## DOCTORAL STUDY Handbook 2022

# Faculty of Mathematics and Physics Albert-Ludwigs-Universität Freiburg

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#### 1 Key People

#### 1.1 You

You are the most important person. You have completed a university degree, you have demonstrated that you are willing and intellectually able to pursue your own research project. You know what you want to do. You like to be treated as an adult person, who tries as first priority to solve problems yourself. If you need help, consult this guide, check the information on the faculty web pages, ask your fellow graduate students, ask your supervisor or contact other key people in the faculty.

#### 1.2 Your Supervisor

Like each graduate student, you are assigned one or more supervisors, who are then your primary source of information and guidance. If you are interested in obtaining a doctoral degree at the Faculty of Mathematics and Physics, you should first contact potential supervisors in the research field of your interest and discuss your research plans and a suitable thesis topic with them. They will also be able to give you more details about the graduate student regulations and the steps towards registration as graduate student, a job contract, and your rights and responsibilities. Your supervisors will provide the help, facilities, resources and supervision which you need to complete your thesis successfully and in a timely manner. Many of these general conditions, as well as a rough schedule for your project, have to be agreed upon and written down by you and your supervisor in a binding Supervision Agreement ("Betreuungsvereinbarung") at the beginning of your graduate studies. If you are not happy with your supervisor, you have several options. You can of course always discuss the situation openly and frankly with your present supervisor. You can as well refer to another professor to mediate the discussion or give you an opinion on the situation. However, the International Graduate Academy has the capacity to offer Doctoral Candidate Advising and we would recommend you to contact them in case of conflict. Another possibility is to contact the Dean of Studies of your department.

#### 1.3 Directors of Graduate Studies (DGS)

The dean of the Faculty of Mathematics and Physics is at the same time the Director of Graduate Studies ("Vorsitzender des Promotionsausschusses"). If, for example, the dean is a physicist, he or she will be the Director of Graduate Studies in Physics, and the vice-dean, a mathematician, will be the Director of Graduate Studies in Mathematics. The current Directors of Graduate Studies can be found here.

The responsibility of the Graduate Comittee ("Promotionsausschuss") and the Directors of Graduate Studies are the admission of graduate students, the oversight of the graduate program and solving supervision problems which can no longer be settled by the respective graduate student and their supervisor alone.

#### 1.4 The administrative staff in the graduate office

The graduate office should be contacted in administrative questions and problems if you were not able to obtain the relevant information on the web pages or from fellow graduate students. The registration / Immatriculation is done at these offices.

Contacts for the graduate office are:

Mrs. Roswitha Schönfeld, Mathematics

Tel. 5534, Room 428 (Ernst-Zermelo-Straße 1)

E-mail: roswitha.schoenfeld@math.uni-freiburg.de

Office hours: none in particular.

Mrs. Birgit Seger, Physics

Tel. 5789, Westbau 1st Floor, Room 01 020 (Hermann-Herder-Straße 3)

E-mail: birgit.seger@physik.uni-freiburg.de E-mail: pruefungsamt@physik.uni-freiburg.de

Office hours: Mondays and Fridays 8:00-12:00, Wednesdays 13:00-16:00

#### 1.5 PhD representatives

The PhD representatives are elected to represent the group of PhD students in committees such as the Faculty Council ("Fakultätsrat"). They inform you about political processes going on in these committees and bring your interests and problems to the decision makers. Their role does not only consist in providing a link between the graduate students on one side and the administration and professors on the other, but also in collaborating with representatives of other faculties to achieve improvements on the university or state level and in connecting the Faculty's graduate students among themselves.

Therefore sometimes events for new graduate students, meetings at pubs or sports events are organized. These are an opportunity to establish contacts and exchange ideas and criticism with the representatives. They will be happy to help you with any problem or question concerning your graduate studies in general, e.g. teaching duties or formalities, or to try and find someone else who can help. After your admission as a graduate student, you may subscribe to a mailing list to receive invitations and get informed about other activities of your representatives. You can find more information about the PhD representatives of the Faculty of Mathematics and Physics at www.phd.mathphys.uni-freiburg.de and contact them via phd@physik.uni-freiburg.de.

