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Welcome Guide

Doctoral School “Dissipation and Dispersion for nonlinear PDEs”

Welcome to the doctoral school “Dissipation and dispersion in nonlinear partial differential equations”! This information sheet gives you some first information how the doctoral school is working.

General concept

The doctoral program provides a top-level structured scientific training in Applied Mathematics, Numerical Mathematics, and Stochastics in the environment of Vienna. This includes a broad course program, a soft-skill training, and an intensive supervision by your main advisor and your mentor (co-advisor). The PhD students of the school are from the Vienna University of Technology (TU Wien), University of Vienna (Uni Wien), or the Institute of Science and Technology (IST Austria). The website of the doctoral school (DK) is

<https://npde.tuwien.ac.at>,

where you may find additional information, in particular in the section *Internal*. For questions, you may contact the Scientific Manager, Dr. Annalisa Iuorio (annalisa.iuorio@tuwien.ac.at), who is in charge of the scientific management of the DK.

Training program

The training program consists of the following main elements:

1. Course program: During the PhD program, you have to acquire a number of ECTS points¹ (TU Wien: 18 ECTS, Uni Wien: 25 ECTS, IST Austria: at least 24 ECTS, where some restrictions apply: contact your advisor). See Figure 1 for an overview.

- You can obtain (once) 3 ECTS points from the regular attendance of the Status Seminar.
- At least 6 ECTS points have to be obtained from courses from the fields
 - Analysis of dissipation,
 - Analysis of dispersion,
 - Numerics of dissipation,
 - Numerics of dispersion,

¹ECTS = European Credit Transfer System.

- Stochastic processes.

For PhD students from IST Austria, these courses may be partially replaced by courses from IST in order to fulfill the requirements of the IST. Please contact your supervisor to prepare a study plan.

- At least 9 ECTS points have to be obtained from either the Topical Lecture Series or the Guest Lecture Program.
- If your institution requires more than 18 ECTS points, they may be obtained according to the regulations of the corresponding institution.

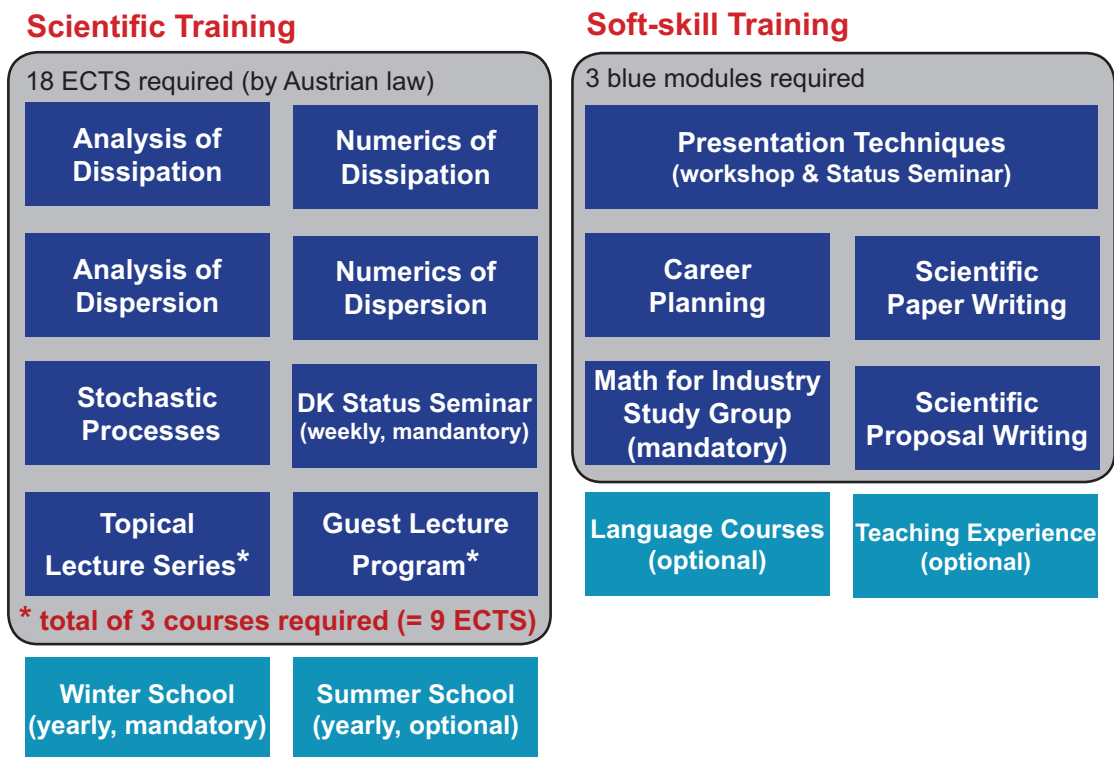


Figure 1: Training program of the DK.

