

# Mathematics

## Owo Info



english  
version

Winter 08/09

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## Preface

Dear freshers,

I am your very personal **OWO-Info**. Actually, that is only a nickname: It means orientation week's journal (which is '*OrientierungsWOchen-Informationsheft*' in German).

During the orientation week I will be your guide. That's where my name comes from. But I am sure I will be helpful at the beginning of your studies and maybe even much longer.

I can give some hints where to go out and what else you can do in Darmstadt apart from studying. Moreover, I include a little introduction to your first year classes and lectures. And if it should happen that you feel frustrated and confused due to your studies I will gladly offer advice. These are only parts of my features. Go on exploring on your own!

Finally, I would like to mention that I only exist thanks to a lot of volunteers who were busy as bees writing and translating articles. Thanks to all of you. Thanks to my layouter, to my editors and to the Computer Science student's union (*Fachschaft Informatik*).

Well, all the best then with your studies. Remember my pages and have a look at them from time to time. I'd enjoy that.

Best Wishes,  
your *OWO-Info*

# OWO timetable MCS and M&E

Zeit	Montag	Dienstag	Mittwoch	Donnerstag	Freitag
08:00 - 08:45	Reception & Lecture Linear Algebra (S206/030)				
08:55 - 09:40	Breakfast	Breakfast	Breakfast	Breakfast	
09:50 - 10:35	KG OWO (_____)	Programming Project (_____)	KG Study math & Activities (_____)	Talk: "Study Regulations" & Guidance (S204/213)	Brunch
10:45 - 11:30					
11:40 - 12:25	Programming Project (_____)		Programming Project (_____)	Programming Project (_____)	Written Test & KG Feedback (_____)
12:35 - 13:20		Get-to-know the "Mathebau" (_____)			
13:30 - 14:15	Lunch Break	(incl. lunch break)	Lunch Break	Lunch Break	
14:25 - 15:10	Meet the Lecturers (206/030)				
15:20 - 16:05			Contest of the Departments (_____)	KG Timetable (_____)	Uni-Sport-Check-In
16:15 - 17:00	Talk: CS / Economics as Minor (S204/213)	Exercise Linear Algebra (_____)		Presentation Programming Project (S311/08)	
17:10 - 17:55		Misc. Fun Activities	What goes on in the math building? (_____)		
18:05 - 18:50					
ab 19:00		Pub Crawl	Film Society & Games Night	Owo-Theatre & Party (603 qm)	

# Commented OWO timetable

The orientation week (short: OWO) is organised for you by older students (tutors), to show you the university and everything else you need to know for your studies. You will find the content of every single OWO-event within this article. Those events are not in chronological order (like in the timetable), but thematically combined into groups.

The following symbols will help you to understand certain important properties and purposes of the events and their groups:



This Symbol labels events and groups that give you the chance to **get to know your fellow students** - this is one of the most important goals of the OWO.



You will meet important **contact persons** in events with this symbol.



This variable points to events, in which you can do some math!



Events with this symbol will give you an understanding of the **formalities of studying**.



A better **orientation on university grounds** will you gain in events with this symbol.



This symbol points on everything else you **need to know for your studies**.



Some events are additionally or primarily for your **entertainment**.



And of course one needs once in a while something to **eat and drink**.

The timetable is also topic in the “KG OWO”, where you the chance to ask questions about single events and the OWO in general.

## Small Groups



After the lecture on Monday we will divide you in small groups (german *Kleingruppen*, hence short: KG). These groups are fixed throughout the whole OWO. Every KG event has another topic, which will be explained to you by your two tutors.

### KG OWO



Since some of you might not know each other already, we will do some quick ice-breaker activities and then give you a short introduction into the OWO timetable.

### KG Study math



We will review exercise and lecture with you, give some additional informations about different types of lesson in the university and some general hints for your successful studies.

### KG Activities



What can one do at the university and Darmstadt in general when one isn't studying? Here we'll inform you about free time activities, ranging from math choir to university sport.

### KG Timetable



Besides the chance for you, to get answers to any remaining questions about study regulations, you'll prepare together your timetable for the first semester.

## Types of lesson



Primarily you are here to study mathematics. During the OWO you'll have your first real math-lessons.

### Lecture Linear Algebra



Linear Algebra is one of the two big lectures you will attend in your first mathematics semester. The lecture will be held by Prof. Otto.

### Exercise Linear Algebra



In this lesson you will get some exercises within the topic of the lecture, that you, maybe with some help from tutors, should solve.

## Studies and Contact Persons

In this events you will learn everything you need to study mathematics and who to go to for help, advise or any other problems with your studies.

### Reception



The Deanship of the department for mathematics and the organizers of the orientation week welcome you to your studies.

### Meet your lecturers



To get to know your lecturers and other contact persons for your first lectures, we came up with something special. Here you will meet everybody and learn all details.

### Misc. Fun Activities



Here you can take part in several fun activities. Your tutors will give you the details about those activities in the KG OWO.

### Talk: "Study regulations" & Guidance



In this talk you will get explained the structure of your mathematics studies. Contents are: Curriculum of your study program, exams and exam types, contact points, etc.

### Written Test



Until you reach your degree you have to take part in many exams. This small and harmless test about all you learned during OWO is just the start.

## Explorer University

These events will not only help your orientation but there is also some things to explore about other students at this university...

### Explore the math building



Besides the geographical orientation there are many particularities to be discovered that won't be found in the building plan. Therefore you have to explore the math building in small groups autonomously. Several stations where you have to perform different tasks will serve you as orientation.

### Contest of the Departments



A healthy competition won't do any harm: The freshmen of the computer science, math and physics departments compete against each other for the title of the "best department".

## What goes on in the math building?



We will show you what is going on in the math building: We will explain to you what a *Fachschaft* is and what its activities in our department are.

## Sociability, Culinary Delights and Entertainment



Besides the simple satisfaction of your physical needs the focus of those events lies in fun and sociability.

### Lunch Break



A lunch break belongs into every timetable: Many students use the affordable meals in the *Mensa*, but you're free to make your own individual plan how to spend this hour.

### Breakfast/Brunch



For the proper start into the day, we offer everything you need for a comfy breakfast (besides plates, cups and knives which you should bring along). On Friday morning we will start later (due to the Party on Thursday evening) with greater buffet for a relaxed brunch.

### Pub Crawl



Finally our chance to show you the nightlife of Darmstadt. Besides all the food & drinks you have the chance to get to know the city and socialize with your fellow students.

### Film Society & Games Night



The Film Society shows just for you freshmen (and all other movie connoisseurs) what can be done in lecture rooms, when there are no professors around. In Color on the Big Screen! At the same time people at the games night in the math building enjoy games, fun, sweets and spirits - of course you can join them after the movie!

### Programming Project



To make the start of your computer science minor easier we arrange a programming project where you can obtain basic programming skills in an easy fun way. Your goal will it be to program in small teams a virtual robot such that it can find its way out of a given labyrinth just be itself. No worries! No previous programming knowledge necessary.

### Presentation Programming Project



At the end of the project your teams compete against each other on the big screen and we will crown the victorious team (incl. a prize for the winner). Watching the tiny robots struggling to find their way out will be good fun!

### Theatre



Your tutors live on stage: We spared no expenses and wrote you your own theatre play: You'll be the audience for its "World Premiere". The secret of Math Jones will finally be revealed.

### Party



Aftershow Party for the theatre and the same time the crown of your OWO: ice-cold drinks, music and party - what else do you need?

### Uni-Sport-Check-In



The university sport center organises a sport meeting for all students of the TUD - show 'em what you got!!

# Freshers' Weekend

## What, Where, When and Why is Freshers' Weekend?

**What:** FreWe is a weekend with your fellow freshers and the *Fachschaft*. We're staying in a very cool seminar house. The transfer will be organized by participants with private cars. During your stay you'll have a lot of time to relax, but also fun and entertainment with your new student friends and the possibility to take part in interesting activities every day.

**Where:** At the Gerhard-Löffler-Freizeitheim (Stierhöfsetten, near Würzburg). The house is a bit out of the way, and we've rented all of it, so we'll be all alone there. There's a main house and some cottages for sleeping. In the house you'll find, apart from the lounges: rooms for tabletop football, table tennis, pool, and a room with a fireplace. Outside there's a place for a bonfire, a beach volleyball court, a basketball court, and a football court.

**When:** Friday, November 21st, till Sunday, November 23rd 2008

**Why:** Because maths at TUD is much more than just lectures and tutorials! You can meet all the other students who show up at the same lectures (or don't, depending). You'll experience that the department of maths is more than studying. It offers parties, musical evenings, the maths choir, university politics, the annual ballroom dance, ...

In short, too much to learn about in one short week of OWO. During that OWO, you'll probably be more concerned about your timetable, your lectures, etc. The first weeks at university turn out to be quite stressful, too. New city (perhaps even new country), strange people, weird mathematics.

At the Freshers' Weekend you'll have the opportunity to relax, and to get to know some of those people in a more un-mathematical atmosphere. We've organised lots of fun activities to take part in, but there'll still be lots of time for you to chill out, do sports, play cards or board games, explore the surrounding area, take your favourite book and find a place away from the entire bustle, whatever. If you feel that a weekend without maths is impossible, fine. Grab your lecture notes and come along! It's surely better to discuss your maths exercises with your fellow students, or have some tutor you can ask if you run into problems, than to stay at home by yourself and get frustrated.

You can *sign up* for the weekend during the Rallye on Tuesday and during the brunch on Friday. Have a look at <http://frewе.mathebau.de>. The *Fachschaft* will pay most of the costs of this weekend, but even they have a limited budget, so everyone who wants to come has to pay 15 € when signing up.