#### 1.6 Grad school responsibles (if applicable)

If you are member of an (international) research training group (grad school/Graduiertenkolleg/GK) located at our faculty, your graduate studies may be subject to some special conditions. In some GKs, for instance, you may enjoy reduced teaching load due to third-party funding and a more generous travel budget. Some GKs have established a mentoring system,

where you get assigned a professor or postdoc from the grad school, who is not your supervisor. The mentor is supposed to serve as an additional person to consult if, for example, a conflict with your supervisor emerges or you want to hear another opinion on questions regarding academia, but not the content of your thesis, such as career building. The grad schools offer talks and lectures by invited speakers and organize joint events as well. Some of these events may be compulsory. For irregular events and announcements, there are typically mailing lists on which you may or may not get automatically. (If not, asking fellow graduate students or seeking the next system administrator is the best starting point.) Most events will also be advertised on the Faculty website or the websites of the grad schools. Accordingly, the grad schools have their own administrative staff (secretaries, "coordinators") who can assist you with formalities, e.g. if you want to travel to a conference or need to find out how to apply for funding. For some such queries, you may also want to first consult a professor who is officially the head of your GK.

Currently, there are three GKs at the Institute of Mathematics and Physics. **Institute of Mathematics:** 

 GK1821 "Cohomological Methods in Geometry", www.gk1821.uni-freiburg.de

#### **Institute of Physics:**

- IRTG 2079: "Cold Controlled Ensembles in Physics and Chemistry", www.irtg-coco.uni-freiburg.de
- RTG 2044: "Masse und Symmetrien nach der Entdeckung des Higgs-Teilchens am LHC",

www.grk2044.uni-freiburg.de

#### 1.7 The International Graduate Academy

On the university level, the International Graduate Academy is as a central service department part of the Freiburg research services dedicated to graduate students. They offer individual advice for graduate students on all questions concerning doctoral studies, including advice on funding options for the doctoral project, career planning and conflict management. There are also a language tandem service specifically for graduate students and, for non-native speakers writing academic texts in German, a proofreading service. But the IGA is probably best known for their transdisciplinary qualification program, consisting of approximately 40 courses and workshops per semester in German and English from the areas

- Management, Communication and Leadership,
- Publishing, Media and IT,
- Career Planning and Career Entry,

- Higher Education and Teaching Qualification,
- Academic Practice and
- Language courses.

These courses are designed and open exclusively for graduate students of our university, who can register and attend free of charge. You can find the course program, the precise conditions for participation and information on the other services offered by the IGA here. The course program and a few other announcements per year are also made available via the IGA newsletter. On their website, you will alsa find other services of continuing education offered at the university. Additionally, a new program for early career researcher is available at the University of Freiburg: you might want to have a look at EPICUR Europeen University.

#### 1.8 Further academic assistance

The FRS (Freiburg Research Services), a central department of the university supporting researchers at all stages, from students to professors. Together with the Studierendenwerk, the staff council, the occupational medical service and other departments of the university, they offer individual help in a variety of specific situations. However, you may be reassured that, if ever you are facing problems concerning your doctoral studies or employment that are beyond the capabilities of the Director of Graduate Studies, you can still search for help. In the ombuds process, deep conflicts between graduate students and their supervisors may be mediated by an experienced academic member from another faculty. These offers also include various kinds of legal and psychological advice.

#### 1.9 Computing centre

The Computing center or Rechenzentrum manages the university IT system. Here you can find help regarding your identification for university online services, e-Mail addresses and software licences. You get your personal ID during your registration as a PhD student. You need this ID for the following services.

- MyAccount, centralized university ID control center, e.g. for eduroam (WiFi), email, mailing lists,
- HISinOne, can be used for payment of registration fees for the new semester
- ILIAS, management of courses and distribution of learning material
- University e-mail system
- Software licences
- Poster printing

#### 1.10 Other notable contact persons

The following list contains a number of other persons and facilities whose help you might need during your time as a graduate student, mostly to perform tasks that are not actually academic in nature. More complete lists with contact data of employees of the Institutes of Mathematics and Physics can be found online: here for the Mathematics and here for the Physics. As for physics, there is also a selection of the most important administrative units.

