young discipline there is much room for contribution in the development of new analysis strategies and software. Project Description: With the IceCube detector it is possible to explore a field of physics with many mysteries and unsolved questions. Analyses are made with a specific selection of events to find answers for those questions. Those selections try to separate between relevant and irrelevant events for the specific analysis, therefore most of the time you are only able to find what you are looking for. In this Rise-Project you will investigate the IceCube data with a broader perspective by using techniques andalgorithms from the field of unsupervised learning. With unsupervised learning one tries to find outliers and hidden structure in data. It is used for example to detect insurance fraudsters, to get a better read of genetic codes, to find irregular bank transfer and in many more applications. In your project you will apply some of those techniques in recorded IceCube data. While interpreting your results you will get a deep understanding of the detector and the related physics. You will be the first using unsupervised learning on IceCube data and your analysis will give a completely new view of the detector. So this will be pioneering work and we can't give you step-by-step directions. Instead you are challenged to contribute with own ideas so we can work out an analysis plan together.</p>			

**# DO 2**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Department for English and American Studies	Prof. Dr. Walter Gruenzweig	1	American Studies; Cultural Studies and related fields	B, M
<b>Time frame:</b>	October – December			
<b>Institute's focal research areas</b>	European-American relations, images of the United States, Anti-Americanism, Religion & American Culture, reception of American literature abroad, American political cultures, Exile in the United States, Jewish-American Literature.			



# Heinrich-Heine-University Duesseldorf (DS)

Even though the French emperor Napoleon I planned to found a university in Duesseldorf in 1811, with the Rhine area being thought of as an intellectual buffer zone between France and Prussia, Duesseldorf had to wait one more century. In 1907 the Duesseldorf Academy for Applied Medicine was founded and opened together with the newly-built Municipal Hospital, which was at that time the most modern clinical complex in the German Empire. Since the Academy had no university constitution, it was only allowed to instruct medical trainees, not students. The academy itself and part of the population launched several initiatives to change the status of the institution. In 1923 they finally succeeded when a university constitution including the right to train students was given to the Medical Academy of Duesseldorf. The study of dental medicine was subsequently incorporated, and by 1935 even doctoral degrees could be awarded in Duesseldorf.

After World War II the federal state of North Rhine-Westphalia and the City of Duesseldorf signed a contract which stated that the federal state would take over the Medical Academy, while the hospitals remained municipally owned. The Medical Academy became the University of Duesseldorf in November 1965, and in January 1966 it became a university with a medical faculty and a combined faculty of arts and natural sciences. In December 1988 the university senate decided to change the institution's name to Heinrich-Heine University Duesseldorf, in commemoration of one of the city's most renowned sons whose critical and inquisitive, poetic mind reached out across national borders and fought against small-mindedness.

Today the university forms the backbone of Duesseldorf's academic reputation. Faced with nation-wide cuts in university spending, the University of Duesseldorf has continued to thrive. Despite its recent foundation it has gained the reputation usually associated only with universities rich in age and tradition. The university's continuous development has made it home to a distinguished range of subjects, including medical science, natural sciences, economics, law, and the humanities. The degree requirements allow for numerous combinations of subjects, and study programs can be tailored to fit individual needs. Some subjects, such as Literary Translation, Yiddish Culture, Language and Literature, and Media Science, are unique features of our curriculum. Further specialties in the Faculty of Arts include Modern Japan Studies, and German as a Foreign Language which address the needs of the international business community. The Faculty of Economics focuses particularly on International Management. European and International Law enjoy an elevated position at the Faculty of Law, which is also a renowned center of commercial law. Duesseldorf has also become a hub of Biotechnology. The focal points of research within the Faculty of Mathematics and Natural Sciences are Genetics and Molecular Biology.

The Faculty of Medicine has gained a reputation for its research in Cardiology; Cell and Gene Therapy form the backbone of clinical research. The Center of Biomedical Research (BMFZ) stands out as a center of excellence. Several institutions devoted to special fields are attached to the university, for example the Institute of Diabetic Research, and the Medical Institute for Environmental Hygiene. The Institute for International Communication is also located on campus.

Ample proof of the confidence that sponsors place in the research conducted at HHUD can be seen in the number of collaborative research centers and research training programs. The University of Duesseldorf ranks 18th among the top 45 universities (113 in total), which together receive 90% of all project funds granted in Germany.

The university's international profile is the result of the active exchange programs it maintains with partner universities in regions as diverse as California and Peking, Reading and Naples. In any given year, about 3000 foreign students come from more than 110 nations, and over 120 guest academics conduct their research here. The total number of students amounts to approximately 25000. The number of faculty exceeds 1500.

Last but not least, the university has the advantage of occupying a pleasant site. After long hours of study it is tempting to take a stroll through the Botanical Garden located right on campus....

