

Message from the Editors

We send you greetings from the “BiBa Machine Room”, the virtual space where we sit and write mails to answer your questions, or the phone if you want to talk to us. We’re (gladly!) busy (enjoying) reading your letters of motivation and other documents you submitted to carry out the Eligibility Assessments. And between servicing our BiBa hotline, we’ve been working on this newsletter and preparing for our first batch of BiBa’s to arrive as of mid-September.

Please note: The application deadline for the BiBa is July 15, 2024. It will no longer be possible to complete profiles, to upload files or to make any changes after that date. This deadline is fixed for both foreign and German applications, for uni-assist and myovgu. This is due to the two months needed to process applications.

Applicants with a German Abitur: Please contact us directly if you missed that deadline.

Recently we gave a presentation about BiBa to about 100 young students who were all just finishing the last bit of preparation to enter a German university. We asked our audience who of them knows already now, i.e. before even starting university, that they might want to go on to do a PhD, a doctorate. We were surprised by the relatively high number raising their hands, something like 20 % of those present. And you always have some who are just too shy to raise their hand.

Therefore, we decided to include in our BiBa Newsletter articles from time to time which

explain the academic system in Germany (and occasionally compare it to systems in other countries). In doing so, we also want to whet the appetite of those of you who have not thought about it, or don’t think you’ll want to go down this career path at this stage. Who knows, maybe you’ll change your mind.

So we’ll tell you what you need to know to move about in the system. We’ll write down some unwritten rules for you! (Of course, you can approach the professor of your choice in Magdeburg and they’ll take time to explain things to you in person.)

In this issue you will also find out where students in Magdeburg go out for dinner when they don’t feel like cooking nor want to eat in the cafeteria: As their first assignment, two new members of our BiBa team (Darija and Twisha) went out to eat at what they consider to be one of the best Currywurst-Places in town, just so that they can report to you about their experience. We’ll also introduce you to one of Magdeburg’s stellar computer scientists who moved on to Stanford after spending 6 years at Magdeburg – but will still be doing some teaching for us.

And we’ll also tell you about what’s New and Exciting at Magdeburg’s Opera House in 2024/25.

Enjoy!

Your
BiBa Newsletter Editors



PD Claudia Krull
BSc (UWSP), Dipl.-Inf.,
Dr.-Ing. habil. (OVGU)



Prof. Thomas Strothotte
BSc, MSc (S. Fraser),
PhD (McGill), MBA (Columbia)
Dr.rer.nat.habil. (Stuttgart)



Your future Professors: How did they get there?



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Magdeburg

Have you ever wondered how your future professors had to qualify to teach you? In the following, we will explain the path taken, at least at *research universities* in Germany like Otto-von-Guericke University of Magdeburg. Indeed, they are all highly qualified teachers and researchers who have gone through two decades of training to get where they are.

1. **Undergraduate studies toward a bachelor's degree.** Of course, the first step after attending school is to partake in academic studies. Most academics who later become professors go to universities, and not universities of applied sciences, because the skills needed in the professorial profession are ones which are conveyed in the former, not the latter.
2. **Graduate studies toward a master's degree.** Future professors generally do an MSc or an MA next, sometimes at the same university as their bachelor's, some move on to another university for their MSc.
3. **Doctoral studies.** The next step is intensive research training which is carried out in a doctoral program. The candidate has one or more "supervisors" (sometimes called "advisor") as mentors who do regular one-on-one consultations with their doctoral students. As a result, usually several papers are written and published, often together with the supervising professor. They are put together in what's called the dissertation, or "doctoral thesis". This generally takes about 5 years after completing an MSc.
4. **Postdoctoral Fellows.** Most future professors spend some time (typically between one and three years) as a "postdoctoral fellow" ("postdoc" for short), often at another university than the one at which the doctorate was granted. Postdocs tend to do very little teaching, if any at all, and are free to carry out research projects on their own. By the end of the postdoc, most academics have spent at least some time abroad.
5. **Staff Scientist.** Payback time begins: In these typically 6 years, often longer, seldom less, the future professor will generally begin teaching in their own right at the BSc or MSc levels. They also carry out their own research projects, usually creating a unique focus and tying together the results in a coherent manner. They publish their research results, sometimes with their own students. In many areas, this time as a staff scientist culminates in them writing another thesis, called a "Habilitation Thesis". Besides the research necessary for the thesis, they also have to demonstrate their ability to teach at the university level – typically by accumulating a good track record of teaching and demonstrating it through a sample lecture. For the research, the *Habilitation* degree may be granted by the faculty. For the ability to teach, the so-called *venia legendi*, the right to carry out independent teaching at the university level in their academic area is granted. Having the *Habilitation* and the *venia legendi*, they may use the title "Privatdozent" (abbreviated "PD").