- When you or a guest of yours need access to or encounter problems with an office computer (e.g., when you move into your first office) or other IT equipment (like projectors or printers), turn to the system administrators of the respective institute.
  - Mathematics: system administration website and email: sysadm@email.mathematik.uni-freiburg.de.
  - Physics: contact by email at it@physik.uni-freiburg.de.

The administrators also maintain mailing lists you do not get signed up to automatically, so it is a good idea to ask them to put you on those lists that are relevant for you.

- In addition to the university's central library the institutes maintain their own specialized libraries. In general, books here are for local use only, but employees and advanced students of the institute may create an account and check out (most) books, provided they return them as soon as someone else requests them for local use. Note that this account is detached from the one you may have at the central library. The university library website contains informations on where the book is located, with contact information of the library that holds it.
- Mechanic and electronic workshops: if you are an experimental physicist, you might have to refer to them quite often. The easiest way is to go there Monday-Thursday from 9:00 to 12:00 and from 14:00 to 15:30, and Friday from 9:00 to 12:00. Please mind the lunch and break times at 10:00 every day! More information on their websites:
  - https://www.physik-mechanik.uni-freiburg.de/
  - https://www.physik-elektronik.uni-freiburg.de/
- If you work at the Institute of Mathematics at Ernst-Zermelo-Straße 1, for some specific questions related to the building you may want to visit

Mrs. Monika Hattenbach Tel. 5669, Room 245 (Ernst-Zermelo-Straße 1), E-mail htb@stochastik.uni-freiburg.de Office hours: none in particular. For instance, she can help you to gain access to the building on Sundays or give you a key for the Institute's shower cabin on the ground floor. At her office, you can also purchase and recharge a card for the coffee machine in the social room (Room 331).

Some other issues concerning booking of and access to seminar rooms or lecture halls, however, are managed by the secretaries of the dean's office.

- Technical support (room booking, media devices, teaching duties): Dr. Hans
   Dummin, -5808, hans.dummin@physik.uni-freiburg.de
- Pforte: Torsten Roth, -5777, torsten.roth@physik.uni-freiburg.de
- In case something about your office or another room is damaged and needs repair or replacement, send an e-mail to hausmiv@zv.uni-freiburg.de to contact the university's Facilities Services Team or the Technisches Gebäudemanagement.
- At least once during your time in Freiburg when signing the work contract, and every time it gets extended you will have to go to the central administration building and visit

Mr. Christopher Hettich Tel. 9023

E-Mail christopher.hettich@zv.uni-freiburg.de

Contact him if you have formal questions regarding your contract.

• Finally, it may at some point prove useful to know about the Fachschaften. They are somewhat loosely organized groups that officially represent the interests of all students at the corresponding institute and organize events for the students. But most of all, each Fachschaft simply consists of really friendly people who are always happy to help any student (and certainly also you, even if you are not registered as a student). If nothing else, you may also ask them to lend to you some board games or a tool for you bike repair, as they have quite some useful equipment available to be borrowed by students. The Mathematics Fachschaft can be found in Room 011, Ernst-Zermelo-Straße 1, and for Physics at Westbau (ground floor). Most of the time, someone will be hanging out there.

#### 2 Procedures: admission, reporting, exams

For a successful admission to the graduate program and a timely completion of the thesis, the following procedures should be followed. It is the responsibility of the graduate students together with the supervisor to initiate and act on these procedures and rules.

#### 2.1 Admission

The overall application process as a doctoral candidate is outlined in https://www.frs.uni-freiburg.de/en/iga-en/promotion?set\_language=en. A detailed step by step instruction for the application for admission as a doctoral candidate can be found under the following link https://wiki.uni-freiburg.de/campusmanagement/doku.php?id=hisinone:promotionsinteresse:annahmeantrag\_en.Also, in the following we outline the main steps of the procedure (without claim to completeness) and provide some additional tips on what might be important to bear in mind.