[www.uni-duesseldorf.de](http://www.uni-duesseldorf.de)

**Contact:**

Monika Lent-Oetztuerk (Mrs.)  
Heinrich-Heine-Universitaet Duesseldorf  
International Office (Building 16.11)

UniversitaetsstraÙe 1, D-40225 Duesseldorf

Phone: +49-(0)211/811-0726

E-mail: [incomings@hhu.de](mailto:incomings@hhu.de)

**# DS 1**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Department for Yiddish Culture, Language, and Literature	Prof. Dr. Marion Aptroot	3	Yiddish (including interdisciplinary studies)	B, M
<b>Time frame:</b>	April – July or September - December			
<b>Institute's focal research areas</b>	Yiddish: Yiddish Language, Yiddish Literature and Culture, Yiddish Historical Linguistics			

**# DS 2**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Bioinformatics	Prof. Lercher	2	Informatics, Biology, Physics	M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	Bioinformatics, especially evolutionary genomics and simulations of metabolic network function			

**# DS 3**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Institute for Jewish Studies	Prof. Dr. Stefan Rohrbacher	2	Jewish Studies; History (English language)	B, M
<b>Time frame:</b>	Summer term 2015 (May – September)			
<b>Institute's focal research areas</b>	Jewish history of the early modern period, 19th century German-Jewish History, History of Antisemitism			

# University of Duisburg-Essen (DE)

Creative inspiration between the Rhine and Ruhr: the University of Duisburg-Essen (UDE) is located in the European region with the highest density of institutions of higher learning. Created in 2003 by the merger of the universities of Duisburg and Essen, the UDE is the youngest university in North Rhine-Westphalia and one of the ten largest universities in Germany. Both campuses are easy to reach and offer some 37,000 students a broad academic spectrum with an international orientation – ranging from the humanities and social sciences to economics and the engineering and natural sciences, including medicine. Students from 130 countries are currently enrolled at the UDE.

In many disciplines the UDE ranks amongst the TOP 10 of German research universities. Over the past three years, research income has risen by 150 percent, a development which is also thanks to the five main research areas: Nano sciences, Biomedical Sciences, Urban Systems, Empirical Research in Education, and Change of Contemporary Societies.

For free German classes in preparation for one's studies see:  
[www.uni-due.de/international/deutschkurse.shtml](http://www.uni-due.de/international/deutschkurse.shtml)

[www.uni-duisburg-essen.de](http://www.uni-duisburg-essen.de)

**Contact:** International Office  
Simone Müller  
Geibelstr. 41, SG 095  
47057 Duisburg  
Tel.: 0203-379 1062  
Email: [simone.mueller@uni-due.de](mailto:simone.mueller@uni-due.de)

## # DE 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Chair of Educational Media and Knowledge Management,  Learning Lab	Prof. Dr. Michael Kerres	2	Educational Technology, Instructional Design	M
<b>Time frame:</b>	12 weeks May - December			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>• Open Education and Open Educational Resources</li> <li>• Impacts of MOOCS for Education</li> <li>• Implications of BYOD in school settings</li> <li>• Social media for informal learning and in formal learning contexts</li> <li>• Sustainable implementation of learning innovations</li> <li>• Instructional design for problem based approaches in online learning</li> <li>• Game based learning and gamification, mobile learning</li> </ul>			

## # DE 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Faculty of Educational Sciences	Prof. Dr. Kerstin Göbel	1	Education  Educational psychology  Instructional research	M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	Instructional research, acculturation in schools, intercultural learning			

**# DE 3**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Department of Neurology; Motor Control Group	Prof. Dr. Dagmar Timmann	2	Neuroscience, Neuropsychology, Biomechanics	B, M
<b>Time frame:</b>	12 weeks within April – December			
<b>Institute's focal research areas</b>	<p>Clinical Neuroscience; Physiology and pathophysiology of the human cerebellum; Behavioural studies in patients with cerebellar disorders; Structural and functional MRI in patients and controls.</p> <p>Projects will be on reach adaptation in cerebellar disease and studying the effects of transcranial direct-current stimulation (tDCS) on cerebellar deficits; Projects will be done in collaboration with Prof. Opher Donchin, Department of Biomedical Engineering and Zlotowski Center for Neuroscience Ben-Gurion University of the Negev.</p> <p><a href="http://www.uni-due.de/neurologie">http://www.uni-due.de/neurologie</a></p> <p><a href="http://www.dagmar-timmann.de">http://www.dagmar-timmann.de</a></p>			

# Research Center Juelich (FZJ)

**Research Centre Jülich**, member of the Helmholtz Association, is one of the major research institutions in Europe.

Key technologies in the areas of health, energy and environment, and information characterize the profile of Forschungszentrum Jülich.

Our potential for meeting the objective of "key technologies for tomorrow" lies in 4,600 employees who work together in an interdisciplinary manner, over 200 cooperation partners in Germany and abroad, a unique infrastructure, and our special expertise in physics, materials science, nanotechnology, and information technology. We harness this potential to generate new solutions for the areas of health, energy and environment, and information.