All courses can be given in English on request, please contact the lecturer in advance.

In order to receive ECTS points, you need to be registered as a PhD student. Please observe the deadlines! If you are registered at one research institution and wish to take a course at another research institution, you need to be co-registered (German: Mit-Belegung) at that research institution.

You want to register at TU Wien? Please, see <https://www.tuwien.at/en/studies/admission/co-registration-changing-a-degree-programme/>.

You want to register at Uni Wien? Please, see <https://slw.univie.ac.at/en/studying/admission>.

You want to register at IST Austria? Please, see <https://phd.pages.ist.ac.at/registration>.

You are registered at Uni Wien or IST Austria and want to co-register at TU Wien?
https://www.tuwien.ac.at/en/services/studienabteilung/co_registration.

You are registered at TU Wien or IST Austria and want to co-register at Uni Wien?
<https://slw.univie.ac.at/en/studying/co-registration>.

You are registered at TU Wien or Uni Wien and want to co-register at IST Austria?
<https://phd.pages.ist.ac.at/registration>.

2. Status seminar: During the weekly seminar “*PDE Afternoon*”, all PhD students of the DK are presenting the progress of their research. Each student member of the PhD school must give a presentation (25 min. plus 5 min. discussion) once per semester and participate actively each week. If you cannot come to the seminar, please inform the Scientific Manager in advance by giving the reason. The seminar also gives the opportunity to meet regularly and to exchange ideas. Please, register for this seminar at your university. For the registration, you need to be a registered PhD student. If you are not already a registered PhD student, you may still participate at the seminar.

Time and location: alternates between TU Wien and Uni Wien

- TU Wien: Wednesday 14:00-16:00, Freihaus (Wiedner Hauptstr. 8-10, 1040 Wien)
- Uni Wien: Wednesday 14:00-16:00 (Oskar-Morgenstern-Platz 1, 1090 Wien)

Schedule: will be announced on https://npde.tuwien.ac.at/public/pde_afternoon/.

Note that the time of the Status Seminar will change from Winter 2017 on! It will merge with the seminar of the Special Research Program “Taming Complexity in Partial Differential Systems” and becomes a “PDE Afternoon” with talks, coffee & cookies, and discussions.

3. DK Schools: Yearly, the DK organizes two schools.

- Each winter, you are supposed to participate at the two-day *DK Winter School* outside of Vienna. The first day is devoted to scientific presentations, while during the second day, a soft-skill training specific for mathematicians takes place, like Presentation techniques, Paper Writing Course, Career Planning, or Time Management. Your participation is mandatory.
- Each summer, you are invited to participate at the one-week *DK Summer School* at Weisensee, which is a very beautiful place in Austria. A scientific program is offered in the morning, while the afternoon is free for group activities (research cooperations, hiking, swimming etc.). Participation is optional.

Informations about these schools can be found on the DK website.

4. Workshops, special lectures: There is a broad program of workshops, summer schools, and special lectures in Vienna, offered in the framework of the

- doctoral school (<https://npde.tuwien.ac.at/public/events/dk/>),

- Wolfgang-Pauli Institute (https://www.wpi.ac.at/activities_view.php?s=event),
- Vienna Center for Partial Differential Equations (<https://viennapde.tuwien.ac.at/events.html>),
- Erwin-Schrödinger Institute (<https://www.esi.ac.at/activities>).

If you wish to participate in scientific events outside of Vienna, please contact your advisor. The doctoral school reimburses your economy-based travel and hotel expenses (an upper financial limit applies; for travel guidelines see below).

5. Soft-skill training. An important element of the PhD program is the soft-skill training, which consists of several elements: training of your presentation skills during the Status Seminar (once per semester); training courses during the winter school (once per year); and participation at a Mathematics for Industry Study Group. These study groups intend to transfer technology and knowledge between academic mathematicians and industry. They take place several times per year at various places; see <http://www.maths-in-industry.org> for the schedule. All these elements are mandatory. Optional elements include language courses (also offered by the research institutions) and teaching experience (you may give exercise classes). Please contact your advisor for details.

6. Long-time stay abroad: You are encouraged to visit another institute (outside of Austria) for a longer stay of up to six months. During this stay, your normal salary is guaranteed. If you have been abroad for at least three months during your three-year employment (and you are a regular DK student, i.e., your salary comes from the DK), you may be employed for a fourth year. We recommend to stay abroad for at least six months. In any case, your advisor and the speaker must agree to extend your contract for a fourth year. Your stay abroad may be split into several parts, each part being at least 30 days long.