#### 2.1.1 Request admission as graduate student

Select a supervisor for your planned thesis topic, discuss the scientific content of the project, and agree with him/her on your duties, the expected outcome of your research work, the supervision, your job contract and other relevant issues. After an agreement is reached and you plan to perform your graduate studies with your supervisor, a graduation agreement ("Promotionsvereinbarung") should be filled in. It can be used as a tool to assist you with establishing the scope and direction of your project together with your supervisor. After an agreement with your supervisor is reached, collect all documents and submit them to the DOCATA Registration System at https://docata.zv.uni-freiburg.de/welcome?0.

The relevant information for this procedure can be found here:

- Request access to DOCATA: https://wiki.uni-freiburg.de/campusmanage ment/doku.php?id=hisinone:promotionsinteresse:annahmeantrag\_en
- Fill out the Graduation Agreement ("Promotionsvereinbarung"), sign it and ask your supervisor to sign.
- Make a print-out from the Docata system, sign the form and take it to the Graduate Office of the Mathematics or Physics department.
- This completes your part on the way to admission as graduate student.

#### 2.1.2 Admission as graduate student

The Directors of Graduate Studies will check your application documents. If everything is in order, he will submit your admission request to the Graduate Comittee ("Promotionsausschuss"), who will then decide on the admission. You will receive a letter

informing you about the result and explaining the next steps. After admission you can start to work in your research group on your thesis work.

Once you have officially been admitted as graduate student, your next steps will potentially include enrolling as a student at the Student Service Centre, www.studium.uni-freiburg.de/en/student-services/matriculation?set\_language=en. If you are not a German citizen, you will most likely need to enrol already in order to get your residence permit. Otherwise, enrollment is compulsory. The only exception is if, and only if, you have also signed a work contract with the university about at least 50% of a full-time position. In this case you may instead decide to merely "register" as a graduate student, as described at www.frs.uni-freiburg.de/en/iga-en/kurse/registrierung-en?set\_language=en. You would then primarily be counted as staff, as opposed to graduate student; for instance, you could therefore not take part in the election of the PhD representatives. Instead, you would be represented by the delegates of the staff group in the Faculty Council and other committees. More reasons why you may or may not want to enrol and pay the associated fees are mentioned in Chapter 4. Among others these include discounts on the university canteens, free use of buses and trams in the city after 7:00 pm and cheaper entrance fees at the theatre.

#### 2.2 Yours and your supervisor's responsibilities

The responsibilities of supervisors are set out in full in the Doctoral Degree Regulations ("Promotionsordnung") of the faculty. Also, the supervision culture of the university is summarized here: https://www.frs.uni-freiburg.de/en/iga-en/promotion/supervision-culture?set\_language=en.

Your supervisor(s) will be your main source of information and advice throughout the course of your research. Their responsibilities include giving you early advice about the nature of research and the standard expected, and about planning the framework of your research program; arranging financial support for the research; advising you about literature sources, and attendance of lectures and classes; arranging any instruction needed in research techniques; meeting with you regularly to discuss your work; directing your efforts as necessary; and giving you informal assessments of your progress. Some students will have a single member of staff as their supervisor, and some may have joint supervision.

The University expects all students to accept their obligation to act as a responsible member of the University's academic community. This includes to take ultimate responsibility for their research program (including subject-specific, research, personal and professional skills training,) and for developing an appropriate working relationship with their supervisor(s). The main elements of your research program should normally be reviewed with your supervisor(s) on a regular basis. The discussion will include establishing regular meetings with your supervisor(s), agreeing on aims and objectives, and reviewing the facilities available to you, such as laboratory provision (bench space); library provision; access to appropriate computer facilities, including e-mail and the in-

ternet; access to telephone, and departmental common room facilities. In order to get the most benefit from your supervision, you should follow a few basic guidelines:

- Discuss with your supervisor(s) the type of guidance and comment that you would find most helpful.
- Agree on a regular schedule of meetings.
- Do not hesitate to take the initiative in raising problems or difficulties, however elementary they may seem.
- Try to maintain progress in accordance with an agreed plan of work, and if this is not possible, discuss the reasons with your supervisor as soon as possible.
- Keep systematic records of all that has been attempted and accomplished.
- Hand in written work (including thesis drafts) sufficiently ahead of time to allow give your supervisor enough time to review your work.
- Above all, be open and frank; with good communication, you are likely to make good progress.
- Always remember that you are the crucial person to take your thesis project to a successful completion. Do not wait for others to take the initiative.