Forschungszentrum Jülich is proud of the tools it provides for its researchers to do their work: simulation with supercomputers, research with neutrons, imaging techniques for medicine, nanotechnology tools—these modern instruments allow science to break through to new horizons of knowledge. This infrastructure, valued and used by researchers throughout the globe, characterizes Jülich the home of key technologies.

The Research Centre is located near the town of Jülich, **close to the university cities** Aachen, Bonn, Cologne and Düsseldorf. The proximity of Jülich to the Netherlands, Belgium and Luxemburg as well as about 700 international guest scientists per year add to an excellent and inspiring training environment.

**German language courses** are organised in the context of our in-house training programme and are free of charge.

[www.fz-juelich.de](http://www.fz-juelich.de)

**Contact:** Gabriele Weiland  
Corporate Development (UE)  
Forschungszentrum Juelich GmbH  
D-52425 Juelich, Germany

Phone: +49 – (0)2461 – 61.3388  
Fax: +49 – (0)2461 – 61.1816  
e-mail: [g.weiland@fz-juelich.de](mailto:g.weiland@fz-juelich.de)

## # FZJ 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Central Institute of Engineering, Electronics and Analytics (ZEA)  ZEA-1- Engineering and Technology	Dr. Ghaleb Natour	1	Mechanical engineering; Material Science; Physics	M
<b>Time frame:</b>	End of August - end of November			
<b>Institute's focal research areas</b>	<p>Modern research requires technically sophisticated experimental facilities, expensive laboratory instruments and complicated measuring techniques. The institute part "Engineering and Technology   ZEA-1 of the Central Institute for Engineering, Electronics and Analytics  ZEA develops and builds technical equipment, instruments, setups and processes on a high level as an important contribution to successful scientific cutting-edge research. More than 150 people, mainly engineers, scientists and technicians are working closely together with the researchers of our scientific partner institutes, and with the other institute parts "Electronic Systems" and "Analytics" of ZEA.</p> <p><b>Welding of special metals with the laser beam under vacuum conditions</b> First studies about laser beam welding in vacuum have shown that significantly different interaction of the laser beam with the treated materials can be generated by the reduction of ambient pressure. Previous works with the aim of achieving high weld depth in aluminum and steel alloys show very beneficial results. The potential of laser beam welding in vacuum of refractory metals, such as titanium, niobium, molybdenum and tungsten, but also of copper were so far still not or only superficially investigated. To determine the potential of laser beam welding in vacuum as a manufacturing process for scientific apparatus engineering, the limits of pressure-reduced laser application shall be scientifically investigated. The pressure dependency of beam/material interaction and the material properties after laser beam treatment in vacuum shall be examined.</p> <p><b>Strength evaluation of glass-ceramic joints for high temperature applications</b> Solid oxide fuel cells (SOFC) are energy conversion devices for an efficient and clean production of electricity. The aggregates need to be sealed gas-tight and electrically insulating by a glass-ceramic sealant. Unfortunately the insufficient strength often is a problem for the operation of SOFC stacks. Latest investigations of ZEA-1 have shown that tensile strength measurements can be improved by an adaptation of component geometry of the glass-ceramic joints. The preparation of samples and evaluation of the improved toughness method is the main focus of the scholarship. In further experiments, the influence of different operation conditions like increased temperatures, cyclic and long term ageing of the joints have to be investigated.</p> <p><b>Setting up a black body with temperature control for the calibration of an interferometer</b> A <i>black body</i> is an idealized physical body that absorbs all incident</p>			



	<p>electromagnetic radiation, regardless of frequency or angle of incidence. A blackbody at a constant temperature also emits electromagnetic radiation; the so called black-body radiation. The radiation is emitted according to Planck's law, meaning that it has a spectrum that is determined only by the temperature and not by the body's shape or composition.</p> <p>In the internship the following tasks has to be done: Determine a cooling concept using Peltier elements. Performing Temperature measurement and evaluation of the black body radiator surface. Development of a remote control system using LabView to control and readout the temperature. Testing of the black body system.</p>
--	--

## # FZJ 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Neurosciences and Medicine (INM-2)	Prof. Andreas Bauer Dr. Simone Beer	1	Physics, Mathematics, Biomedical Engineering, Computer Science	B, M
<b>Time frame:</b>	May - December.			
<b>Institute's focal research areas</b>	<p>Positron Emission Tomography (PET) is a non-invasive technique for studying in vivo tracer pharmacokinetics and metabolism. High resolution animal PET is used e.g. for receptor studies in brain research, where the best possible image quality and quantitative accuracy is required. The combination of PET with Computer Tomography (CT) gives additional and complementary information about the anatomy.</p> <p>The focus for the scholarship project is to take part in the development of methodology to provide the best possible image quality and quantitative accuracy for high-resolution PET and combined PET/CT. The work may involve computer modeling and simulation, the development of dedicated imaging strategies, image reconstruction algorithms or statistical analysis.</p> <p>PET is multi-disciplinary, so that the projects offer the opportunity to experience collaborative research and teamwork among various disciplines from chemistry, physics, engineering and mathematics to biology and (pre)clinical research.</p> <p>The hosting group "Molecular Neuroimaging" comprises physicians, biologists, physicists and several technicians. Currently, the working group operates a combined PET, CT and SPECT scanner for small animal imaging as well as laboratory facilities for in vitro techniques (e.g. autoradiography) and extensive analytical processes as parts of PET imaging studies.</p> <p>More information is available at <a href="http://www.fz-juelich.de/inm/inm-2/EN/Home/home_node.html">http://www.fz-juelich.de/inm/inm-2/EN/Home/home_node.html</a></p>			

