

Podcast - How to Hochschule VOICES



Show transcript

Dr. Claudio Abels

00:00:00: Stephan Hanf: Welcome to How to Hochschule Voices the latest series from the How to Hochschule team! In this monthly bonus feature to the main podcast, there are full-length interviews, individual stories and a collection of conversations with people from Rhein Waal University of Applied Sciences, Kleve, Kamp Lintfort and the entire Lower Rhine region.

00:00:27: Stephan Hanf: in the very first episode of Voices. It's Norman Körber, our first-semester student, who already featured in the very first episode of How to Hochschule, our main podcast, who meets Doctor Claudio Abels, the very first graduate of Hochschule Rhein Wahl. Norman Körper talks to Doctor Abels about his experience at a university that was still in its infancy at the time.

00:00:53: Norman Körber: What's your name? What are you doing at the university right now?

00:00:55: Claudio Abels: My name is Claudio Abels. I am a research associate at Rhein Waal University. I am in the ZFIT and responsible for the Start Glocal project as a Start Up Scout.

00:01:04: Norman Körber: Start Glocal? Since when does the project exist?

00:01:06: Claudio Abels: Start Glocal has been around since 1.4.2020. So exactly in the Corona phase and we are in the third year.

00:01:13: Norman Körber: Where exactly are we here?

00:01:15: Claudio Abels: Yes, normally there are many lectures here, even during the semester. Currently, of course, it's the semester break, so there's nothing going on. There are two of us sitting in this room, which used to be a storage room. It was cleaned up for us. But there are other staff members in the building, and there is a project team on the lower floor.

00:01:33: Claudio Abels: We actually have four people from the Faculty K and U, which is actually also in here, primarily. But on the first floor are project rooms, downstairs is the sports facility and a few labs. We are here in this great old building, the old magazine building, so here are the Kumpel from the past, the mining workers used to run here and get spare parts. Soap, screws and back then there was still bridge to the other building. It's great to sit in this old in this historic building.

00:02:03: Norman Körber: Is it good to work here?

00:02:04: Claudio Abels: Yes, parallel to the State Garden Show, a lot of work was done here. The streets were leveled and there was a lot of excavation work, and the building also shook from time to time. But that was all okay, because we knew they were doing something nice for the city. We now have a small petting zoo. We now have a trim trail here on the grounds. So in winter the children can go sledding down a little hill when we have enough snow. So this place has become beautiful, we have another lab, the Green FabLab also only two minutes away, the faculty K and U is also in there. I think it's nice how the university is growing. From the campus to the towns of Kleve or Kamp-Lintfort here, that's really good for the towns.

00:02:44: Norman Körber: What distinguishes the university locations Kleve and Kamp Lintfort?

00:02:47: Claudio Abels: I can just say from my gut that the location in Kamp Lintfort is similar to the one in Emmerich, namely smaller, not more familiar, but more central. There is one place where everyone is and not many different places, that is a big difference. I think both locations are super well-equipped, the colleagues are extremely nice, there's no difference. So I like being at both locations equally. The big difference is that in Kleve it's very big, I don't want to say it's not clearly laid out, but it's complex in terms of getting direct connections from people and so on. In Kamp-Lintfort it's smaller. You can get to the right place faster, and I think when you see each other in this one cafeteria and can actually see the main square from your office, where people are standing and chatting. You quickly go there and chat with them. It's a bit easier to keep in touch, yes, that's the big difference, I think.

00:03:45: Norman Körber: How did you come to the university?

00:03:46: Claudio Abels: I've been in Cologne, I've worked there for a relatively long time, I had a small company there with the three of us and basically offered IT services. In an agency for two years, a multimedia agency. Then it just called me back here. My studies became even more important. I always wanted to do a special course in bionics, and when I realized that a new university was being built here, I didn't really believe it at first, and then at some point it was clear, so I basically packed up my tents in Cologne, came back and started studying. It was still on the first campus in Emmerich because the Faculty of Technology and Bionics was not in Kleve, in the city, where the other faculty was, but on the campus in Emmerich. That was where the Bundeswehr base was. And getting there was always a bit difficult, because I had to go from Moers, I lived in Moers at the time, first to Duisburg to the station, from Duisburg to Emmerich to the station, then by bus. And that was always difficult, but that was in 2010, when I started as a student.