If you have any more questions, ask Black, Christina or Elli, your tutor or anyone else or send an email to [frewе \(at\) mathebau.de](mailto:frewе(at)mathebau.de)!

**Elli, Christina and Black**



# Contact persons

## Linear Algebra I

### Martin Otto

*Short Biography:* Study of Math and Physics in Freiburg (1980-1987) and Cambridge (1983/84); State exam in Math and Physics, Diploma in Physics 1987. Ph.d. in mathematical logic at H.-D. Ebbinghaus in Freiburg 1990. Postdoctoral lecture qualification in Math at the RWTH Aachen at E. Grädel, research topic mathematical fundamentals of Computer Science, 1996. Research stays at the University of California Santa Cruz and Stanford University 1997/98. 1999-2003 Lecturer, since 2002 Reader for theoretical computer science at the University of Wales Swansea. Since 2003 at the department of Mathematics at the TUD, in the group logic.



Martin Otto

*Research interests:* Mathematical Logic and model theory, in special with relations to theoretical computer science; mathematical basics of computer science; Completeness and algorithmical properties of logical systems; Logic and Complexity.

*Why Math?* <sup>(1)</sup> In my opinion, the most fascinating aspect of math is the discipline of thought, the clarity of methods, the joy of precisely modelling of abstract concepts and the amazing match of mathematical concepts to the empiric world. During my studies, I was amazed, at first, mostly by relations between theoretical physics and math, specially differential geometry. Later by the logical fundamentals of math and, by now, the connections between logic and mathematical fundamentals of computer science.

*Other interests/Hobbies:* Identification theory, arts, literature; photography, kitchen, garden, riding bike.

### Achim Blumensath

I joined the logic group of our department three and a half years ago after having studied computer science at the RWTH Aachen. My current research concerns model theory for monadic second-order logic.

This semester I will be helping with the Linear Algebra course for mathematicians.



Achim Blumensath

<sup>1</sup> Up to my school degree, I considered educating arts and architecture as my field of study as well; and when I studied, the decision between math and physics was not very easy as well.

## Eyvind Briseid

Eyvind Briseid will be assistant for the course Linear Algebra I for MCS, M&E (English) in the winter semester 2008/09. He will mainly be responsible for preparing and organizing the tutorials and exercise groups. Since the courses Linear Algebra I f. MCS, M&E (English) and Lineare Algebra I f. M, LaG/M, LaB/WfM will run in parallel he will cooperate closely with the assistants for the German course.

Eyvind Briseid comes from Norway and studied at the University of Oslo. Since October 2005 he has been a doctoral student and “Mitarbeiter” at the TU Darmstadt. He works in “Forschungsbereich Logik”.



Eyvind Briseid

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## Analysis I

### Patrizio Neff

Academical development:

1992: Vordiplom Mathematik at TU Darmstadt

1995: Diplom Mathematik at TU Darmstadt

2000: PhD at TU Darmstadt

2004: postdoctoral lecture qualification at TU Darmstadt

2005-2006: Lecturer Analysis at the University Dui.-Essen

since 2006: Lecturer at TU Darmstadt

### Laurentiu Leustean

Academical development:

1990-1995: Computer Science studies at the University of Bukarest, Romania

1997: Master of Science in Fundamentals of Computer Science at the University of Bukarest, Romania

2004: PHD in Mathematics at the University of Bukarest, Romania

since April 2004: Research Associate at TU Darmstadt

Hobbies: playing chess, reading, listening to music

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# Introduction to Mathematical Software

## Ulf Lorenz

Research group: Optimization

Academical development:

since 2007/11 : Akademischer Rat at TU Darmstadt

2007: selected for a Junior Professional Management program, Zentrum für Wissenschaftsmanagement e.V.

2007 : Research Fellowship "Algorithm Design in Combinatorial Optimization", TU Berlin

2001 - 2007 : Research assistant at the University of Paderborn

2006 : Habilitation

1995 - 2001 : Research Associate at the University of Paderborn

2001: PhD mit Auszeichnung

1989 - 1995 : Studies in Computer Science in Paderborn



Ulf Lorenz

Hobbies:

my family and Badminton, Chess, Jogging

## Christian Brandenburg

My name is Christian Brandenburg and I will be the assistant for your Introduction to Mathematical Software classes. You can find me in my office in room 229 in the math building. We will discuss about my office hours when the term starts to make sure you have time during my office hours.

Between 2001 and 2006, I studied MCS Bachelor and diploma in Darmstadt. Since October 2006, I work as an assistant at the TUD at the AG 10 (Optimization).

My hobbies are soccer and reading.



Christian Brandenburg

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## The mentoring system of the math department

For many students, the first year of studying is also a year of orientation. Many students face these upcoming questions for the first time:

Did I choose the right subject? How do I study correctly? What is important? Should I be afraid of tests? Will I succeed in studying maths? How good am I, compared to my fellow students? What is mathematics? Is there still any new research in mathematics?

A mentor can help answering these questions and others. Mentors are experienced members of the math department, usually professors, who offer their service as contact persons. Each student chooses a mentor before starting the studies. For prospective students, who joined a talk with a professor during the orientation week, these professors can be their mentors later.

All first semesters pick a mentor by signing up in sheets displayed during orientation week. With each mentoring group, there also is a student mentor, meaning a student of a higher semester. Each mentoring group meets several times during semester. The exact arrangement varies from group to group; there are talks with the whole group, but also individual ones, where desired. Also the subjects and questions discussed at a meeting can differ and should be chosen according to requirements of the group. Only one appointment is fixed; the mentoring day, where all mentoring groups should meet. The mentoring day is scheduled halfway through the first semester. For this appointment, all first semester students get an overview over recent performances by their tutor and can discuss these with their mentor. This may help, to estimate ones achievement so far and to notice early, whether you have to change your work habits in some way.

Anyway, attending mentoring groups is highly recommended for the whole first year of studying. Even if you do not have urgent questions in the first place. These may come up later and it may be important to be part of a mentoring group then. The activities of mentoring groups are part of study council of the math department and regular attendance is considered an obligation of all students. The Hessian university law orders attendance in a talk at the end of the first year of studies as a duty for all students.

In master courses, mentors have the important role to help with creating the study plan to be arranged by all students, to give advice and to approve it. This should secure that students carefully plan their studies with professional assistance and take into account student research papers and study guidelines.

All in all, the mentor system gives university teachers and students the possibility to get to know each other via direct contact. Thereby, experiences made by both sides can be exchanged and there is the possibility of giving feedback. Feedback may be forwarded to the head of studies and will be used to improve studies and study terms.

**Markus Helmerich, Study Advisor, translated by Ruben**

## Study-advisor mathematics

Where to go with questions like

- “I did not pass the exam - what should I do?”
- “I would like to change from MCS Bachelor to mathematics with another minor subject or to *Lehramt* - is that possible?”

Of course, you can ask older students or students from the *Fachschaft*. And the professors and assistants will usually try to help you when you ask them. Often they are also available outside their office hours.

But you can also direct your questions at the *Studienberatung* (study-advisor): to Reiner Liese or to me. Normally one can find at least one of us during our fixed office-hours Tuesday and Thursday 10:30 to 12:00, Reiner Liese in room 413 and me in room 210 (in the maths building S2|15). If you want to come at another time, you can contact us via email (*studienberatung* (at) *mathematik.tu-darmstadt.de*) and we can make an appointment. If your questions are related to MCS, you can also see Ms. Cosulich (room 325, *mcs* (at) *mathematik.tu-darmstadt.de*).

And what else does the *Studienberatung* do? Together with other members of the mathematics department we organize information days for high school students, we offer a special training for tutors, we create information material and we participate actively in the committees of the department. You want to know more? Then come and visit us.

**Markus Helmerich (translated by Rafael)**

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# Studying

## Overview of the first two years of MCS and M&E

In this article we would like to present you the first two years of your study program. During the first year both MCS and M&E students take part in the same courses. After that the programs differ. There will be an introductory course concerning the third year during your fourth semester. We start with some remarks:

The size of your courses is measured in ECTS credits (European Credit Transfer System). One credit is equivalent to 25 to 30 hours of study. Apart from the time at lectures postprocessing is contained in this measure as well. You need to gain 180 ECTS credits to graduate.

Another measure for the size of your courses are SWS (*Semesterwochenstunden*). They tell how much time you are supposed to spend in class.

In order to take part in an exam you have to “participate in exercises successfully”. The exact rules can be set by the organizers. So you should check with them what you have to do.

There is a difference between *Studienleistungen* and *Prüfungsleistungen*. You can find more information in the article about **examinations** (page 19).

### 1. Year

#### 1. Semester

In your first semester you will take part in Analysis I (Ana) and Linear Algebra I (LA) (both 9 ECTS or 4+2+2 SWS). That means there will be 4 hours of lecture, 2 hours of exercises and 2 hours tutorial. Apart from that you attend an Introduction to mathematical software two hours per week (3 ECTS). In Computer Science you will take the course Computer Science I (CS) (10 ECTS). **Exams:** There will be written exams in Analysis, Linear Algebra and Computer Science. The course in mathematical software is a *Studienleistung*.

#### 2. Semester

In your second semester Analysis, Linear Algebra and Computer Science are continued in the same size. If German is not your native language you acquire 3 ECTS for your language class. Before your third semester begins there will be an Introduction to scientific programming (3 ECTS) which takes two weeks.

**Exams:** As in your first semester there will be written exams in Analysis, Linear Algebra and Computer Science. The course in scientific programming is a *Studienleistung*.

### 2. Year MCS

#### 3. Semester

Your lectures will be: Ordinary Differential Equations (4,5 ECTS, 2+1), Complex Analysis (4,5 ECTS, 2+1) and Introduction to Numerical Analysis (9 ECTS, 3+2+1 programming). Apart from that you attend a Proseminar (4 ECTS) and the course Working Skills In Mathematics (2 ECTS).