### # FZJ 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Neurosciences and Medicine (INM-2)	Prof. Andreas Bauer  D. Elmenhorst	1	Medicine / Health Sciences;  Biology  Psychologie	B, M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	<p>Why do we need to sleep and what are the regulating mechanisms behind the sleep-wakefulness cycle? Which factors influence synaptic plasticity and how is neuroreceptor expression affected in neuropsychiatric diseases? These questions describe the main research interests of the hosting institute.</p> <p>The putative scholar will participate in a preclinical or clinical imaging project addressing varying (e.g. within the 24 hrs day-night cycle) or altered (e.g. in states of disease) neuroreceptor expression.</p> <p>In technical terms we use radioactive labeled tracers and positron emission tomography (PET) to visualize distinct molecules and molecular mechanisms in a living organism. Modeling of pharmacokinetic processes and quantitative analysis of data ascertain an optimal usage of PET in preclinical and clinical research.</p> <p>PET is multi-disciplinary, so that the scholar has the opportunity to experience collaborative research and teamwork among various disciplines from chemistry, physics, engineering and mathematics to biology and (pre)clinical research.</p> <p>The hosting group "Molecular Neuroimaging" comprises a physicist, a biologist, four physicians and several technicians. Currently, the working group operates a combined PET, CT and SPECT scanner for small animal imaging as well as laboratory facilities for in vitro techniques (e.g. autoradiography) and extensive analytical processes as parts of PET imaging studies. Clinical PET and MRI scanners are available as well.</p> <p>Depending on the duration of the scholarship, the student will be involved in PET imaging procedures and concomitant experiments (e.g. electro-encephalography or in vitro experiments) as well as data analysis.</p> <p>More information is available at the institute's webpage (<a href="http://www.fz-juelich.de/inm/inm-2/EN/Home/home_node.html">http://www.fz-juelich.de/inm/inm-2/EN/Home/home_node.html</a>) or via email to <a href="mailto:d.elmenhorst@fz-juelich.de">d.elmenhorst@fz-juelich.de</a></p>			

## # FZJ 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Complex Systems	Dr. Thorsten Auth	1	Physics, Chemistry, Biology	M
<b>Time frame:</b>	May to July 31th			
<b>Institute's focal research areas</b>	<p>The student will perform numerical calculations to study interface-mediated interactions between particles: this can either be interactions of particles at liquid-gas interfaces or interactions of particles that are attached to lipid-bilayer membranes. Our main interest are membrane-mediated interactions that are particularly important from a biological point of view. Examples are viral budding, the entry of parasites into a cell, and the interaction of nanoparticles bound to cell membranes.</p> <p>From a technical point of view, both systems are closely related and can be investigated using triangulated surfaces. We will employ the program package „Surface Evolver“, therefore knowledge of a programming language is not required, but can be helpful. However, basic knowledge of Linux, bash scripting, as well as of a plotting program such as gnuplot are necessary prerequisites. The details of the project and the work plan for the student will be adjusted according to the area of study of the applicant.</p> <p><a href="http://www.fz-juelich.de/ics/ics-2/EN/Home/home_node.html">http://www.fz-juelich.de/ics/ics-2/EN/Home/home_node.html</a></p>			

## # FZJ 5

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Central Institute for Engineering, Electronics and Analytics,  Electronic Systems (ZEA-2)	Dr.-Ing. Gudrun Wagenknecht	1	Computer Science,  Electrical and Biomedical Engineering	B, M
<b>Time frame:</b>	May – November			
<b>Institute's focal research areas</b>	<p>Our research in multimodal image processing focuses on the development of algorithms for segmenting and analyzing 3D target structures in the human head and brain based on multimodal images (MR-BrainPET, MRI, CT, PET). These algorithms are used to improve imaging procedures and the diagnosis of brain diseases (e.g., Alzheimer's disease). Our work is supported by third party-funding (HVF fund).</p> <p>Small projects can be offered for students with background in medical image processing and outstanding programming skills in C, C++:</p> <ol style="list-style-type: none"> <li>1. Implementation of segmentation and analysing methods.</li> <li>2. Comparison and evaluation of new approaches.</li> </ol> <p><a href="http://www.fz-juelich.de/zea/zea-2/DE/Home/home_node.html">http://www.fz-juelich.de/zea/zea-2/DE/Home/home_node.html</a></p>			