00:04:51: Norman Körber: How should I imagine studying at a newly founded university?

00:04:55: Claudio Abels: I knew that it was rudimentary, I knew that it was a temporary location, because at that time it was already clear that the new Campus Faculties would be built in Kleve. But then it was also clear relatively quickly that my studies could only be for one and a half years or two years at the most, and then actually, the adventure of new studies, new university was much greater than the fear of something going wrong.

00:05:17: Claudio Abels: Of course, I also knew that the university was still being set up. Not all the people who were there now were there by a long shot, we started with empty rooms and the staff was not there yet either, so while I was there, many professors were still being appointed. Staff, colleagues were hired, I found it exciting. I wasn't scared either, but I applied for two degree programmes. For Usability Engineering in Kamp Lintfort and for Bionics, in Kleve or Emmerich, and I only spent the first few weeks in Kamp Lintfort on the Usability Engineering Master's course.

00:05:49: Claudio Abels: But then I realized at some point. I'm possibly doing this for the last time with my studies, okay, I was wrong, I studied again later, but afterwards I said come on, then you just have two years of driving with public buses and trains, but maybe you should study what you really want, why you just gave up a good job and then I did bionics against all the arguments against it, yes.

00:06:13: Norman Körber: What was the mood like?

00:06:14: Claudio Abels: That was actually from the beginning, from the very beginning, very familiar, So I'm now talking from the perspective, maybe I'm already there then, I'm already a research assistant there. I'm already building up the faculty and since the campus there, this one building on the old Bundeswehr site was very small, it was an old barracks building, there was only one kitchen, there was only one room where the future dean's office was in it,

we met, we really worked together from the beginning, very close, there was no, office radio. There was, but everyone could hear it, you couldn't hide, it was very good, it was very healthy and I think we grew very, very well.

00:06:54: Norman Körber: How is it now for you compared to the early days, what has changed?

00:06:58: Claudio Abels: It's more difficult. In my opinion. The first big problem was already there when we all moved from the one building in Emmerich to the four or five buildings in Kleve. Huge spaces, great equipment. Only we no longer had our offices in one building, but we had now spread out or had to expand to four or five buildings, and of course you can't see the people any more. Instead of a kitchen, we now had five kitchens. You actually saw each other in the cafeteria, typically except for those who were sitting on the same floor with you, but you lost contact with a lot of people. What was different in any case was that the administration also grew, of course it had to grow with it, and structures were created there, rules were created, systems and workflows had to be learnt again, and of course they were constantly adapted and optimised to follow this and to know which one is the one right now, and I have to address that now. That was of course a challenge that, I think, everyone on campus wanted to master, they also wanted to make little work or create trouble by asking again, and it was such a balancing act between I try it the way I think and then learn how it should actually have gone and of course the more important these structures become the bigger we get. In the meantime, I know, but honestly not at all, we are 400-500 people working here, maybe even more by now. You can't manage that without these structures. Many people have been given other tasks in the meantime and then you come into an office, expect to see a person, but then he or she is no longer sitting there, then the office moves on and it's exciting.

00:08:32: Norman Körber: What happened after your studies at Rhein Waal University?

00:08:34: Claudio Abels: I did my doctorate in Italy from 2014 to 2018, then I only had a half-time position in the faculty, and then I was mostly here during the semester breaks, clearly for teaching whenever I could. Outside of that time, I was in Italy doing my doctorate at the Institute of Università del Salento in the very south in Apulia. I always wanted to do a doctorate, not because of the two letters, but because I found it exciting and because I wanted to do research. When I was at university, I think it was 2012 / 2013, I was looking for a topic, the background was computer science, technical computer science, electronics, hardware and biology, bionics. And I was looking for a topic, something exciting. And it took me, I think, two years to find one at that time, so Professor Megill, William Megill, came to our university and he brought great topics and he also brought an old project, there were 3, 4, 5 European universities and partners together and we developed something. In 2012 we stopped it, but the project ended, but they have not finished everything. I fit right in, both professionally and in terms of my interests, so I was able to take what was available and research it further or develop it or make it ready for the market or at least turn it into something that could perhaps be used commercially at some point. What was developed was a new kind of sensor, a very small micro sensor that you can only see from a very specific angle, you can imagine it like an artificial hair that we all have on our arm for example. It's about 20 times thinner and this sensor can bend underneath because it's