#### 2.3 Reporting

The Doctoral Degree Regulations of the faculty request that two years after the admission the supervisor informs the Directors of Graduate Studies whether the thesis should be continued or whether there is no realistic chance to complete it successfully. In order to avoid such a situation, which happens indeed very rarely, the graduate student should agree with his/her supervisor(s) to have regular, formal discussions about the progress of the thesis, for example every 6 or 12 months, and keep a written and signed summary of this interview. It should contain the achieved results, the next planned steps and a regular update of the time schedule towards finishing the thesis, participation in lectures, summer schools and conferences. This structured interview helps to organize the thesis project and to avoid misunderstandings between the supervisor(s) and the graduate student.

#### 2.4 Exams

In case you have not attended certain lectures, required by the University of Freiburg, during your previous studies, it might happen, that you have to take lectures and write exams during your PhD. In this case you will be informed by the University which lectures you are obliged to attend. Your lecture will usually use the central learning platform ILIAS (https://ilias.uni-freiburg.de/login.php?lang=en) and the registration for the exam is done using the HISinOne platform: https://campus.uni-freiburg.de/qisserver/pages/cs/sys/portal/hisinoneStartPage.faces?chco=y.

Note, that sometimes it can be hard to cope with the workload of teaching, taking lectures and starting your PhD at the same time. However, there are different possibilities to deal with this situation. For example:

- You could not teach in the first term(s) in which you plan to attend lectures (but then would have to teach in the upcoming five terms of your PhD).
- It might happen, that it is possible to teach the same lecture as you are attending in parallel (this has been made possible by some professors before).
- You could attend the lectures in the second half of your PhD and not directly in the beginning.
- You could discuss with your PI which possibilities ther are, or contact the representatives of the PhD convent for advise.

#### 3 Your rights and responsibilities

#### 3.1 As a university member

Besides your scientific responsibilities towards your project and the bureaucracy that comes with the process of starting and finishing it (Section 2), here are some more general rights and duties you may gain by entering the university:

- As a new graduate student and employee, you should get assigned an office when taking up your work and get access to a computer therein. To make the necessary arrangements, refer to the secretaries and system administrators named in Subsection 1.10.
- Most PhD positions come with a work contract, most of which in turn entail teaching duties. There may be some differences in what your teaching load will amount to, depending e.g. on the institute you are working at. As a general rule, assistance jobs are distributed early before the semester start and there is no need for you to take any action. They need manpower and will call you when your data has been collected and forwarded by the respective secretary.
- Needless to say, gaining access to an office, a laboratory, a computer, internal
  networks or sensitive personal data of students and colleagues comes with due
  responsibilities. Just do not lose the key to the building, be careless with lab
  equipment, hack university servers or gossip about specific students' performance
  at exams.
- Depending on your status, you may vote or run as a candidate in the annual elections of the following:
  - the PhD representation (all PhD students, cf. Subsection 1.5)
  - the graduate students' deputies in the Faculty Council and the University Senate (graduate students enrolled as students)
  - the academic staff's deputy in the Faculty Council and the University Senate (employed graduate students who do not vote for the graduate students' deputy)
  - the Staff Council (all employees, http://www.personalrat.uni-freiburg.de/)
- When starting your studies, you should fill in a Supervision Agreement, as already mentioned in Subsection 2.1.1. It also serves the purpose of fixing the project to provide something to appeal to if you and your supervisor start disagreeing on what is part of your are memb project and what not. You have a right to this.
- If you are member of a GK, your situation may be substantially different; cf. Subsection 1.6

