On Monday 28 May 2018, the IFF hosted an event for students interested in pursuing a doctorate at the TUM Faculty of Informatics. The event featured a panel with two professors and two doctoral students: Prof. Gudrun Klinker, Prof. Matthias Althoff, Barbara Reichart and Hanna Schäfer joined moderator and IFF officer Dora Dzvonyar on stage to share their experiences and stories around finding a position, expectations going into the doctorate, the day-to-day life of a doctoral student, supervision by the professor as well as finishing your thesis. After the panel, the attendees came together for food and further discussion, joined by 15 additional doctoral students from the department who came to answer students’ questions. Thanks to everyone involved in making this event a reality! Here are the some takeaways from our session, structured by topic.

MOTIVATION & GETTING STARTED
From what our panelists shared, the reasons for taking up a doctorate can vary from being interested in a certain research area to a love for teaching. Hanna Schäfer had always been interested in doing research for a living, so for her, moving from her Masters thesis to a doctorate at the very same chair was quite a natural progress. Barbara Reichart shared that
her initial motivation wasn’t focused as much on the dissertation itself, but more on the possibility to teach at university level.

We discussed the importance of knowing what you want to get from a doctorate and to familiarize yourself with potential chairs or research groups to find out whether they provide a work environment that you can see yourself spending a lot of time in. As you will work closely with your advisor, our panelists suggested you should really make sure that communication between you and your advisor works well, especially in conflict situations.

In order to find a position, the panelists suggested to get involved with chairs that you are considering for the doctorate by doing your thesis with them, taking HiWi positions or even just talking to other students involved with that chair.

“You have to find something that you love doing, because you will spend a lot of time on it. But you will only know if you love something, if you’ve previously done it. It’s like test-driving a car!” - Hanna Schäfer, doctoral candidate
SELECTION PROCESS

The panel brought differences in the application process to light. Both doctoral student panelists progressed from their Masters thesis and were offered a position by their supervisors afterwards. Both professors confirmed that this is also their preferred way of finding new doctoral students. While they will more often than not already know the potential candidates from their previous work with them, they also shared how the formal process works: they advertise the position and let people apply for the job. See below for the list of open doctoral positions at TUM [1].

Possible aspects that are taken into account for these more formal applications include your CV, grades and thesis work, Skype interviews, on-site interviews and also potentially consulting your Masters thesis advisor. Prof. Klinker shared that even if there are positions that can’t be filled with people she has personally worked with before, she also asks for recommendations in the broader research community (e.g. for Masters students at other universities and research labs she has connections to).

Both of the professors emphasized that no matter which way the initial contact has been made, one of the most important decision factors is the chemistry between them and the potential candidate. They will try to make sure that they are on the same page with candidates regarding their topic ideas as well as on their approach to the academic research process.

DAY-TO-DAY TASKS & WORK-LIFE-BALANCE

As a doctoral at TUM usually provides you with a lot of freedom regarding the structuring of your work, the panelists agreed that there is almost no such thing as a “typical” work week. The daily work depends on whether the position is more focused on teaching or research, but in both cases self-managing your time is crucial.

Barbara Reichart, who was involved in a lot of teaching, described a major difference between the lecture period and the semester break. During lecture period, she had teaching commitments throughout the week. In order to be able to focus on her dissertation work, she tried to arrange it so that she had at least one day a week solely dedicated to that. Another day she would usually dedicate to meetings and advising her bachelor or master thesis students. What helped her to not lose track of her research was to dedicate at least 15 minutes each morning to working on it (this method she learned from the book “Writing Your Dissertation in Fifteen Minutes a Day” by Joan Bolker, which she highly recommends). Barbara defended her thesis two months prior to the panel.
Hanna Schäfer’s perspective is quite a different one, as she has a research-based position where she works on three different research projects. She describes the main tasks she has to manage next to her dissertation: advising students, project meetings and academic publications. While one of the tasks sometimes takes over, usually her week is a mixture between all of them.