**Exams:** You will have to take part in written or oral exams to pass your three lectures. The other two courses are *Studienleistungen*.

#### 4. Semester

The next courses will be: Algorithmic Discrete Mathematics (4,5 ECTS, 2+1), Introduction to Algebra (4,5 ECTS, 2+1), Integration Theory (9 ECTS, 4+2) and Introduction to Stochastics (9 ECTS, 4+2). Apart from that you will take part in Logic and Foundations or *Mathematik im Kontext* (each 3 ECTS) depending on which will be offered.

**Exams:** To pass the lectures you will have to take part in written or oral exams again. The last course is a *Studienleistung*.

#### Computer Science

During your second and third year you have to participate in 18 ECTS credits in Computer Science courses. You can take part in the *kanonische Einführungsveranstaltungen* each worth 4,5 ECTS.

## 2. Year M&E

### 3. Semester

Your lectures will be: Ordinary Differential Equations (4,5 ECTS, 2+1) and Introduction to Numerical Analysis (9 ECTS, 3+2+1 programming). Apart from that you attend a Proseminar (4 ECTS) and the course Working Skills In Mathematics (2 ECTS). Your business administration lectures will start as well. You will attend *Grundlagen der Betriebswirtschaftslehre I (BWL)* (3 ECTS) and *Buchführung* (2 ECTS). You might take part in *Makroökonomie I* (4 ECTS) which is actually supposed to be taken in your 5. semester.

**Exams:** You will have to take part in written or oral exams to pass the Math-lectures. The examinations in Economics and business administration courses are written ones. The other two courses are *Studienleistungen*.

### 4. Semester

The next courses will be: Algorithmic Discrete Mathematics (4,5 ECTS, 2+1), *Integrationstheorie Wirtschaftsmathematik* (4,5 ECTS, 2+1) and Introduction to Stochastics (9 ECTS, 4+2). By attending *Integrationstheorie Wirtschaftsmathematik II* (4,5 ECTS) you can already pass one of your obligatory elective subjects. In business administration you will attend *Grundlagen der BWL II* (3 ECTS) and *Kosten und Leistungsrechnung* (each 3 ECTS). Furthermore in economics the lectures *Grundlagen der VWL* and *Mikroökonomie I* (je 3 ECTS) will take place.

**Exams:** To pass the Math-lectures you will have to take part in written or oral exams again. The examinations in Economics and business administration courses are written ones.

Rebecca, Stephan & Markus

## Studying abroad - don't I do that already?

It is true that you as a foreign students are in a foreign country already, so we don't have to convince you that studying abroad is a good idea. But even if you want to study in Germany for quite a while, you might want to go to a third country and another university later on during your studies.

In general one can say that it is more difficult for foreign students to spend a year abroad, e.g. most of the financial support like the Erasmus program is available for inhabitants of the EU only. But still it is possible, so if you are interested don't hesitate and ask a lecturer or go to some of the information sessions on studying abroad that will be held in the Maths building during the year.

More information can be found on this page, but since its mainly for German students it is written in German: <http://www.mathematik.tu-darmstadt.de/Math-Net/Aussen/ausland.html>

For the German MCS-students, who like to spend one year abroad: Please have a look at the German part of this OWO-Info, where you can find some useful advice.

Ute

## Study abroad - My year in Ireland

In September 2006 I went to Ireland to study mathematics at Trinity College in Dublin. But actually, my adventure already started some weeks earlier. In January, I applied to the School of Mathematics and the Department of Genetics (my subsidiary subject) at Trinity College Dublin. During the next four or five months I didn't hear anything from them, and I started thinking that I wouldn't get a positive answer. Finally, in the beginning of June a letter of confirmation arrived. Hurray! My year in Ireland could start.

First however, I had to book my flight, find an apartment in Dublin and a new tenant for my room in Darmstadt, pass my first *Diplomprüfung*, and celebrate my departure. By the end of September everything was done and my year in Ireland could start.

After a few days of acclimatizing, the Fresher's Week (an 'OWO' for all new students at College) started. Although the programme was nothing out of the ordinary, these days were helpful to meet other international students and get information about the countless societies, in which everyone could participate. As a result, by the end of the week I already knew some other students from Germany and had decided to join a few societies, the volleyball and swimming society for example.

My lectures started in the second week, and I quickly realized a lot of things were going to be different from TU Darmstadt. The academic year in Ireland is divided into Trimesters. The four courses in mathematics, which I choose, lasted the whole year. We didn't have any "Übungen", tutorials or seminars. We only had lectures.

In a few courses we could do some homework every third or fourth week. It wasn't corrected, but sometimes the lecturer presented the results on the board in the next lesson. In only one course we did have lecture notes.

Even if many things were different, there were some pleasant similarities, too. I had a lot of free time, for example. On the one hand Irish maths students have to take part in only five courses of 2-3 SWS and don't have to do any homework. On the other hand there were a lot of time breaks, i.e. holidays, without any exams, since every exam is written in the final weeks of the third Trimester.

Because of that I always had enough time to enjoy my stay in Ireland, to play volleyball, to get to know the country and the people, and to go on holidays.



Cliffs of Moher

lade, and 77 € for a monthly bus ticket. In a supermarket you can't find chocolate cereals (*Schokomüsli*) for example, dark bread, or apple-sauce. You won't find checked paper either, but there are pancakes for toasting. If you look for something typically Irish, you have to visit one of the numerous Irish Pubs, drink a pint of Guinness, and listen to Irish folk music!

Therefore it's obvious that my year in Ireland flew by very fast. Suddenly it was the end of May and my exams were just around the corner. In mathematics and genetics I had to write nine exams in three weeks, and I think that I've never learned so much in such a short time in my life. In the end however, the exams weren't really difficult and I could be tolerably satisfied.

With my last exam my time in College came to an end, of course. The last three weeks I went on trips around Ireland with some friends. Besides sightseeing and culture in Belfast and Cork, walks along lonely beaches and lakes, mountains and waterfalls, wonderful cliffs and rocks were parts of our journey. Although the weather wasn't always so good, these trips were a fantastic end to my year in Ireland.



Trinity College Dublin

Hence, sometimes I felt more like a tourist and not like a student, and I think that after my stay abroad I've seen more of Dublin and Ireland than of Darmstadt and Germany. But of course, there were a lot of things to discover.

In addition to the historic sights and the beautiful landscape of Ireland, it was in the daily life that I noticed the biggest differences between Ireland and Germany. For example, traffic and public transportation are catastrophic. There are no highways, the people drive on the left, and outside of Dublin one's car may get stuck behind a flock of sheep.

Another big difference is money. Everything is very expensive. You have to pay about 500 € for a room in a student residence, 1.20 € for *Milkaschokolade*,

What was the best thing about my stay in a foreign country? It's not easy to answer such a question because there were thousands of wonderful situations and moments. I studied on a beautiful campus in the heart of a fantastic city, drank my first Guinness, played in the Premier Volleyball League, and improved my English, of course. But I think, the best aspects of my stay are the new friendships with students from all over the world. I met many interesting people from Ireland and other countries, and learned a lot about their culture, way of life and their view about Germany. Although not everything was perfect, I can recommend going to a foreign country for a while. This year abroad was a great experience, and I wouldn't hesitate to do it again!

Susanne

## A year in Sweden - Why not?

In this essay I would like to tell you about my year as an exchange student in Sweden. My name is Markus Schupp and I'm studying Mathematics in my seventh semester. Like many others I applied for the ERASMUS program and came to the Swedish town of Lund. Right now my year here is almost over. Some of you have probably already heard all my stories but perhaps I can convince you to think about going to Sweden as well.

Let's start from the beginning. In the middle of August I drove my car to the north. I was accompanied by Silke who also went from Darmstadt to Lund. As our destination is in the south of Sweden, we took the Oeresund Bridge from Copenhagen to Malmoe. This bridge is approximately 8 kilometers long. Therefore it is the world's longest cable-stayed bridge. Shortly after crossing it we were already in Lund. After finding the youth hostel we met some other exchange students. Nearly all of us did not know where to live in the next year but I'll talk about that later. Lund's youth hostel is accommodated in an old train so that it is quite small. Due to that fact it is allowed to set up a tent in front of the hostel and to use the facilities of it. As we were quite late with our booking, we didn't get a room so I brought my tent with me. The next day was the official arrival day.

### The first weeks

As I already told you many exchange students don't get a room although they applied for it. We knew that there usually are some rooms left that will be given out at the arrival day by the rule "First come, first served". So our group in the youth hostel decided that we would get up so early that we would be the very first people at the particular building. But some Austrian guys thwarted us. They had spent the night there. So we were waiting until 9 o'clock when they opened up. We went from desk to desk resolving several organisational issues. Due to the fact that we were quite early we were able to decide which place we wanted to live in. That's an advantage over the people who were given a room in advance. I spent the rest of the day unpacking my stuff and getting familiar with my new home.

The following day language class was about to start in the morning. Every exchange student may participate in a free course for two weeks. In our first meeting some people including me realised that they were put into the wrong course which was too difficult for us. But we could easily solve that problem in the very first break. We asked some other people in which class they were. After that we just went to their classroom and asked the teacher if we could join her class. She even took care of the bureaucracy.

In these two weeks the town was quite empty. If you saw someone of your age he was mostly another exchange student. The corridor I lived in was quite empty as well. Swedish students are usually not at the place they study at during the summer as it is the only longer period of time without courses. They only Swedish students I met were our mentors. They organised e.g. a tour through the town or went to a party with us.

At this time there were quite many parties so that one could get to know people from all around the world. Apart from that there was a free music festival in Malmoe. As Malmoe can be reached from Lund quite fast we went there a couple of times.