#### 3.2 As a German citizen

And in case you just moved to Freiburg or even Germany, you may find the following hints helpful as well (which are not specific to university staff):

- The Office for Migration and Integration offers several services and can be contacted to get detailed information about moving to Freiburg from aboard. An information letter in English can be found here: https://www.freiburg.de/servicebw/Flyer\_Amt\_Migration\_2019\_engl\_WEB.pdf.
- In Germany, health insurance is mandatory. The only case in which you may be exempted is that your health insurance is covered already in your home country; inform yourself about specific agreements between your country and Germany. Otherwise, you will have to join one of several (marginally different) public health insurances and forward the associated certificate to the university before your employment or scholarship begins. The insurance fees are then deducted automatically before you receive your salary. You also have to supply a health insurance certificate if you want to enroll as a student. Note that the drastic student discount does explicitly not apply to graduate students.
- As soon as possible after moving to Germany, and also later each time you move within Germany, you should visit the registration office ("Einwohnermeldeamt") and register your new residence. For Freiburg, that would be part of the "Bürgerservice" at the townhall in Stühlinger. For more information and to make an appointment online for registration, see <a href="https://www.freiburg.de/pb/-/205332/">https://www.freiburg.de/pb/-/205332/</a>; vbid3818. (Somehow they do not seem to provide any English version of their website, but you can choose at the bottom "Leichte Sprache", so that the webpage will use a simpler and less bureaucratic language) If you are moving within Germany, it is not necessary to visit the registration office at your previous residence, as the one at your new place will take care of deregistering your old apartment.
- The "Bürgerservice" is responsible for many other administrative tasks, too, e.g. anything related to passports and driver licences. See the list "Leistungen" at https://www.freiburg.de/pb/-/205348/;oe6007035.
- On the Freiburg website <a href="https://www.freiburg.de">https://www.freiburg.de</a> you can find other information concerning life here as well. Just as an example, depending on where you live and what your rental contract says, you may have to actively arrange something concerning waste management, in which case you may want to start searching at <a href="https://www.freiburg.de/pb/233007.html">https://www.freiburg.de/pb/233007.html</a>.
- Depending on how long it takes to retrieve the required documents, you may have to postpone getting a German bank account for a short while after your arrival, but in the long run it is probably advisable to get one rather sooner than later. Especially if you have a payed contract of the university, which only transfer the salary to a German bank account. As for which bank to choose, there are many options. Look around a bit and maybe ask your colleagues if they have

recommendations which bank currently has the lowest account fees or the best network of free-to-use cash machines (you will need them!). You will find a list of documents needed to apply for an account on the bank's website. Some may demand more, but essentially you will need to download and fill in some form, supply some proof of employment or salary (like recent pay slips), a residence permit and proof of your identity. For the latter, the most common way is the "PostIdent" procedure, in which you take your passport and a personalized coupon provided by the bank to a post office. A post officer then verifies your identity and sends the data directly to the bank, which also pays the corresponding fee. (Coincidentally, post offices are usually Postbank dependencies as well, but this is really independent of the bank you chose.)

- Germany has a public broadcasting fee, called "Rundfunkbeitrag", via which citizens finance public radio and TV channels. Notably, this is fee and not a tax, which is due to legal reasons and may seem otherwise quite irritating. This means that there is a dedicated institution ("Beitragsservice") that will almost certainly send you a letter after you registered your new residence, asking you the necessary data to collect 17.50€ monthly from you. Only one person per household has to pay and everyone pays for at most one household. So if your only residence in Germany is a shared flat, you will probably pay only a fraction of the full fee. Otherwise there are discounts and exemptions only for the disabled and unemployed. You can find more information at https://www.rundfunkbeitrag.de/welcome/englisch/index\_ger.html.
- You may have noticed already that the housing market in Freiburg is no fun and searching for a place can get tough. But do not despair, somehow your new colleagues have made it as well! Your best bet besides keeping your ears open in case you can take over some acquaintance's apartment when they move away—is probably WG-gesucht (https://www.wg-gesucht.de). Contrary to what the name suggests, there you do not only find shared flats, but also individual rooms. Less student-focused are https://www.immobilienscout24.de and https://www.ebay-kleinanzeigen.de. (On the latter, you may also find pieces of furniture, or just about anything else.) You may also try registering at the university's own housing database (www.wohnungsdatenbank.uni-freiburg.de).
- Here is another guide to the first steps when moving to Freiburg from abroad: <a href="https://www.swfr.de/en/international/life-in-freiburg/the-first-steps">https://www.swfr.de/en/international/life-in-freiburg/the-first-steps</a>. It contains more details, which we have only been linking to above, on some of the steps. But be careful: it is written for non-graduate students and therefore describes the (easier) path of someone wanting to study here after being accepted as a student. As someone getting employed here, you will first need a work permit and will only later have a chance to enroll as a student; also health insurance works differently once you earn money, as noted above.
- While the university has a collection of resources for new employees at www.zuv.