## # FZJ 6

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Jülich Supercomputing Centre	Prof. Dr. Johannes Grotendorst	2	Comp. Science, Applied Mathematics, Computer Science	M
<b>Time frame:</b>	August until mid-October			
<b>Institute's focal research areas</b>	<p>Parallel Computing, Computational Science, Numerical Mathematics, Visualisation, Cluster Operating Systems, Federated Systems and Data Management, Performance Analysis, High Performance Computing in Neuroscience, Civil Security and Traffic</p> <p><a href="http://www.fz-juelich.de/ias/jsc/EN/Home/home_node.html;jsessionid=6EACF97AD423F74E4D0FCD4FBDF87850">http://www.fz-juelich.de/ias/jsc/EN/Home/home_node.html;jsessionid=6EACF97AD423F74E4D0FCD4FBDF87850</a></p>			

# University of Cologne (KL)

The University of Cologne was founded in 1388 and is one of the oldest and largest universities in Germany. The six faculties offer students a wide range of subjects as well as a great variety in choice and combination of courses and disciplines. The University of Cologne is popular not only due to the diversity of academic opportunities but also to the unique atmosphere of Cologne itself. Also by tradition, the university is internationally oriented and cooperates closely with people and institutions worldwide. The internationalization of teaching and research can be seen through joint programs with universities and colleges from abroad, double degree programmes, graduate schools, summer schools, short-time programmes, the binding of the (German and international) alumni. An important aspect of the strong international position of our university is the recruitment of qualified international students. Students who expect and fulfil high standards at the university, will find best studying conditions here.

In 2012, the University of Cologne was distinguished by the German Excellence Initiative, and now belongs to the small group of elite universities in Germany.

The University of Cologne offers German language courses for international students. They are taught by our German as a Foreign Language Department. Scholarship holders can participate in the pre-semester intensive language courses which take place in March / September or in the semester courses (April to July / October to February respectively). These courses are offered also for beginners' level; in case of successful completion participants can obtain credit points. The number of places is limited. Registration for the courses takes place through the International Office of the University.

[www.uni-koeln.de](http://www.uni-koeln.de)

**Contact:** Dr. Stefan Bildhauer (Mr.) /  
Daniela Simut-Perent, M.A. (Ms.)  
  
Universitaet zu Koeln  
Albertus-Magnus-Platz; 50923 Koeln  
  
Tel. +49 221 470 - 2382; or -1340  
  
[s.bildhauer@verw.uni-koeln.de](mailto:s.bildhauer@verw.uni-koeln.de)  
[d.simut@verw.uni-koeln.de](mailto:d.simut@verw.uni-koeln.de)

**# KL 1**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
History Seminar	Prof. Dr. Werner Eck	2	Classics-Ancient History	B, M
<b>Time frame:</b>	June – October			
<b>Institute's focal research areas</b>	Roman Imperial History (first five centuries AD)			

**# KL 2**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Department of Criminal Law and Criminal Procedure Law	Prof. Dr. Martin Wassmer	1	Criminal Law; Criminal Procedure Law	B, M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	Criminal law, criminal procedure law, criminal tax law, administrative criminal law, European criminal law and medical criminal law. This can be the areas of work of the scholars.			

**# KL 3**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Dept. f. Media and Technology Management	Prof. Dr. C. Loebbecke, M.B.A.,	1	Business / IS / New Media	M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	Business Plan Development / IT-, New Media-, Telecom Market analysis			

**# KL 4**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (B = Bachelor; M = Master; P = PhD)</b>
Institute of Classical Studies, Chair of Classical Philology (with special focus on Latin Philology)	Prof. Dr. Jan Felix Gaertner	2	Classics / Greek Language and Literature or Latin Language and Literature	B, M
<b>Time frame:</b>	May – July or October - December			
<b>Institute's focal research areas</b>	Latin Historiography, Augustan Poetry, Greek and Roman Comedy as well as other fields of Classical Studies.			



# University of Muenster (MS)

The University of Muenster (WWU Muenster) has developed a strong research profile in natural sciences, the humanities, medicine, law and business administration. The WWU Muenster is one of the biggest universities in Germany and has 15 Departments in 7 Faculties. Founded in 1780, the WWU is also a university with a long tradition in teaching and research.

<http://www.uni-muenster.de/en/>

The language center of the University of Münster offers language classes at different dates throughout the whole year. You will find more information on the dates and the requirements here: <http://spz.uni-muenster.de/en/daf>

**Contacts:** Elisabeth Schattke / Dr. Petra Hille  
International Office  
Westfaelische Wilhelms-Universitaet Muenster,  
Schlossplatz 3, 49149 Muenster, Germany  
  
elisabeth.schattke@wwu.de, Tel. 0251/ 83- 22459;  
  
petra.hille@wwu.de, Tel.: 0251/ 83-22255

## # MS 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Institute of Physics	Prof. Dr. Helmut Zacharias	1	Physical chemistry, nanoscience	M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	Self-organization, functional organic films.			