curved upwards, so to speak. If someone blows against it or if water flows over it or if something happens, it's able to bend - we can measure that. And if we now stick or position a lot of these very small sensors on a surface, we can use them to make a gas or a liquid visible as it flows over this surface and there is no such thing. In the meantime we can simulate rooms, very large rooms, very well, there are great models, but for the first 1-2 millimetres on surfaces the boundary layer, there it becomes very complex, these models don't work so well and it would be nice, we thought, if we had the sensor that fits exactly into this niche and we managed to do that, actually and we copied it from fish, because with fish it's like this, next time if you walk next over the market, fish have on both sides a line, which is often also coloured background, so you can see all fish have that. All modern fish have them, at least, and there are channel structures in the lines and there are little hairs in them. These are tufts of hairs, similar to how it works in the inner ear, it also works with them and they feel their surroundings. The biologists call it the sense of long-distance touch, and with it they can know what's happening at a distance of three body lengths. So if a shark is on the way, speed pushes a certain pressure wave in front of it, the fish will notice this and can go somewhere, that the biological has really been researched very well, even before the project at that time was called FiLoSe - Fish Locomotion and Sensing. The first steps towards a sensor have already been taken. But it might have been possible to continue working on the topic for another 2-3 years. But the project had just come to an end. We then improved the sensor even more, we made it smaller. We did it in such a way that it could be scaled up in production at some point, and you have to imagine that they are produced in the same way as microchips in clean rooms, which you know. So you wear a suit, go into a clean room and then stand at the machines, you have to build a Lego city, you have lots and lots of 1000 sensors, then you separate them and then you have to pack them and house them and then you can use them at some point. The university in Apulia was called University of Salento in the city of Lecce and the IIT was located there. The Italian Institute of Technology is roughly comparable with the Max Planck Institute or with the Fraunhofer similar structures, they are usually located somewhere where there are large universities, in Italy there in the city of Lecce there was also the IIT, and I sat there, but the doctorate ran through the university that was only a few 100 metres away from each other and there in this team I then worked. I was enrolled in both universities, so here in Rhein Waal as well as in Italy it's clear here back in Rhein Waal there wasn't no possibility to do a doctorate yet. But of course you can have your doctoral supervisors doctoral mothers at different universities. The defence was in May 2018 and it felt like 42 degrees in the room. I dressed the wrong way, I had a long shirt and short and long clothes on, as is usual for a defence, at least I thought I did, but as a Northern European, I was sweating quite a bit, and I took it with humour at some point, because it was OK, but I can still remember it clearly, it was a nice time.

00:13:36: Norman Körber: Do you sometimes yearn back?

00:13:37: Claudio Abels: No, I wouldn't say homesick. As I am, I think because of my profession I like structures as a computer scientist, so I have no problem with that. It used to be very fast and familiar and, I guess, super exciting. And that was perhaps also the motivation Why I went from Cologne back to the campus, I wanted to build up the university from within I found it exciting and it was fortunately just as I imagined. That was very exciting and it is still okay, after now 12 years we no longer building up, now we have time to do other things, to optimize things or to question whether we have to change and must be able to do so. Our students have changed. I think the way we do research, the way we teach has changed as well. That's great.

00:14:24: Stephan Hanf: Thank you very much, that was the first episode of Voices. We welcome all feedback and are always looking for ways to improve. You can reach us directly at podcast@hsrw.eu. In the show notes you can find links and more information about today's topics and guests. My name is Stephan Hanf, thanks for listening and see you next time! Tschüss.