uni-freiburg.de/service (in German), it does not seem to have published any compendium of information for scientists from abroad. While we surely do not have to tell you how to search the web for the information you need, let us just mention one guide to living in Germany. It's from a trustworthy source and written for scientists from abroad, albeit not at our institute: www.mpg.de/4311252/living\_working\_germany.pdf.

#### 4 Opportunities in Freiburg

No matter how much attention and commitment your doctorate demands, nobody can work productively for sixteen hours every single day, though some may be zealous to convey this impression. Without some recreation in between, all is none, and you will hardly want to abandon all other pursuits during your time in Freiburg. Luckily, the area offers you many opportunities to engage in physical activities, acquire new skills and knowledge, join political or social movements or simply relax.

As a citizen of Freiburg, you are in the fortunate situation of living at the slopes of the Black Forest, a region where others travel for vacation. It offers excellent opportunities for outdoor activities, like an extensive and mostly well-signposted network of hiking paths, bike lanes around the surrounding landscape, uphill and downhill mountain bike trails as well as nearby skiing areas. Furthermore, climbing in the Black Forest as well as bouldering in one of the bouldering halls (www.blockhaus-freiburg.de, www.freiburgboulderkitchen.de) is quite popular in Freiburg. In addition, for wine enthusiasts the whole region Südbaden, which stretches west of Freiburg along the Rhine and forms one of Germany's most famous wine cultivation areas, will be of particular interest. If you are more into fine or performing arts, you can pick from a wide variety of music festivals, gigs, literature readings and theatre performances. Not to be forgotten is the well-developed Freiburg cinema scene, with both mainstream and arthouse cinemas. A particularly noteworthy option is the Academic Film Club (www.aka-filmclub.de), which is run by students and offers cinema shows at very affordable prices for everyone. Some popular places to just hang out on sunny days (there are many of these!) are Seepark and Opfinger See (a little further away) in the west, Stadtgarten in the east, the *Dreisam* riverside and *Platz der Alten Synagoge* in front of the university library. Needless to say, there is no shortage in museums, historical buildings and other places of interest to be visited, either.

To feel at home in Germany as soon as possible – if applicable – or to further extend your language skills beyond German, you have a few options for taking language courses. The first institution to turn to is, of course, the university's own Language Learning Centre (SLI, www.sli.uni-freiburg.de), which offers courses in most common languages as well as a few more exotic ones. Course fees are moderate, and depending on how exactly you are affiliated with the institute (e.g., whether you are member of one of the grad schools), at least for German and English courses you might even get a reimbursement, so it is worthwile making some inquiries here. Do not forget the aforementioned IGA services in this context either. If the SLI and IGA cannot satisfy your needs, you may want to first have a look at the city administration's website at www.freiburg.de. Although particularly geared towards refugees, it lists many language schools which offer courses in German as foreign language (commonly abbreviated DaF, "Deutsch als Fremdsprache") and other languages to anyone. Two particularly well-known and trustworthy options are the local Goethe Institute (www.goethe.de/ins/de/en/kur/ort/fre.html, but mind the substantial fees) and the local Volkshochschule (www.vhs-freiburg.de), which is dedicated

to making a diverse educational programme available to the general public.