## # MS 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B = Bachelor; M = Master; P = PhD)
Center for Eastern Mediterranean Studies	Prof. Dr. Reinhard Achenbach Dr. Nikola Moustakis	2	Religious Studies, Jewish Studies, Coptic Studies, Ancient History; Archaeology; Oriental Studies	B, M
<b>Time frame:</b>	whole academic year; please note that in July, August and September most scholars are not on location because of holidays and fieldworks.			
<b>Institute's focal research areas</b>	<p>The focus of research is on religious, historical, cultural, social and economic themes concerning the ancient Eastern Mediterranean region.</p> <p>The scholarship holder can use the excellent libraries, make contact with the scholars of the Center of Eastern Mediterranean Studies to discuss his/her thesis and visit the regular courses (please note: the language of instruction is German).</p> <p>German language courses are offered by the University of Muenster (see above) and are strongly recommended to scholarship holders who don't know any or just a little German.</p>			

## # MS 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)
Department of Biology	Dr. Roda Niebergall	6	Biological Sciences, Biomedical Sciences, Biotechnology	M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	<p>The research carried out in the Department of Biology has a special focus on:</p> <ul style="list-style-type: none"> <li>• Biotechnology</li> <li>• Evolutionary Biology and Biodiversity</li> <li>• Molecular Cell Biology and Physiology</li> </ul> <p>For further information, please visit our website:  <a href="http://www.uni-muenster.de/Biologie/en/Forschen/index.html">http://www.uni-muenster.de/Biologie/en/Forschen/index.html</a></p>			

## # MS 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master; P = PhD)
Institute for Applied Physics Nonlinear Photonics Group	Prof. Dr. Cornelia Denz	2	Physics; Optics; El. Engineering	M
<b>Time frame:</b>	June - October			
<b>Institute's focal research areas</b>	<p>Photonics – applications of optics in information processing, biology and medicine – has recently achieved a highly developed state that allows to consider the actual century as the "century of the photon" that displaces the last century - the "century of the electron".</p> <p>Photonics is therefore one of the most promising technologies of the future, and driving motor for many industry applications of optical technologies which are nowadays already used e.g. in optical data storage as for CDs and DVDs, in optical illumination with LEDs or OLEDs, or in optical communication using optical fibres.</p> <p>Nonlinear optical effects allow to amplify, control and steer light in order to realize complex information processing tasks. They require the understanding and control of nonlinear effects as well as tailoring light for the purpose of application. Using nonlinear optical processing features, we can use light as the carrier of information of the future.</p> <p>Our actual research activities are centered around this vision, based on two major focus lines - nonlinear optical applications in information, biology and medicine, and photonic circuits by light is guiding light.</p> <p>In this field, we are offering places for PhD students or Master students in the following fields:</p> <ul style="list-style-type: none"> <li>• Optimization of organic solar cells by surface structuring</li> <li>• Investigations of cell elasticity by optical tweezers</li> <li>• Development of tailored light fields for holographic optical trapping</li> <li>• Realization of polymer structures by dielectrophoresis</li> <li>• Nonlinear light localization in photonic crystal structures</li> <li>• Nondiffracting beams as tools for photonic lattices</li> <li>• Creating 3D nonlinear photonic spiral lattices</li> <li>• Nonlinear integrated optics by direct femtosecond laser writing</li> <li>• Nonlinear microscopy</li> <li>• Grating-assisted nonlinear frequency conversion</li> </ul>			

**#MS 5**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program (M = Master, P = PhD)</b>
Institutum Judaicum	Prof. Dr. Lutz Doering	2	Jewish Studies, Jewish History, Talmud, Ancient Jewish Literature, Mediterranean Religions and related subjects	M
<b>Time frame:</b>	October - December			
<b>Institute's focal research areas</b>	Ancient Judaism and its cultural, political, and religious context (Greece, Rome, early Christianity)			

# Muenster University of Applied Sciences (MFH)

The University of Applied Sciences (MUAS) was founded in 1971 out of public and private schools and has developed to a modern, achievement-oriented and science-oriented university. MUAS is with around 12,700 students and 14 faculties/central research institutions one of the biggest institutions of its kind in Germany. The departments and institutions are located at different places in Münster and Steinfurt.

A Welcome Service for foreign students is offered to make students' life easier and to integrate them successfully into everyday life at the university.

Internet: [www.fh-muenster.de](http://www.fh-muenster.de)

**Contact:** International Office  
Patricia Ferrier  
Hüfferstraße 27, 48149 Germany  
Phone +49 251 8364119  
Fax: +49 251 8364014  
Email: [ferrier@fh-muenster.de](mailto:ferrier@fh-muenster.de)

## #MFH 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Mechanical Engineering  Laboratory for Thermal and Power Engineering	Prof. Dr.-Ing. habil. Stefan aus der Wiesche	2	Mechanical Engineering	B, M
<b>Time frame:</b>	May – December			
<b>Institute's focal research areas</b>	<p>All research projects are dealing with fluid mechanics and heat transfer (both experimental and theoretical research). Every project is linked to a larger research project coordinated by PhD students and research assistants in the lab. The supervision and support of the students is fully ensured. The following projects are currently open for the present initiative:</p> <ul style="list-style-type: none"> <li>- Boiling heat transfer and investigation of microscale flow phenomena</li> <li>- Convective heat transfer from rotating disks</li> <li>- Flow separation and reattachment of a turbulent boundary layer</li> </ul> <p>Further information are available (see corresponding internet page of the lab).</p>			