6. **“Privatdozent”**. Now future professors have the formal qualification to apply for professorships. The time spent as a “Privatdozent” is usually a small handful of years. Generally, they continue to have fixed-term appointments (i.e. one-year jobs, sometimes 3 or even 5 years). Some have permanent positions as staff scientists at their universities and some do not move on to their own professorships. “Privatdozenten” (abbreviated “PD” before the “Dr.”), usually have a mixture of teaching and research assignments. Formally, a “Privatdozent” has the same rights and responsibilities as a professor, such as supervising doctoral theses, but neither the title nor the position.
7. **Professorship**. Whereas most future professors switch universities at least once somewhere along the way, German law dictates that universities that hire professors may not hire their own “Habilitation”-Graduates, let alone their own staff scientists. Hence a transition between being a “Privatdozent” and a Professor forces scientist to switch universities so as to avoid “academic inbreeding”.

Professorships are always advertised and with the help of appointment committees that perform a rigorous selection process, the “best” candidates are “called” to the positions. A professorship is generally a job with an unlimited term and comes with funding for staff scientist positions, administrative support, and equipment. Professors also carry responsibility for the academic well-being of a faculty and the university by engaging in “institution building”. Professors are sometimes called upon to develop new study regulations, new degree programs (like the BiBa), collaborative

projects with others, or new research institutes. They often spend two or more decades in their positions, until they retire around the age of 67. Professors only seldomly move from one university to another.

Of course, not every professor in Germany has gone through exactly these steps. For example, a slowly increasing number of young scientists get coveted positions as “Junior Professorships” instead of “Staff Scientist” positions; after 3 and 6 years they are evaluated, and if they pass, they skip the Habilitation and therefore also the level of “Privatdozenten” to move up to professorships directly.

To give you an idea of the “funnel” that your future professors will have gone through, the following table shows the number of people completing each of the stages at the University of Magdeburg in 2022. The average age to become a professor in Germany is about 42 after spending some 20 years, often more, preparing for the position.

You can be proud of your professors at OVGU, everyone of them!

Degrees Granted at OVGU in the year 2022	
Bachelor’s	1,339
Master’s	792
Doctorates	236
Habilitation	14

Source: Controlling Dept. OVGU

Numbers for the German university educational system in 2022	
High School Graduations	385,000
Bachelor's	246,802
Master's	145,877
Doctorates	27,692
Habilitation	1,535

Source: <https://de.statista.com/>

Spotlight on “Privatdozenten“: PD Dr. Gabriel Mistelbauer

PD Dr. Mistelbauer’s career is a picture-book version of the scheme explained in the previous article. Currently he is a Senior Research Engineer at Stanford University School of Medicine, Stanford, CA, USA. He spent the years 2016 to 2022 at the University of Magdeburg in the research team of Professor Bernhard Preim and worked toward his Habilitation during this time. He took the formal exam for his Habilitation in June, 2024 and earned the *venia legendi* for the subject “Computational Visualistics”. The title “Privatdozent” in Magdeburg means that he will be doing a bit of teaching in our faculty while holding down his job in Stanford. Students will thus continue to have the opportunity to get to know him.



Gabriel is an Austrian citizen who grew up in Vienna. He went to the Vienna University of Technology where he earned his BSc in Media Informatics and Visual Computing in 2007, his MSc in Visual Computing in 2010, and his doctorate (in his case a “Dr.techn.”) in 2013. His research focuses on visual computing in medicine and medical image processing, in particular on the analysis of vascular structures.

An example of the kind of images which Gabriel is working on is shown in the middle of this page and involves visualizations of the human aorta suffering from a dissection. Gabriel explains the images: The cardiovascular disease aortic dissection is

characterized by the formation of a secondary flow channel that divides the aorta into two channels (true and false lumen) separated by the thin elastic dissection flap. It is a serious condition with a high risk of late complications, such as aortic rupture. A comprehensive analysis, involving a multidisciplinary team of experts, is required for an informed diagnosis and treatment. This analysis typically starts with segmentation of the true lumen (red) and the false lumen (blue) in computed tomography angiography data using machine learning (left image). The middle images show a slice of the segmentation (top), and the subsequently calculated surface meshes with the outer vessel wall (bottom). Computational fluid dynamics simulations are then carried out and the results are visualized with ray tracing (right image).

Already confused? Join Gabriel’s class and learn all about it.