Apart from language courses and the doctorate-related IGA services, members of the university have special access to educational and recreational opportunities in other areas as well. Most notable are the *Unisport* (www.hochschulsport.uni-freiburg.de), which summarizes the university's sports teams and courses, and the *Studium Generale* (www.studiumgenerale.uni-freiburg.de). The latter comprises a varied and interdisciplinary programme of talks, lectures and courses directed to the general public; if there are fees, students usually get a discount. Again, if the university's own offers do not appeal to you, there are plenty of other local sports clubs, musical societies, political movements, educational institutions and groups of all kind among which you can choose.

While most of the services mentioned above that are provided by the university are open only to university members, for some of the others students get discounts as well, e.g. performances at the theatre. Making use of these discounts, however, necessitates being enrolled as a student and possessing a corresponding UniCard, as opposed to just being admitted (and registered) as a graduate student and having an employee's UniCard. If you are in a position where you can choose whether or not to enrol according to what has been explained before, you may also want to take into account how many such discounts you would be able to cash in over the semester. Other financial benefits of enrolling as a student, whose usefulness largely depends on your specific situation, include a significant discount at the university canteens and free use of all buses and trams in the city after 7:00 pm every day. Note that the latter still requires "buying" a specific season ticket in addition to a student's UniCard, though at zero cost (www.studium.uni-freiburg.de/ en/student-services/unicard). (This is because the UniCard itself is valid for more than one semester.) Optionally, enrolment allows you to purchase a SemesterTicket at a low price, which then entitles you to use all public transport in Freiburg and the surrounding districts for the whole semester.

#### 5 Documents and online resources

The following list summarizes and supplements the weblinks scattered over the previous sections.

- Resources for graduate students on the Mathematics homepage and on the Physics homepage, including forms and contact data.
- University-wide and faculty-specific PhD regulations.
- University law of the state Baden-Württemberg (LHG) and university constitution.
- The PhD representation website.
- Staff Council website for all university employees.
- Information on the overall process of starting graduate studies at University of Freiburg and on how to enroll as a student in particular.
- (Student) UniCard- and (employee) UniCard-related (only in German) information, also on use of public transport.
- The university's myAccount website from where you can administer your e-mail and eduroam settings.
- Compendium of information on bureaucratic processes and forms by the central university administration, ordered alphabetically.
- Website of the city of Freiburg, in particular of the "Bürgerservice", which is responsible for everything concerning registration of residences and passports. The latter site contains a link to the online appointment system. Unfortunately, there seems to be no English version of these websites.
- Rundfunkbeitrag (broadcasting fee) website.
- A trustworthy-looking guide for international scientists to living in Germany by the Max Planck Society.
- Website of the "Studierendenwerk" with information on their social and counselling services, material for international students like this checklist (mainly for non-graduate students, so some items may not apply to your situation) and the Mensa menu.
- Public transport in Freiburg (VAG) and the surrounding area (RVF). In particular, information on the SemesterTicket and here.
- The University Library website offering literature search over all libraries of the university (as well as e-books freely available to university members) and access to your library account.

- IT-related information for employees at the Institutes of Mathematics (link only accessible from the math institute network) and https://home.mathematik.uni-freiburg.de/admins/?l=de and Physics, respectively.
- Computing centre of the university and their Wiki, e.g. with information on how to configure your eduroam connection.
- Instructions on how to set up a git repository, create guest accounts etc. on the Institute of Mathematics' own git server.
- International Graduate Academy services at the Freiburg Research Services website
- For information on available language courses in Freiburg, please see the list given in Section 4.
- Other courses the university offers its members.
- Website of the university's sports program with list of courses and information on how to register.
- ILIAS e-learning platform and HISinOne campus management system of the university.
- List of members of the Institute of Physics and their contact data, available only from within the university network. Selection of some particularly relevant contacts.
- Public (and not always complete) list of members of the Institute of Mathematics and their contact data.
- Examinations Office of the Mathematical Institute (German only) and the Institute of Physics.
- Application for leave/Urlaubsantrag for physics
- Further forms (via intranet)