## Studying in Sweden

After these two weeks university started. We met our coordinator Sigmundur for the first time. So we went to the math-building which is much more beautiful than the one in Darmstadt. There is a typical Swedish sign on it (see picture). We registered for the courses we were about to take in the upcoming semester. Perhaps you have noticed that I only wrote down the first name of our coordinator. In Sweden you address everyone apart from members of the royal family by his first name - a nice system.



math-building Lund

But there is another system which is not that nice. Exercises are usually presented by the students at the blackboard at the end of the lecture. That means that there is not always time to cover every single problem. There was one course in which we did not discuss a single exercise. In another course several exercises were written at the blackboard at the same time. The following discussion was extremely short. Apart from that you do not spend as much time at university as in Germany but you have to work at home instead.

Another difference is the fact that each term is separated into two study periods. So after half a semester you have your first exams and start with new courses. That means that you learn the material in quite a short period of time. A typical exam has a written and an oral part. Before my first exam I thought that 5 hours (the usual timeframe) is quite a long time just for one course but you usually finished before time is up. The reasoning behind that system is that students should not feel the pressure of time in an exam. Oral examinations are sometimes like the ones in Germany and sometimes completely different. A usual way of doing it is the following. The teacher gives you something to do (state a proof..., solve the following problem ...) and leaves the room after that. After he returns you have to present your solution.

Apart from doing Mathematics I also participated in two language courses. Swedish is quite similar to German and English so that you can often identify new words easily. After my course in the first two weeks I could at least order in a store or ask which way to go. In my last course we had some discussions and we were writing essays about a topic of our choice. Although Swedish is not a complicated language there are several exchange students that don't know a single word in Swedish since nearly all Swedish people speak a very good English. That's why even if you do speak Swedish, it sometimes is difficult to practise it due to the fact Swedish people switch to English as soon as they recognise that you are not that familiar with their language.

## The life of a student or inte sjuk bara svensk

Since we were just talking about the Swedish language I can tell you my favourite Swedish phrase. "Inte sjuk bara svensk" means "not sick, just Swedish". It is the title of a Norwegian book that makes fun of Swedish behaviour. One of these special manners is called sittning. These are big dinner parties. While you are waiting for food being served you drink and start to sing Swedish songs. Although some people are dressed formally (e.g. black suit and tie) everyone sings along so that the atmosphere is enjoyable. After that you can stay for the nightclub. I really recommend going to one of these sittnings.

Sittnings are arranged by the so called nations. These are associations organised by students. They usually have their own rooms in which e.g. parties, lunch, sittnings or brunch are arranged. Apart from that a sports program is offered. If you are a member of one of the nations you can attend the program of all other nations as well. Since only students are allowed to join they can offer relatively cheap prices for alcohol. If you work there you can go to a "Thank You Party" with free (or very cheap) drinks or a free sittning.

The nations are not open every day. But from Wednesday to Saturday it is possible to go to a party hosted by at least one of them. Apart from that there is a pub on Tuesday. But how do you

party in Sweden? That's what brings us back to our motto *inte sjuk bara svensk*. As alcohol is so expensive there are two possibilities: Either you don't go out or you are completely drunk. So a party has three different parts: preparty, party and afterparty. At the preparty you sit together with your friends and start drinking. Then you go to a party hosted by one of the nations. As you drank before you only buy a few drinks. After the nation closed you go to the afterparty.

Why do Swedish people have such a peculiar attitude? Alcohol was forbidden for quite a long time. Even today drinks with more than 3.5% can only be bought at a store which belongs to the state. So prices are quite high. In former times many people went to Denmark to drink so that there were several accidents with drunk Swedish people.

There are a lot of other characteristics. There is a special day called Kanelbullesdagen. Kanelbulle is a special Swedish pastry with a lot of cinnamon in it. On this special day Kanelbullar are sold to very cheap prices and a large amount of them are eaten. Instead of Santa Claus' day you celebrate Lucia on the 13th of December. A group of women in white clothes sings traditional songs and carry candles. Due to the darkness in winter (especially in the north) this creates a very nice atmosphere.

## Interesting places

At our first weekend we went to a trip with our language class. We were at a nice small town at the sea and we visited an old fortress. When I sat in the bus I got my first impression of the Swedish landscape. It is not as crowded as the Rhein-Main region. Sweden has only 9 million inhabitants but it is much larger than Germany. Most people live in the south of Sweden. So if you go north there are fewer and fewer people living there. On the way to Stockholm e.g. I passed several hundred kilometers of forest.

Swedish nature is quite fascinating. There are several very beautiful national parks. I really recommend visiting them. Many people ask about elks. Unfortunately it is not possible to see wild living ones in the south. But there is a nice zoo where you can look at them. Apart from that there are several beautiful cities which are quite old. Apart from that a trip to Gotheburg or especially Stockholm is always worth a while.

## Conclusion

All in all I enjoy my year in Sweden to the fullest. I'm in a beautiful country, I found a lot of new friend from all around the world and I gathered a lot of experience. Swedish people are very helpful and the administration does a very good job. As you call everyone by his first name conversations are always pleasant. I could tell you a lot of other things. So if you are interested in finding out more you are welcome to ask me.

**Markus**

## A year in Canada

*"The Lord said 'Let there be wheat' and Saskatchewan was born."*

Stephen Leacock (1869-1944)

I spent the last two terms at the University of Saskatchewan (UofS) in Saskatoon in Canada. Since there is an Exchange program between the UofS and the TUD, I still could sign in December of the previous year. We five students, who were allowed to go by our Department, met at Misses Cunningham in march to get the documents to sign in. After getting 10 Canadian dollar in cash for the dormitory, I could send it back to the UofS. With that I could ask for a study permit after I had made biometric pictures, paid the embassy 72 € for looking at my application, calculated how much money I had and how much I wanted to spent there. After a week, the embassy told me, that I could come to the Canadian border to see an immigration officer. He asked me about my height and my place to stay and I finally got my study permit. During that, Chary, the advisor of the physicians, and Franz-Viktor, the advisor of the mathematicians, came to Darmstadt to

discuss details of our stay in Saskatoon. I learned there, that Canadians usually call each other with their first name and that German teachers also do so, even when they talk German.



When I arrived in Saskatoon, employees from the International Students Office (ISO) picked me up and brought me to the dormitory to place my bags. Afterwards I went to school. I could lend there knives and dishes during my stay. There was also an international Orientation, we were told about academic honesty. You must not do your assignments in a team, unless you have your teacher's permission since the assignments are marked and therefore have to be individually done or else you are kicked out from university, But of course you may go to the teacher or to the marker. There are no hours with a group leader as there are in Darmstadt. At the

weekend, I could convince myself that the rumor, that Saskatoon is only a big city within a lot of fields with a river, indeed *is* true. But it is not true, that it is always cold in Canada, it still used to be about 20 °C over zero.

In the next week was the OWO, although it is slightly different over there. There is a central OWO for all new students in all subjects. Therefore I had no class together with any one in my group. We had breakfast, were shown shown the university, had lunch and were told about academic integrity.

The reason for the different OWO is the different way to study. In Germany, you study math and you take several math classes every term. Canadians study at the College of Arts and Science and in their three or four years of study to their Bachelor, they take about 10 classes in their major. About 80 percent of all Canadians make a Bachelor's degree, but only few people actually make a master's degree. It is very difficult in Canada to fail an exam. You can earn a lot of points with your assignments, so that you don't have to get a lot at the mid-term and the final examination. In one class the teacher said, that his class was no present and two people failed it already, although he felt very sorry for *both* of them. That's quite different in Germany.

To register a class, you have to register at PAWS, a computer system, where every student is registered. If you want to take a graduate class, you need a permission signed by the head of the department and by the teacher. PAWS also schedules the exams and some teachers even care about that. The other teachers replace it by a ten-hour exam, that you get with an e-mail at 9 a.m. and you bring it to the teacher at 7 p.m. Other teachers even give you 24 hours a weekend or the whole week. The 24 hours exams are worst, since you think at 3 a.m. that you have over six hours left, but you cannot think about the topic. Canadians who do not know take-home-exams usually ask about googling the questions and Germans usually impute to academic dishonest behavior.

Unless you live on the campus, you have to buy the U-Pass, a ticket with which you can ride the bus through Saskatoon (you don't want to leave the city since there is nothing within 100 km). Since I lived about 10 Minutes away, I had to buy one, too. I preferred riding my bike. Since Canadians don't know bicycles on the road, I stayed on the sidewalk. In summer, I had problems with that, since the sidewalks are higher than they are here, but in winter, the snow gives a great ramp to get onto the sidewalk. Canadians don't clear the snow. After every snowfall, snow lies until it is walked to ice that stays till March. In March the Ice melts and becomes either water or slippery water or water with a thin layer of ice on top of it, that you will break through it, when you set foot on it and therefore dip your foot into ice-cold water. By the way, when it is colder than 30 degrees under zero, which still means warmer than the temperature, where the moisture in your breath freezes in your eyelash, you should not remove snow from the saddle with you bare hand before you unlocked your bike, otherwise you could freeze your hand to the lock. That hurts (it happened to me at academic honesty week). My roommate was smarter and walked in winter, but in March, he checked every hill of snow, to see if it releases his bike.



The only bad thing about Canada is the small size of the math department. Therefore I could only take very few Math classes. Altogether, my time in Canada was a great fun and I can really recommend it, if you have enough to do in you minor to spent some time.

**Stefan**

## Examinations

There is no study program without examinations. This article will explain the different kinds of them and it will present the administrative details.

There are two different kinds of examinations: *Studienleistungen* and *Prüfungsleistungen*.