Mandatory curriculum: The requirements of the DK for completing the PhD program (beside your PhD thesis) comprise the following:

1. Credit for at least 18 ECTS points, among them at least 9 ECTS points from the Guest Lecture Program or the Topical Lecture Series.
2. Proof of participation at a Mathematics in Industry Study Group and three soft-skill courses.
3. Regular and active participation in the Status Seminar (one presentation by semester) and at workshops, summer schools, conferences.

Note that your research institution may impose additional requirements (for instance, more ECTS points). Please contact your supervisor or the Scientific Manager.

Organizational issues

Vacation: Before you can go on vacation (Erholungsurlaub), you need to hand in a vacation request. First contact your advisor for her/his approval.

- If you are employed at TU Wien, you may submit the vacation request online using the SAP Employee Self Service Portal, but please let the secretary of your work group do this for you.
- If you are employed at Uni Wien, you need to fill out the form *Antrag zum Verbrauch von Erholungsurlaub* and to submit it to the corresponding secretary.
- If you are employed at IST Austria, submit the vacation request using the HR (Human Resources) Software.

You are obliged to take your holiday regularly. At the end of your contract, you must not have any vacation entitlement.

Illness: In case of an illness or accident, you must inform your employer immediately.

- If you are employed at TU Wien, inform the secretary by phone or e-mail.
- If you are employed at Uni Wien, inform your advisor and the secretary.
- If you are employed at IST Austria, inform your advisor or, if this is not possible, inform the HR Department.

If the duration of your illness is longer than 3 working days, a medical certificate (Krankensstandsbestätigung) must be handed in.

Please inform the secretary when you are back to work. Observe that as an employee, you are automatically covered by the social health insurance for civil or public servants *Versicherungsanstalt öffentlich Bediensteter (BVA)* in case that you are employed at TU Wien or Uni Wien, and by the social health insurance in Lower Austria *Niederösterreichische Gebietskrankenkasse (NÖGKK)* in case that your employment is at IST Austria.

Business trip: If you intend to go to a conference, a workshop, a summer school, or to cooperate with a colleague, you must ask for a permission to leave your workplace, i.e. to fill out the corresponding form. The secretary or team assistant of your work group will help you. In order to get reimbursed from the DK, you have to fill out the DK travel form in advance. The work flow is as follows:

- Fill out the DK Travel Form and submit it to the Scientific Manager. Wait for the approval.
- Fill out the travel form of your institution and give it to the secretary of your work group. Wait for the approval.
- After your trip, fill out the reimbursement form of your institution and give it to the secretary. Please observe the travel guidelines of the DK below.

Travel guidelines

As a student of the doctoral school, we encourage you to present your research to the scientific community and to establish contact with other scientists. From the second year on, you should

give a talk or present a poster when traveling to a summer school or workshop; if this is not possible, please give a reason in the travel form. For your business trip, the DK provides a financial support. The following guidelines apply:

- You have to fill out the DK Travel Form in advance.
- Only economic-based travel expenses can be reimbursed. Try to minimize the costs.
- Book as early as possible to keep the overall costs as low as possible.
- If you go by train, cheap tickets are offered by the *ÖBB Sparschiene*. In case you are less than 26 years old, you may purchase the *VORTEILScard* (19,90 Euro/year) to get a discount.
- We do not cover expenses for taxi or (private) airport shuttle if public transportation to/from the airport/train station is available.
- When you go to Vienna airport, use the *Schnellbahn (S-Bahn)* instead of the *City Airport Train (CAT)*.
- If you are abroad for more than a few days, you may rent an apartment instead of a hotel room to keep the costs as low as possible. Often, student housing is available for longer stays. For this, an advanced booking is highly recommended. We cannot reimburse longer stays in a hotel.
- Expenses for the leisure program at conferences cannot be reimbursed.

For the procedure of the reimbursement of your travel expenses, please login in at <https://npde.tuwien.ac.at/private/> to check out the details.

You still have questions on...

... your research field, registration, course program? Please, contact your advisor.

... organisational issues (e.g. Status Seminar), travel reimbursement? Please, contact the Scientific Manager of the school, Dr. Annalisa Iuorio (annalisa.iuorio@tuwien.ac.at).

... future events (e.g. internal workshops), financial issues, problems? Please, contact the speaker of the school, Prof. Jüngel (juengel@tuwien.ac.at), or the deputy speaker, Prof. Teschl (gerald.teschl@univie.ac.at).

You want to know who are your colleagues? Visit our homepage at https://npde.tuwien.ac.at/public/current_students/. If you do not see your picture, please send it to the Scientific Manager.