Prof. Klinker, having obtained her own PhD in the US, adds that the life you could expect as a PhD student also highly depends on the country or program you are looking into. Especially in the US a PhD student is a student in the narrower sense, who “writes a long Masters thesis over the course of 5 years”, while in Germany doctoral candidates will usually be employees and thus more involved in the day-to-day obligations of university.

**CHALLENGES & EXPECTATIONS**

All four panelists agreed that finding and narrowing down your specific topic can take quite some time in the beginning. Barbara Reichart shared that she only found her final research topic after 3 years and 5 to 6 different proposals. However, the work that she did before wasn’t completely lost, as she published some of it, but in the end much didn’t end up in her final dissertation.

Hanna Schäfer remembers that part of why it was hard to commit to a topic in the beginning was her expectation that her work had to be most innovative, radically new and possibly world-changing. With time, she realized that her contribution would be very specific and “small”, but would address and solve a certain research topic with all of its facets. Prof. Althoff agreed and Prof. Klinker added that this hurdle of imagining oneself as the next Nobel Prize winner can actually scare candidates, and she described how it’s the supervisor’s job to guide doctoral students and help them narrow down the topic.

Another challenge that was discussed was finishing your PhD “in time” and moving on from it. Both professors advised not to take another job until you are finished with your dissertation. Even if the only task that is left is writing up the results, the time investment and difficulty of achieving this while having other commitments should not be underestimated. From her own experience Barbara Reichart adds that the had to finish her dissertation on the side, working for a couple of hours each day after work, which was a difficult time for her.

“After one year you will have nothing, after two years you will think you don’t have time anymore and after three years you will want to
throw everything away and start again ... and in the end everything works out somehow.” - Hanna Schäfer, doctoral candidate

TEAMWORK
Depending on the university, research lab or group, the opportunities and nature of teamwork can vary greatly: while some are nearly competitive within their group, some actively encourage collaborations, e.g. on joint papers. Barbara Reichart shared that her chair holds a yearly seminar where everyone presents their current work and can get advice, usually from colleagues who are more advanced in their research work. Hanna Schäfer, who did a lot of project work, explains that she often had more teamwork with other project members than with the people she shared her office with, and she collaborated a lot with remote team members.

Gudrun Klinker, Matthias Althoff, Dora Dzvonyar, Barbara Reichart and Hanna Schäfer

DOCTORATES IN INDUSTRY
While for potential candidates this might seem as an attractive option, both of the professors were hesitant and spoke about potential challenges. They warned that some companies want
to use doctoral candidates as “cheap labor”, involving them in the daily business instead of letting them focus on their research work. Moreover, the two advisors (university and industry) have to be on the same page about the research topic and the general research environment for the candidate, a balance which is difficult to achieve, sometimes changing the whole preset of a PhD. Additional challenges with confidential research results and academic publications were briefly described.

**MOST POSITIVE EXPERIENCES**

While a doctorate has tough moments, we asked our panelists to also share what they enjoyed most about and what distinguishes a doctorate from other options.

“A doctorate is a once in a lifetime opportunity“ - Prof. Matthias Althoff

According to Prof. Althoff, the chances of going back to do a doctorate after working in industry are small, but when you start your career with a doctorate all doors remain open and you can either decide to stay in academia or take up a position in industry afterwards. All of the panelists agreed that doing your own research and being rewarded for it, for example at conferences where you’re able to present it, is a great experience. They also emphasized again the great freedom a doctorate offers, both in terms of topic as well as schedule and time management. While in industry, ideas have to ultimately be profitable and therefore often the road of least resistance is chosen, a doctorate also allows you to explore even “crazy” ideas out of pure interest. Barbara Reichart also explained that at university she got much more responsibility for projects early on in her career. Hanna Schäfer added that she really appreciated the experience of advising people with their research and theses at a young age. Prof. Klinker described that her doctoral students really...
Conversation between students and doctoral candidates

MATERIAL

[1] List of open positions for scientific staff at TUM

[2] “Writing your Dissertation in 15 minutes a day” by Joan Bolker (TUM Library)