### Prüfungsleistungen

You will spend most of your time on courses which are examined as *Prüfungsleistung* e.g. Linear Algebra or Analysis. Usually you have a written or oral exam at the end of the term.

Your grades in *Prüfungsleistungen* are part of the final grade of your Bachelor. Exceptions are the courses in your first semester (Analysis I, Linear Algebra I and Computer Science I).

You may take a second and third try in every *Prüfungsleistung*. But you have to talk to the *Studienberatung* before the third try.

You need to sign up for the exam in every *Prüfungsleistung* at the **zentrales Prüfungssekretariat**. You can find it in S1|03 room 1 to 4 and 76b. Mrs. Goßmann (room 4) is responsible for you. You can find the forms you need to sign up at [http://www.tu-darmstadt.de/pvw/abt\\_i/ref\\_ib/pruefsek/anmeldefomulare.tud](http://www.tu-darmstadt.de/pvw/abt_i/ref_ib/pruefsek/anmeldefomulare.tud). After filling in your data you have to put it into the mailbox at the *zentrales Prüfungssekretariat*. There is a deadline for the registration which has changed several times during the last years. Thus you should check it at the homepage of the *zentrales Prüfungssekretariat*. If an examination takes place during the semester, note that you have to register 4 weeks before.

### Studienleistungen

Apart from *Prüfungsleistungen* there are (usually smaller) courses which have an examination as *Studenleistung*. That means that there are no different grades so that you either pass or you don't pass the course. Usually the lecturer responsible for the course will inform the *Prüfungssekretariat* directly. You don't have to sign up for a *Studienleistung* and you can try to pass them as often as you want. That means that the lecturer can decide what is necessary to pass the course, e.g. an oral or written presentation of your results or a programming project.

Markus, revised by Miriam

## Scholarships

Have you ever thought about applying for a scholarship? You do not need to be the best student of your course to apply. The German government raised the funds for scholarship in the last years, therefore the number of scholarship holders rose.

In Germany there are different foundations with different political or religious focusing. Some of them have special scholarship programs for international students. You can find a lot of information in the internet (<http://www.daad.de>). They have special database with informations about scholarship programs for international students depending on your home country and your studies. For an application you need a curriculum vitae and a letter of recommendation by a lecturer. Furthermore, you need a first transcript of your records. In the internet you may find out which scholarship is the most suitable for you.

If you obtain a scholarship, you usually have a financial support up to 700 € per month. There might be a special support for your health insurance and a family allowance. Beside the financial support these foundations have special seminars for scholarship holders. Attending these seminars you have a chance to broaden your horizon. Some foundations also have a mentoring program, where you can meet interesting people engaged in science and industry.

If you have any further questions do not hesitate to contact me.

Julia (plehnert (at) mathematik.tu-darmstadt.de)

# University in everyday life

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## Facts about the faculty

The department of mathematics is counted among the four departments of the TU Darmstadt most involved in research. In addition, with 23 professors, about 1200 students, amongst them 571 enrolled in the diploma program of studies, 264 enrolled in the bachelor program (including MCS) and 267 teacher trainees, the department of mathematics at the TU Darmstadt is one the bigger mathematical faculties in Germany.

Furthermore our faculty is highly placed within the CHE ranking system and comes out tops concerning graduation to the PhD. This is partly due to our superb student support system, e.g. featuring a learning centre (LZM), where students can easily meet for the purpose of communal study. The LZM is regularly staffed with competent personnel, able to help the students in the case of arising difficulties and questions.

The department also offers a mentoring system, such that the students are looked after during their first year of studies. This system caters to general initial difficulties, learning aids and related problems or situations. The department policy is generally an open door policy, so that a student does not have to turn to a particular mentor, but can usually approach any of the department's staff members. To this end many of the staff simply leave their doors open to ease the students into approaching them and asking questions.

In the “*Mathebau*” (the “math building”) several so called *offene Arbeitsräume* are scattered among the different floors, *offene Arbeitsräume* being rooms expressly reserved for the use of students to study in freely. This supports communal learning and solving of assignments. And of course every student can visit one of the many consultation hours pertaining to a particular lecture.

The department is involved in several international exchange programs, such that it is usually possible for a student to study abroad for a given amount of terms. In the year 2005 the math department had 54 guests from international research cooperations, in the year 2006 there were 48.

Moreover the department regularly allows high school students the opportunity to have an insight onto itself. It participates in both the HIT (acronym, translates roughly to “college information days”) and the “*Schülerinnen-Schuppertage*” (an orientation event specifically for the female sex).

The bachelor of mathematics was first established at the TU Darmstadt in the year 2007, with 117 first-year students enrolling. In the same year 59 students received their math diploma, further 14 got their MCS diploma, 17 their MCS bachelor and 21 successfully finished their studies for the teaching profession.

**Claudia, translated by Michael**

## Eight Tips against frustration

The first couple of weeks are supposed to be some of the most difficult ones of the whole time of your studies in mathematics. Probably most of you will make their first experiences in living in an apartment of your own or a shared flat. Some of you even have to get used to a completely new country. On top of all those uncomfortable things there are homework exercises that need to be done, the lectures that need to be understood and the tutorials that need to be revised in case you did not succeed in doing them on time. You will experience that the exercises are not designed in a way that you know immediately how to solve them. Everybody will come to a point eventually where you are completely frustrated. We did as well. In the following we want to give some advice, where to seek help and how to handle some difficulties that come along with your studies.

1. First of all, it is absolutely normal if there is a moment from where on you cannot follow the lecture anymore. There is absolutely no reason to give up at that moment. Now, it is important to act immediately. You will need the missed material in the next tutorials and exercises. Moreover, the lecturer will carry on with the material the next time. Do not hesitate to seek advice. Otherwise it will be even more difficult to keep up with the course.
2. Make use of the office hours and ask older students in and around the *Fachschaftsraum*. There is always somebody around who is willing to help. Moreover, it is a myth that office hours are only designed for bad performing students. Sometimes, it is very helpful to get a deeper understanding of the problem if somebody else explains it.
3. Find some fellow students to form a team to learn and work together. You will see that other people have the same questions and problems you have. Working on a solution together deepens your understanding and is more time-efficient. It is sensible to find people who are approximately on the same level as you are. It is frustrating working with people who are ahead in their studies. You should try to do most of the exercises on your own.
4. It may be advisable to bring along some chocolate, cookies or similar sweets. You may also treat yourself to some ice cream from time to time.
5. It is definitely necessary to find something else to do to get your mind free of mathematical thoughts regularly. There is lots going on, you should inform yourself. Something might be of interest, like the sports program of the university, the 'Math Choir' or the 'University's Orchestra'.
6. In any case you should participate in the 'Fresher's weekend'. There you will meet other students of your year and you will discover for sure that you are not alone with your frustration.
7. One point concerning the 'Computer Science' part: You do not need to know how to program at the beginning of your studies. Of course, it is an advantage if you do, but it is not necessary. Both of us did not have a clue of programming before we started here. Do your homework assignments regularly and ask people if you need help. There are enough people around who know how to program. Keep on with the course and you will be fine.
8. At last, if you are completely overwhelmed and you feel you cannot produce anything sensible anymore, have a break, do something completely different, take a breath of fresh air or have a coffee in the *Fachschaftsraum*. Some problems even seem easier to handle if you look at them at a later point.

Eva & Anita

# Learning and teaching strategies

After 13 years of school you are probably almost experts when it comes to “learning and teaching strategies”. You already know that classes can take on many forms. Sometimes it mainly consists of listening and comprehension, at other times you have to actively work on problems. The concept of homework will be a familiar one to you as well. All of this is also incident at university. But at university the different forms of learning are distributed among different courses. This article is supposed to help you find your way concerning all these different types of activities.

What differentiates the TU Darmstadt from other universities is not only the acute support offered to the students, but also the “hands on approach”, which is greatly encouraged. That means you are expected to talk about mathematics a lot and write it down as well. In the current system of education this is usually considered to belong to the “methodological competences”.

## Lectures

During the lecture methodological competences are of small importance. The contents are divulged in form of a speech, which is mostly supported by the blackboard. Sometimes a beamer or overhead projector is used as well. This goes on for about one and a half hours, supplying you with information, which you can seldom memorize or comprehend on the fly. Because of this it is usually estimated that every lecture has to be either prepared or succeeded by a follow-up of about the same time as the lecture itself.

To do so notes you might have made during the lecture can be used to good effect. But often it is not necessary to take notes, because many professors will supply the students with a prepared script. In this script the relevant lecture content will be written down in an orderly fashion so that you usually do not have to do more than take some side notes (usually there is not enough room to jot down a whole proof). If there is no script it is advisable to take a peek at the recommended literature. But it would be more than rash to simply buy such a textbook before really thinking it through and pondering if you truly have to own one. These books are usually pretty expensive. Often if there is no script the notes taken down on the blackboard will be completely sufficient.

It will probably happen that despite your follow-up or your preparations you won't completely understand a lecture! Because of this the lectures are accompanied by exercises, tutorials and additional supervision. And of course it is actually encouraged to ask questions. In the bigger lecture halls it might be difficult to gain the attention of the professor, but please do so. After all usually quite a few other students will have exactly the same question.

However being able to ask questions is not the only reason to visit the lecture, although (at least in mathematics) attendance is not compulsory. Ultimately you will have to find out by yourself what method of knowledge acquisition is best for you, how many notes you have to take down and so on. Nonetheless skipping lectures can quickly lead to problems. After all the pace can be rather severe and you can easily fall behind. Therefore you should think about it before ditching the lecture even if you think the professor can't explain very well or he basically only reads out the script. After all you can only allow yourself to miss lectures if you are not only able to learn better out of a book or the script but also do so.

## Exercises/Tutorials

The basic lecture is accompanied by exercises and tutorials during which you will finally be able to do some math yourself. Many universities simply hand out the exercises and present a sample solution later on but in Darmstadt we treasure communication.