## #MFH 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (M = Master, P = PhD)
Department of Engineering Physics	Prof. Dr. Thomas Rose	1	a)science / engineering  or  b)social science	B, M
<b>Time frame:</b>	October - December			
<b>Institute's focal research areas</b>	<p>a)the focus of the lab is sensor technology, esp. industrial image processing, optical sensors and colour measurement,</p> <p>b)in addition Prof. Rose is interested in the attitude of trade unions towards science, so he would like to develop an online survey to study Israel's trade union's organization Histadrut</p> <p>we can offer one position in total, either in topic a) or in b).</p>			

# University of Paderborn (PB)

**University of Paderborn** is a fully accredited state university offering all types of academic degrees including PhD and postdoctoral lecture qualification.

The university has an academic staff of about 1.000 and offers a wide range of subjects in five faculties: Faculty of Arts and Humanities, Faculty of Business Administration and Economics, Faculty of Science, Faculty of Mechanical Engineering, Faculty of Computer Science, Electrical Engineering and Mathematics.

There are about 19.500 students currently studying at the University, among them about 1500 international students.

[www.uni-paderborn.de](http://www.uni-paderborn.de)

Language courses: 4 - weeks crash course of 20 hours per week; starts before the official start of the semester in March and in September (100 €). Another course of 10 hours per week runs during the semester (200 €).

**Contact:** Nicola Weinert  
 International Office, Universität Paderborn, 33095 Paderborn, Germany  
 E-Mail: nicola.weinert@zv.uni-paderborn.de  
 Tel.: +49-5251-60-3208

## # PB 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Chair of Mechatronics and Dynamics	Dr. Tobias Hemsel	2	Mechanical Engineering, Electrical Engineering,  Mechatronics	M
<b>Time frame:</b>	July 15 <sup>th</sup> - September 30 <sup>th</sup> or October 1 <sup>st</sup> – December 15 <sup>th</sup>			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>- Dynamics and dependability of mechatronic systems</li> <li>- Actuators and sensors, piezo- and ultrasound systems</li> <li>- Non-linear dynamic systems and contact mechanics</li> </ul>			

## # PB 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Department of Physics	Prof. Dr. Arno Schindlmayr	1	Theoretical Physics, Applied Mathematics	M
<b>Time frame:</b>	July 15 <sup>th</sup> - September 30 <sup>th</sup> or October 1 <sup>st</sup> – December 15 <sup>th</sup>			
<b>Institute's focal research areas</b>	<p>Within the field of theoretical solid-state physics, the focus of our research is the development and application of ab initio methods to investigate the electronic structure and excitation spectra of solids without adjustable parameters. Our principal techniques are density-functional theory and many-body perturbation theory, which is based on Green functions. With these methods, the electronic, optical and magnetic properties of a material can be predicted using only fundamental quantum mechanics and the chemical composition of the material in question. We are particularly interested in the effects of correlation on the electronic band structure and in the accurate description of collective excitations, such as plasmons, excitons and magnons. Within a research project, candidates could make use of these techniques and the available computer codes for quantitative simulations of technologically interesting materials. Another important activity is the formal theory development with the aims of analysing the influence of common approximations and of improving the internal consistency of practical implementations as well as the conformance with known exact relations. For this purpose the methods are applied to model systems that can be studied either analytically or with the support of standard numerical computer software. This offers a variety of possible short-term projects for candidates with a background of theoretical solid-state or molecular physics, many-body quantum mechanics or applied mathematics.</p>			



**# PB 3**

<b>Institute</b>	<b>Contact at the institute</b>	<b>Number of places</b>	<b>Discipline or subject area</b>	<b>Scholars' degree program</b> (B= Bachelor; M= Master; P= PhD)
GET Lab – Cognitive Systems Engineering	Prof. Dr. Bärbel Mertsching	3	Computer Science, Electrical Engineering and related fields	M
<b>Time frame:</b>	July 15 <sup>th</sup> - September 30 <sup>th</sup> or October 1 <sup>st</sup> – December 15 <sup>th</sup>			
<b>Institute's focal research areas</b>	Autonomous and teleoperated mobile robot systems Computer vision Virtual and augmented reality/ simulation Learning			

# University of Wuppertal (WU)

## **Bergische Universität Wuppertal / The University of Wuppertal, Germany**

The University of Wuppertal, founded in 1972, is one of the state universities in North Rhine-Westphalia (NRW), which is economically the most significant German state with an outstanding educational and cultural landscape. The city of Wuppertal, situated close to Düsseldorf and Cologne in a particularly delightful region with wooded hills, meadows, orchards and fields, called the "Bergisches Land", is an interesting mixture of outgoing metropolis and cosy village with a lot of leisure facilities. From any part of the city it is only a 10 minute walk to the nearest park or shady woodland path.