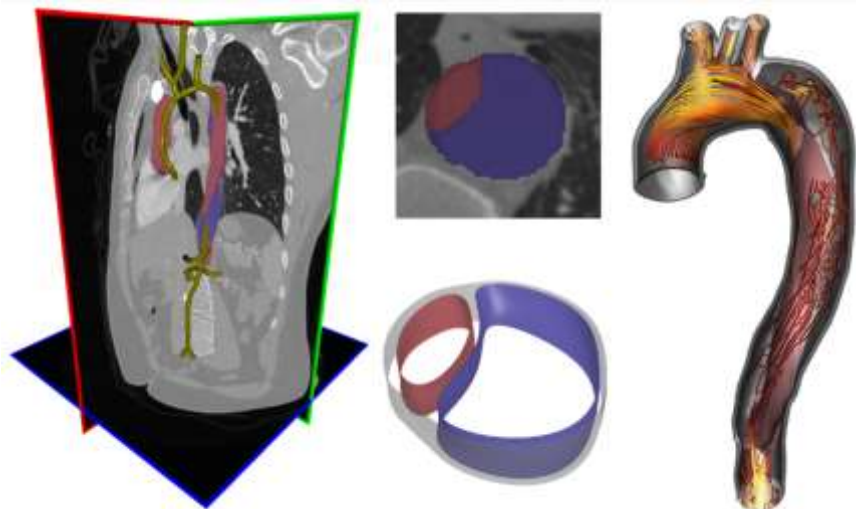


Image Sources: left unpublished from Gabriel Mistelbauer, the others from <https://doi.org/10.2312/evm.20231085>, creative commons license.

Gabriel is not just a computer scientist, but was an accomplished figure skater in his youth. He then moved to ice dancing from 2000 until 2005 and qualified to coach figure skaters through a series of exams from 2005 to 2010. Until today he enjoys skating as a past-time, even if where he currently lives, California, provides more opportunities for surfing than skating!

Where to Grab a Bite to Eat as a Student in Magdeburg?

The authors of this article are joining the BiBa team as a staff member (Darija Grisanova) and as a student assistant (Twisha Parmar). They will serve as mentors for our inaugural class.

Student life can be chaotic and unpredictable, so it is good to have a reliable place to eat. In Magdeburg – as most places throughout Germany – you can always rely on a “Döner” or a “Currywurst Place” to be your saving grace. Currywurst is a German dish, a sausage with curry ketchup on top (or something like it but spicier) usually served with fries.

This week we visited a place where you get great Currywurst in Magdeburg. The place is called “Curry54” and is at Hasselbachplatz, the party mile of Magdeburg. Hasselbachplatz is also a place where a lot of students choose to rent apartments. From the University (or also the main station), it takes a 10-minute tram ride to get there.

At the Curry54, your hosts are pleasantly accommodating and also consider religious or cultural preferences with respect to meats and sauces. You can get a filling meal for around 7 or 8 € per person. They also have a collection of hot sauces – if you're feeling up to the spicy challenge!

Check out our video about our culinary trip by scanning the top QR-code to the right. Please “like” it if you are interested in more such videos from us!

And before you actually go there, check out the menu on Curry54’s home-page by scanning the lower QR-code.



Step 1:
Take a tram ride to Hasselbachplatz in Magdeburg



Step 2:
Walk up the street for about 30 yards to Otto-von-Guericke Street No. 54, where you will find the Currywurst-Place called Curry54.



Step 3: Enjoy!

Twisha and Darija consider it to be one of the best Currywurst Places in town.

Will you agree?



Culture in Magdeburg

Feel like you're going to need a dose of classic music? Magdeburg has its own Philharmonic Orchestra with concerts being played regularly in the Opera House that's been around since the 1920's, directly beside the University. And the good thing is: Tickets are very inexpensive for students. While working folks and others pay around 30 €, students typically get the same seats for only 7 € online. Enjoy!

September 19 and 20, 2024
Jean Sibelius and Franz Schubert

October 24 and 25, 2024
Jörg Widmann, Ludwig van Beethoven and
Robert Schumann

November 14 and 15, 2024
Present-Day young composers
Benjamin Janisch, Annette Schlünz, Einojuhani
Rautavaara, Errollyn Wallen, and Esa-Pekka
Salonen

December 19 and 20, 2024
Arturo Márquez, Francisco Mignone, George
Gershwin (*Rhapsody in Blue*), and Paul Dukas

January 30 and 31, 2025
Bogusław Furtok, and Felix Mendelssohn
Bartholdy

February 27 and 28, 2025
Johannes Brahms, and Errollyn Wallen

March 20 and 21, 2025
Sergei Rachmaninow

Check out their web page by scanning the QR-code to the right. It's in German – but just think, in a couple of years in the BiBa, that shouldn't bother you at all!



Photo: Thorsten Maue

The Opera House at University Square in Magdeburg, just around the corner from the University.

About us, your BiBa Team

Bilingual Bachelor's Program (BiBa) in Computer Science

BiBa Newsletter Editors

PD Dr. Claudia Krull, Prof. Thomas Strothotte, PhD
Assisted by Darija Grisanova, Twisha Parmar

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Darija Grisanova and Twisha Parmar; Pages 2, 6
(bottom): Dept. of Media, Communication and
Marketing, OVGU

Hotline

BiBa(at)ovgu.de, +49 (391) 675-BiBa (-2422)

Websites: inf.ovgu.de/en/BiBa

inf.ovgu.de/BiBa

Address

Faculty of Computer Science

Otto-von-Guericke University of Magdeburg

Universitätsplatz 2, 39106 Magdeburg, Germany

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