Basically in both activities you will have the current exercise and a tutor, an experienced student who will be able to answer your questions. However the tutor will not simply blurt out the whole answer to a problem but rather give you a few hints to point you into the right direction. (e.g. “Wasn't there a useful theorem in your script concerning this question?”) To be able to do efficiently the students are divided into manageable small groups. How this is done will be announced in the very first lecture. The exercises themselves will be a bit more orientated towards proving theorems than in school and range from simple application of a theorem presented in the lecture to whole exercises specializing in a certain topic.

The most important and common way to learn are group exercises. In these cases the assignments should be attended to during the allotted time span. To this end the tutor will ask you to form small groups (about four persons per group) and to work towards the solution together. In this way you will not only be forced to learn to talk about mathematics but you will also soon notice how much you profit from the knowledge of others. Naturally you should take care not to simply copy everything down but always make sure that you understand why a certain step is necessary. Otherwise the exercise would of course be futile. In time you will find people with whom you can work together well and who go about things in approximately the same pace. If you cannot deal with all the exercises there is no need to worry. The exercises are devised in a fashion that nobody has to suffer from boredom. Often the tutor will point out some especially important problem.

In the assignments it is important to write the solutions down in an orderly fashion. And although you are allowed to solve the exercises in groups you should take care to write down the final answer on your own even if you did not come up with the solution yourself. In this way you can check if you really understood how it worked.

The assignments can be handed in weekly by your tutor. He will check and correct your answers, giving individual feedback concerning your solutions and the way you wrote it down.

Sometimes you will have a solution presented to you by another student after having worked on it. It can of course also happen that you are invited to present one of your solutions. This is done to help your presentation skills.

Attendance is usually not compulsory. However you are encouraged to attend the group exercises since it is an excellent way to prepare for the tests - where you will have to solve similar exercises. Sometimes admittance to the examinations is even linked to regular attendance of the group exercises or you may have to meet a certain quota concerning the assignments to be allowed to partake. Often good achievements with the assignments can mean a bonus in the actual test.

## Seminars

Seminars come in many different sizes and packages. For example you might have a *Proseminar*, a *Mittelseminar* or a *Projektseminar*. But the differences are not immediately important. Seminars actually resemble schoolwork a bit. There is a maximum number of participants and you will occupy a room together with the presenter - mostly either a professor or a research associate. Usually you should familiarize yourself with a certain topic about which you will have to give a presentation and perhaps a report. To do so you will have to use appropriate literature. You might have to work on your own or in small groups. Often discussions will be part of the familiarization process. And since you will only be able to learn something if you there mostly attendance will be compulsory.

Concerning the different types of seminars: While *Proseminare* have next to no prerequisites a *Mittelseminar* demands some knowledge of the first terms of your study course. The other prefixes to 'seminar' inform about its contents or the used working method. Further mentionable might be the so called *Blockseminar*. In these you do not have a weekly meeting, but rather a few considerably longer ones.

## Further events

Aside from the activities mentioned before there are practicals to consider as well. During practicals the usage of things like mathematical software are absorbed directly. But that can wait...

A special event however should be mentioned. The *Orientierungskolloquien* (also called *O-Kolloq*). These events have no regular schedule and are supposed to bring young students into contact with the task groups of the math department. This is important, because as your studies progress you will have find out what part of mathematics you like and how to emphasise these parts. During an O-Kolloq a task group will give a presentation concerning their research or at least a certain aspect of their research. In this way you get to know the people from a task group as well as get an idea of what they are doing. Afterwards you can mingle while enjoying tee and cookies.



## supervision offers

All events have additional supervision, which you can use and are encouraged to use even if you do not have any problems concerning the specific event. All tutors have a weekly consultation hour, during which you can either ask general questions or get help for specific assignments. In addition both the professors and their assistants, who usually organize the assignments, have consultation hours. Time and place of these can be found on the websites dedicated to the specific lectures. These websites also contain the assignments and, in case it exists, the script.

If you are unable to take advantage of such a time or only have a short question you can use the open door policy. In the math building it is considered to be completely acceptable to simply knock on a door and ask your question. In the worst case you will be asked to come again later on. If you have a more time consuming request you can send an email and ask for a special appointment.

The daily routine of many successful students might look like this: If they are not currently partaking in an event like e.g. a lecture, they will probably sit in one of the students group rooms (first hint) together with their study group (second hint) and work on one of their assignments. If they are not in the consultation hour of their tutor (third hint) they can get some food for thought from the other students in the room (fourth hint), from the consultation of a different tutor for the same lecture, which may take place elsewhere (fifth hint) or in the *Lernzentrum Mathematik* (the centre of learning for mathematics / sixth hint), where you can find a qualified helper the whole week round. Or else you look for a fitting open door (seventh hint). How could anybody still have problems with the assignments?

You do not stand alone concerning general or personal problems either. The mentoring system, student counselling and other advisory facilities of the university - not to mention the students' council (not to be confused with the students counselling) - are there for you. If you need some advice or have a problem, go to them! This is one of the main differences between the university and school. Just as there is usually no compulsory attendance to most events the university can only make you offers. You have to take them up on it by yourself!

Just one more bit of advice for everybody who likes to work alone and has already repressed any mentioning of group work. Even if you had some bad experiences, give it another try! Do not forget that, perhaps contrary to your experiences at school, people here like math! The mere presence of others helps to learn, to let knowledge flow into you. Allegedly the mathematical pressure on the outside is often bigger than on the inside.

Rüdiger, translated by Michael

## Fachschaft and Department of Mathematics

So now you're a student at the mathematical department. What is this mathematical department and how does it work? And what is this ominous "*Fachschaft*"? These and similar questions are (hopefully) answered in this article.

### The Fachschaft

*Fachschaft* actually means all students of the mathematical department. But in everyday use, "*Fachschaft*" means all students dealing with the politics of the mathematical department, organising Orientation Week and/or coming to the weekly *Fachschafts* meetings. You can find the current date and time on <http://www.mathebau.de>.

By law, these tasks are taken over by 5 persons elected in University Elections for the "*Fachschaftsrat*" (FSR). In our department many people do this without being elected for the FSR. Because of this, the FSR is regarded as contact persons for the students.

Then there are also some *Fachschaft*-teams. Here, some people (in the ideal case, they are mathematicians) sometimes do certain activities. These teams are always happy about newcomers. These teams are

### The $f \cup \mathbb{N} - \forall g$

Several times each semester (for example Wednesday in the Orientation Week at 6.30 p.m.), the  $f \cup \mathbb{N} - \forall g$  arrange a games night. Most of the time, these events take place near the *Fachschafts* room, sometimes they take place in other departments. You play games you brought with you or use games of the  $f \cup \mathbb{N} - \forall g$ . Additionally, some sweets are handed out (based on donations). The games nights are announced by posters and over the mailing list "wasgeht". If you are interested in a games night, you can contact fun-ag (at) mathebau.de.

### The Ball-AG

Once a year, in June, there is a math-ball where you wear a nice suit or dress, dance to the music of a live-band and admire the show. To be prepared, there are also some dance courses, and tickets have to be sold as well. The work taking place directly at the ball day (like preparation and the programme) is only a small part of the whole organisation. All this of course requires planning and enough time in advance. For this purpose, the Ball-AG is brought into being. A few experienced people are always in that team, but often you can see new faces and there are always more people needed helping to bring the new Math-Ball to a success.

### Math-choir

Possibly the only mixed choir not short on guys! The Math choir meets every week in order to practice (under experienced leadership) together four-part, mostly modern songs. These are performed every semester at the popular "Math Music Evening" (MMA) and at certain events of the department and the university. The always increasing requests prove the quality. You will surely have the possibility to have a look during OWO and Fresher's Weekend. And remember: everybody can (learn to) sing! And it's fun!

### Go

Go is a game, that some wise man once called "Chess for adults". The Go-Players meet every Monday at 7 p.m. in *Fachschaft* room to lay patterns and conquer areas. They aren't really a team, but are always happy about newcomers coming over to play.

## The Department of Mathematics

A department has to be organised. For this, there are several committees. The most important one is

### The Faculty Council (*Fachbereichsrat* (FBR))

The Faculty Council as the mightiest committee of the faculty discusses important things, such as e.g. affairs of study (i.e. the planning of the courses in the coming semesters and the spreading of assistants to the lectures), occupation of councils (i.e. appointment commissions), affair of personnel (i.e. job posting, suggestions about occupation of professorships, adjustment of academic colleagues at the faculty), distribution of the faculty's funds (Do we buy new computers, do we complete our library or do we use the money for anything different?), election of the dean [*Dekan*] who represents the faculty and leads the current business, election of the vice-dean [*Prodekan*] and the provost [*Studiendekan*] who form the deanery (with the dean - of course), distribution of the rooms, and so on... The Faculty Council is a sort of a parliament of the faculty.

Besides five students there are eleven professors, three academic and two administrative-technical assistants, that means the professors have the majority. But since it is a bad impression if difficult decisions are made with 11:10 votes, the professors try making compromises - here we can intervene :-)

There are of course many other important committees, for example, the Committee of Studies (every decision regarding studying and teaching are prepared here), the Diploma Committee, the Graduation Committee, the Committee of Research, the Budget Committee, the Evaluation Committee (takes care of evaluations of lectures and improvement of learning quality), the Perspective Commission (how will we develop our department?) and the Commission for the equality of treatment of women.

As you can see, there are a lot of committees, in which students make sure that the world/*Mathebau* doesn't collapse. To keep it like that, your *Fachschaft* need your help. Because you can tell us the best where the problems are; and we need dedicated people like you going into the former mentioned committees. So: come over to the *Fachschaft*! It's always open and somebody is always there.