<https://www.wuppertal.de/microsite/en/index.php>

The University of Wuppertal towers over the city. The main campus enjoys a panoramic view across the town – a perfect environment for developing inspiring ideas and academic projects that will shape the future. Some 18.000 students from more than 100 countries benefit from our high-level academic approaches in teaching, and the university's commitment to research and international collaboration. Wuppertal University offers a diverse range of programs in science, engineering economics and the humanities, as well as educational science, design and architecture. Our academic culture is marked by diversity, experience and innovation.

## **Study in Germany – Join us in Wuppertal!**

<http://www.internationales.uni-wuppertal.de/en/incoming/international-students.html>

[www.uni-wuppertal.de](http://www.uni-wuppertal.de)

Our Language Center ("Sprachlehrinstitut –SLI" – [www.sli.uni-wuppertal.de](http://www.sli.uni-wuppertal.de) ) offers the following courses of German as a foreign language:

### •Intensive German Courses

Levels: A1(beginners) to C1b (advanced).Weekdays daily beginning in April and October each year  
September 1 to 30, 2015 (level advanced)

- Lecture course „German Grammar“ (Level: B2 upward), 2 hours per week
- German for Business and Economics (Level: advanced), 2 hours per week
- German for Humanities and Social Sciences (Level: advanced), 2 hours per week
- German for Science and Technology (Level: advanced), 2 hours per week

## **Contact:**

Andrea Bieck  
Head of International Office  
Bergische Universität Wuppertal  
Gauss-Str. 20, D – 42097 Wuppertal

Phone: +49 (0) 202 439 2181 / Fax: +49 (0)202 4393856

Email: [bieck@uni-wuppertal.de](mailto:bieck@uni-wuppertal.de)

[www.internationales.uni-wuppertal.de](http://www.internationales.uni-wuppertal.de)

## # WU 1

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Center for International Studies in Social Policy and Social Services	Prof. Dr. Heinz Suenker	4	Social Sciences; Education; Social Policy; Social Work; Migration; Gender; Social Sciences and Law	M
<b>Time frame:</b>	May to July or October to December			
<b>Institute's focal research areas</b>	The center deals with theory, politics and practices in political and welfare institutions, in education and social services. We offer a broad range of topics with respect to comparative questions. <a href="http://www.sozpaed.uni-wuppertal.de/sozialpolitik/">http://www.sozpaed.uni-wuppertal.de/sozialpolitik/</a>			

## # WU 2

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
School of Education, Institute for Educational Research	Prof. Dr. Petra Buchwald	4	Teacher Education	B, M
<b>Time frame:</b>	May to June or October to December			
<b>Institute's focal research areas</b>	The center deals with theory and practices in education. We offer a broad range of topics with respect to learning environments. <a href="http://www.ifb.uni-wuppertal.de/">http://www.ifb.uni-wuppertal.de/</a>			

### # WU 3

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
University of Wuppertal Faculty of Mathematics and Natural Sciences - Atmospheric Physics.  In cooperation with:  Research Centre Jülich Institute for Energy and Climate Research	Prof. Dr. Martin Riese  Dr. Martin Kaufmann	2	Physics/ Atmospheric Physics	M
<b>Time frame:</b>	May - December			
<b>Institute's focal research areas</b>	<ul style="list-style-type: none"> <li>• Development of a temperature-control unit for an infrared detector of the Wuppertal Ground-based Infrared P-Branch Spectrometer (GRIPS) using an Arduino Yun <b>(Knowledge in unix and/or microcontroller-programming required)</b></li> <li>• Derivation of Mesopause temperatures from ground-based OH* measurements using different retrieval methods <b>(Knowledge in Python programming language required)</b></li> <li>• Development of a mock-up model for a nano-satellite (CubeSat)</li> </ul>			

## # WU 4

Institute	Contact at the institute	Number of places	Discipline or subject area	Scholars' degree program (B= Bachelor; M= Master; P= PhD)
Research group Experimental Particle Physics	Prof. Dr. Wolfgang Wagner	1	Physics	B, M
<b>Time frame:</b>	May 1 <sup>st</sup> to November 30 <sup>th</sup>			
<b>Institute's focal research areas</b>	<p>Our group pursues research in the field of elementary particle physics with the ATLAS detector at the Large Hadron Collider at the European Centre for Nuclear Research (CERN). The students can choose from two projects:</p> <p>a) data analysis in top quark physics,</p> <p>b) work on detector control system of the ATLAS pixel detector (digital electronics or embedded programming).</p> <p>Concerning data analysis, two different projects can be offered: The measurement of the top-quarkantiquark cross section with collision data recorded in 2012 or studies on future searches for heavy top-quark resonances using Monte Carlo generators. This second topic aims at preparation for the analysis of data to be recorded in the new run in 2015.</p>			