## University politics

Not only our homely department, also the big TU Darmstadt must be governed (might there be a system behind that?). And again there are multiple committees, for example

### Parliament of Students (StuPa)

The Parliament of Students is the legislative organ of the general student body. Its tasks are the election and supervision of the AStA and the budget's passing of the student body. Besides, it decides on the principle students' affairs (i.e. the statute or the semester ticket). The Parliament of Students is elected by list election. It is worth while to visit the sessions (they are always open). The representatives will be highly motivated if there are more interested students. Here also a high election turnout is important.

### University Congregation and Senate (*Universitätsversammlung und Senat*)

The University Congregation is a sort of a university's parliament. It issues and changes the basic order and elects the president and vice-president of the university. Here the professors also have the absolute majority: Out of 61 they have 31 seats while the rest distributes on 15 students, 10 academic colleagues and five administrative-technical assistants. Another quite important issue of the University Congregation is the election of the Senate which consists of 11 professors (one of them is the president of the university), 4 students, 3 academic colleagues and 3 administrative-technical assistants. The Senate is a substantially smaller committee with more might. It decides on affairs of science and study (i.e. agreement on all faculties. conditions of study), affairs of research and the academic junior staff, affairs of budget and the university's development planning, university elections, information management (library and computers), affairs of jobs, goal agreement between Land Hesse [Land Hessen] and the university and between the university and the faculties. In the Senate the before mentioned 4 students represent the interests of nearly 17000 students. So you see, it's important to demonstrate interest with a high election turnout and to elect the four best students into this position. Because the four students are elected by the students of the University Congregation it is important which list you elect into it. The lists' way of acting and their estimation you can find on the traditional hustings (election campaign). Additional information, e.g. about the various lists, can be found on the internet, <http://www.stupa.tu-darmstadt.de>.

Stephan, translated by Tristan

## Virtual Realities

Well, looks quite real, the maths building, doesn't it? That much concrete just has to have a firm foundation in reality, right? But there's more to it, as you can also find it on the internet.

So let's start our descent into the virtual realities hidden beneath the grey surface with the *Fachschaft's* homepage: <http://www.mathebau.de>. There you can find a list with important dates, an archive with old "Mathe-Info"s, a board to discuss with other students and much more. And of course you can also reach the *Fachschaft* via email: [fachschaft \(at\) mathebau.de](mailto:fachschaft@mathebau.de).

The department of mathematics can be found under <http://www.mathematik.tu-darmstadt.de>. There you can, for example, find course materials for your lectures as well as the email addresses of your professors and their assistants.

## Mailing lists

There exist several internal mailing lists in the math department, which are used to broadcast various announcements. For one thing, every year the freshmen get their own list. There are also lists which are for a fixed topic or for a specific group of people. You can find an overview on <https://www.lists.mathematik.tu-darmstadt.de/mailman/listinfo> (where you can also subscribe to the lists).

Among those mailing lists, for you the most important is mcs2008 (at) mathematik.tu-darmstadt.de, which is yours. There you can discuss with other students from your courses. Also, announcements regarding your courses, special events, changed time table and so on, will be broadcast there. So you really should make sure you are subscribed to that list!

If you want to be informed about upcoming games/reading/music evenings, parties or other events by students for students, subscribe to the **wasgeht** list.

## Computer access in the maths building and the HRZ

There are three computer pools in the maths building: 309K, 313K and 317. To get access to those, you need a special user account. Unfortunately you get this account only if you are at least in your third year. An exception is the account for the *Introduction to Numeric* lecture, which you can use for one semester only and which you have to share with other students.

## HRZ

The HRZ (*'Hochschulrechenzentrum'* = university computation center, <http://www.tu-darmstadt.de/hrz/>) provides additional computer pools in various places. In the city center, you can find them in the old main building: S1|02 030, S1|02 030a, S1|03 016. On the Lichtwiese there are two more: L1|01 055 and L1|01 074. All students have a special HRZ user account, which you need to activate in order to use it. More on this can be found on <http://www.tu-darmstadt.de/hrz/stud/>.

As part of this you also get a special email address (IRGENDWAS@stud.tu-darmstadt.de), and are allowed to use the university wide HRZ WLAN. So if you have a laptop, get the required VPN software from <http://www.vpn.hrz.tu-darmstadt.de/> (available for free for Windows, Linux and Mac OS X) and start surfing.

Max

## Be smart and use RMV!

*"In an endeavour to attend to the social and economic interests of the students and to assure their mobility with environment-friendly means of transportation, the RMV and AStA conclude an agreement: [...]"*

This is the preamble of a contract between RMV and AStA, in which the reasons for a semestral ticket are mentioned. Such a contract was first agreed on in 1996. It enables us free travel in RMV area. To receive such a great benefit for a rather small price is only possible when every student is obliged to buy this ticket (exceptions: see below). This principle is based on the fact that the ticket is used in a different amount by every owner and everyone has to pay the average amount (including a big discount).

So for the wintersemester the price equals 81,47 €. This amount is paid automatically with the semester fee.

## What counts as a ticket?

To use the semester ticket, you need two things: your student's identification card with the note "RMV-AStA-SemesterTicket" on the back and a valid photo identification. The latter is significant, because the semester ticket is non-transferable and the student's identification card doesn't count as unforgeable.

If you forget one of those, it counts as "without ticket", so you have to pay the fee of 40 €. But because you actually own a ticket but only forgot it, there is the possibility of giving it to the transportation company within one week. In that case, the fee is reduced to a handling fee (currently 7 €).

Since summer semester of 2005, the RMV prohibits the laminating of the ticket. For the RMV, this would mean an illegal change of the ticket, rendering it useless. If you do it anyway, you risk paying the fee for riding without ticket and losing your student's identification card.

Foreign students whose passport is far more important than a German id-card because of the visa, have the possibility to use the **International Student's Identification Card (ISIC)** instead. You can get it for example at the AStA.

## What if I don't need the ticket?

As told in the beginning, the ticket is so low priced only because every student is obliged to buy it. But some students aren't able to use the ticket, so there are the following cases in which the RMV refunds the money:

- demonstrable residence outside of the RMV area because of foreign study or practical of more than three months
- postgraduate studies or free semester
- severe disability with free ride in public transports
- double matriculation (the cheaper ticket is refunded)

To make use of these possibilities, you have to apply for the refund *within 21 days of semester start* (watch out: start of semester, not start of lectures!). You have to state and document your reasons, then your semester ticket is cancelled and you get your money back.

The application form is found at the AStA and in the internet. Here you can also find out what exactly is needed for the application and which conditions must be met.

## Which transports may I ride?

In the RMV, all buses, trams, interurban trains, subways and all local traffic trains (*Regionalbahn, StadtExpress, RegionalExpress*) are usable. ICE- and IC-/EC-trains may not be used. For special offers, such as the Night buses of Frankfurt and the Airliner of HEAG you have to pay an additional charge.

## Where can the semester ticket be used?

The semester ticket applies in the whole RMV area as well as in the crossover-areas to the VRN.

## Travelling larger distances

To travel farther then RMV area, you have to pay the fee from the borderline of RMV. There is also the possibility of buying a connective semester ticket for VRN (141 €) or RNN (133 €), which enables you to use the whole areas. You can find more information at the according sales agencies.

All stations from which you have to buy connective tickets are listed here:

<b>direction</b>	<b>border station</b>
Mannheim/Heidelberg (via Heppenheim)	Lützelsachsen
Mannheim (via Groß-Gerau)	Lampertheim
Eberbach	Erbach
Aschaffenburg (via Dieburg)	Babenhhausen
Aschaffenburg (via Hanau)	Großkrotzenburg
Gemüden	Jossa
Bad Hersfeld/Bebra	Burghausen
Kassel/Treysa	Neustadt
Siegen	Dillbrecht
Koblenz (via Limburg)	Limburg
Koblenz	Lorchhausen
Bad Kreuznach/Bingen	Mainz-Mombach
Alzey	Mainz-Marienborn

## University groups

Studying is not everything. Your university offers a variety of different activities from artistically to technical, from religious to commercial, from sport to politics.

Let's start with the **artistically activities**:

- **Schauspielstudio**: Plays from Shakespeare to Dürrenmatt (<http://www.tud-schauspielstudio.de>)
- **Filmkreis**: Movies from Hollywood to Cannes (<http://www.filmkreis.de>)
- **Audiomax**: Radio all around the university (<http://audiomax-campusradio.de>)
- **TU-BigBand**: From classical swing and latin to funk and pop-ballads. (<http://www.bigband.tu-darmstadt.de/tu-band/>)
- **Hochschul-Orchestra**: Music from orchestra ... (<http://www.tu-darmstadt.de/hg/orchester/>)
- **Hochschul-Choir**: ... to choir (<http://www.tu-darmstadt.de/hg/chor/>)

**functional activities** are offered by the following groups:

- **AKASOL**: vehicles run by solar power ... (<http://www.akasol.de>)
- **AKAKRAFT**: ... or by the Otto-Motor (<http://www.akakraft.hg.tu-darmstadt.de>)
- **AKAFLIEG**: sailplanes built from scratch (<http://www.akaflieg.tu-darmstadt.de>)

There are several **religious groups** like:

- **Evangelische Studierenden-Gemeinde**: From protestants ... (<http://www.esg-darmstadt.de>)
- **Katholische Hochschulgemeinde**: } ... over catholics ... (<http://www.khg-darmstadt.de>)
- **Studentenmission in Deutschland**: ... to christians generally. (<http://www.smd-darmstadt.de>)

If you like to socialize with some companies or want to go abroad for an internship

- **Konaktiva**: Contacts from students to companies (<http://www.konaktiva.tu-darmstadt.de/web/>)
- **AIESEC**: As trainee from Darmstadt in the wide world (<http://www.aiesec.de/da>)

**Sport and politics** are mentioned in other articles in this OWO-Info, where you can get a better picture of their activities. Finally you can check out the whole list of university groups at <http://www.tu-darmstadt.de/hg/>.

**Andreas, translated by Jakob**

# TUD map City



# Living

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## Money

### Costs

To be a student will cost you some money! Even though the Hessian parliament revoke the 500 € tuition fees this year, it is still unsure if they won't be reintroduced next year. But even if not, one still has to pay 204,47 € student service fees.

For the course itself, you don't need so much money. All you need is basically paper, a pen, a ruler and sometimes a calculator. Maybe you like to learn from books instead of the course-scripts. You can rent them from the university library, read them in the library of the math-department or buy them from the next bookshop. Anyways, make sure to read and work with the books before you buy them.

Housing is rather expensive in Darmstadt. The lease for a room in one of the boarding houses varies between 140 - 280 €, rooms on the private market are with 150 - 350 € a bit more expensive. In case you are looking for a room, take a look at one of the many billboards (like the one in the *Mensa* cellar) or look in the internet.

- <http://www.wg-gesucht.de>
- <http://www.studenten-wg.de> (Unfortunately both only in German)

For lunch you may want to go to the *Mensa*. It is open on weekdays from 11 am to 2:30 pm (bistro from 8 am to 4 pm). The selection of meals you can choose from is manifold, with mixed quality. A complete meal costs between 2 and 4 €. So here one spends approximately 60 € a month.

Besides all that you will also want to feed your fridge, maybe go to the movies every now and then, have fun, the usual. Summing it up, you are probably looking at 500 to 700 € (not included the study-fees)

### Finance

Unfortunately, the situation is pretty bad for foreigners, as they do not have many of the financing options German students have. So if you already know that you will not be able to come up with enough money, you should first of all check if there are any scholarships you can apply for in your own country. It is not always necessary to be a super-mind, in order to obtain one. In the era of globalisation, more and more governments, companies and other institutions support students who wish to go abroad.

For German students, whose parents have a low income, there is the possibility to get an interest free loan, called BAFöG. Sadly, if you are not German, you will most likely not be eligible for BAFöG. There are, however some exceptions. For example, if you are from a state within the European Union or if one of your parents has been working in Germany. If you think, that this might apply to you, then you should consult the Office for Educational Furtherance at the *Studentenwerk*. I dearly hope they speak English there, their websites are unfortunately (again) only in German.

<http://www.studentenwerkdarmstadt.de/geld/geld.html>

The last resort is of course to find a job that does not consume too much of your time. If you are from a foreign country which is not a member in the European Union, you will only be allowed to work 90 or 180 days a year, but you should be told about that when you obtain your visa. If you come from a EU-state, you can work, like every German student, 20 hours per week during the semester and full time in the semester break. Good jobs are of course those that are related to the study branch you are in, so in your particular case hopefully some flavour of maths. There are usually many jobs offered at the university departments. As a higher-level student there is the possibility of becoming a tutor for exercise classes. As a tutor you receive



9,00 or 11,00 € per hour depending on the difficulty of the lecture. Doing this you can not only refresh the material of former courses and meet other people, but although learn a lot about teaching other people (you'll even get a short pedagogical training). So if you decide to become a tutor after the next semesters, just look at the billboards in the maths-building or talk to one of the professors that are going to hold the lectures for the next time.

Outside the University, the jobs offered at the Fraunhofer Institute for Graphical Data Processing (<http://www.igd.fraunhofer.de>) are particularly interesting for maths students. They often look for students who are familiar with computers and programming. Besides that one might find jobs at billboards at the *Citybüro* : Ludwigstraße 20 - Tel: 304 304 oder 304 700; Fax: 304 88 or you take a look at the advertisements in the daily papers (like the *Darmstädter Echo*), the university website or the university billboards.

When having problems or additional questions you might find help from the people at AStA. (although I don't know if they can speak English) <http://www.asta.tu-darmstadt.de/cms/>

Sascha

## Pub Guide

According to the Yellow Pages, Darmstadt has far more than 100 pubs, inns and restaurants. Introducing every single one would be overkill, so if you would like a list of them, just look them up yourself.

Why do I write this article then? Well, mainly because the editor thought "Since he's always hanging around in bars anyway, he could at least write something decent about it.", so I will do my very best to describe some of my favourite haunts here.

Let's imagine we are standing at the Kant-Platz at the university and are looking for cool pint of beer. We don't have to walk far, since just a few yards walk will take us to the **Hotzenplotz**, the **Hobbit** and the **Havana**.

The first two of them are known for their beer, pizza and "*laterchen*" (two pints of cider with a glass of cherry liqueur in it, just give it a try).

The only difference between the two bars (apart from the owner's accent) is the names of the pizzas.

The Havana on the other hand is a cocktail bar. With its happy hour (before 20:00) and pizzas for 3 € (sadly only on Mondays, but try the fantasia-pizzas if you get the chance) it's surely worth a visit, even if the waiters sometimes take their time.

Having drunk our first pint of beer we now continue to another group of three bars in direct vicinity of each other, namely the **Roots**, the **Pueblo** and the **Green Sheep**. I'm afraid I can't give you much information about the Roots, but the Green Sheep is a nice Irish pub with everything you'd expect: Guinness, Killarney, a wide range of whiskeys and (once again) pizza and some cocktails.

The Pueblo is my favourite haunt at the moment. As the name would suggest it's a Mexican bar and features a wide choice of cocktails and Mexican food and a cosy interior (even a miniature pond indoors).

There are two places I'd like to mention here, even if they are not exactly bars.

The first of them is the **Panino**, a Greek restaurant with mostly Italian food located directly within the precinct. It is worth mentioning because of the good food and its special offer to students consisting of a main dish and non-alcoholic drink of your choice for under 6 €.

The second is the **Steinbruch** a disco far to many people don't know about, partly because it is located in Mühlthal which is a bit off, but easily reachable by bus or car. The music played there reaches from rock, pop, alternative and ska to electro, gothic, hardcore and all the variations of metal (check the program since there are different ones each day). The Cocktail Happy-Hour (before 23:00) and the great atmosphere (usually after 23:00) make this place worth a visit.

A real treasure trove of information for the student night owl is the partyamt (<http://www.partyamt.de>) containing all the events and concerts happening in and around Darmstadt.

Now I should probably mention the **603qm**, the **Schlosskeller** and the **Ratskeller**, the **Cafe Extrablatt**, The **Aussiebar**, the **Vacaciones** and all those great bars in Darmstadt. I won't do that for two reasons. Firstly because if you hadn't had your fill of night live after those bars mentioned above you will soon find out about the others without further help. Secondly because there is still the pub-crawl during the OWO to get to know Darmstadt and its night time activities.

So long!

Flo

## Fresher's Weekend

23 November: About 40 crazy first-year students of mathematics gathered in small car-pools to take off to their secret mission: Destination of the weekend foray was Stierhöfsetten; a village so benighted that three digits are sufficient to the resident hares and hedgehogs to number serially their telephone numbers. Thus, this place should be perfect to provide for one weekend as a hideout to a horde of mathematicians whilst they planned their studies and world domination.

The freshers have been locked up for three days at the Gerhard-Löffler-Freizeitheim along with their tutors. Despite all expectations there wasn't any Darwinian selection.

Instead they were conveyed that studying maths means much more than attending lectures and tutorials. There were many parties, several activities like a jam session with the *Mathechor*, disputations with fictitious professors, sundry mathematic and less mathematic puzzles about numbers, fish and red dots were presented and even tried out. Needless to say, one also got to know their fellow students.

The weekend was a raving success: From baking biscuits and wandering through campfire and playing "Go" to interesting conversation, with a couple of jars and pints; there was something for everybody. At the end of the weekend, everyone agreed that those days were both nice and informative, since they got many tips from older students so that they could start their studies well-informed, relaxed and, in some cases, hangoverish.

Thus, this weekend should be diarised by those, who like having a friendly conversation with some beer and singing at campfires, those, who want to learn anything concerning their first semester or the studies of mathematics in general, those, who relish wandering or baking biscuits as well as those who like dancing in log cabins by night or beating each other with cushioned weapons .

Swetlana & Flo

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# Miscellaneous

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## Imprint

OWO-Info - The *Mathe-Info* for the orientation week 2008/2009, published by the *Fachschaft Mathematik* at TU Darmstadt.

- ISSN 1612-6025
- **Printing:** typographys GmbH, Darmstadt
- **Print run:** ?
  
- **Closing date:** 01.08.2008
- **Editor:** Miriam Schwebel
- **Typesetting & Layout:** Sebastian Hamann
- **Cover:** ?
- **Contact:** owo-info (at) mathebau.de

Typeset using T<sub>E</sub>X and ConT<sub>E</sub>Xt in:

- Trebuchet
- Boister

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- **Fachschafts meetings:** For current date and time see <http://www.mathebau.de>. The transcript of the most recent meeting and other information are in the glassbox to the right of the *Fachschafts*office and near the entrance of the *Mathebau*. All transcripts can also be found on the internet at <http://www.mathebau.de/protokolle>.



<b>Zeit</b>	<b>Montag</b>	<b>Dienstag</b>	<b>Mittwoch</b>	<b>Donnerstag</b>	<b>Freitag</b>
08:00 – 08:45					
08:55 – 09:40					
09:50 – 10:35					
10:45 – 11:30					
11:40 – 12:25					
12:35 – 13:20					
13:30 – 14:15					
14:25 – 15:10					
15:20 – 16:05					
16:15 – 17:00					
17:10 – 17:55					
18:05 – 18:50					
19:00 – 19:45					