



Dr. Ramona Samba, Head of Business Unit at NMI TT Microdevices

A warm, welcoming person, full of enthusiasm and positivity, handling well her family and career, shortening the bridge between science and business, and an appreciated team leader – that's Ramona. She joined the NMI in the year 2009 and became a valued team member. Nowadays, she is contributing in many ways to the Microdevices unit.

Ramona spoke in the following interview about marketing, business, and leadership in science, how to handle a career and a family, and how it is to be one of the rare women in such a position.

What was your first job ever? Tell us about it.

I think that was in fashion! I was only 15, still in school, and I helped in a big fashion store in Tübingen to put clothes where they belong, to unpack packages, and stuff like that. I was not into fashion myself. It was just a student job around the corner. It sold well, and we got a discount on clothes there, that was good! [laughing]

What triggered your decision to become a scientist?

It didn't have to do anything with my first job, as you can imagine. Well, the decision to study was actually due to all the student jobs that I had. I also worked a lot in the automotive industry and in production to earn money for my holidays and studying and all that. There, it became obvious to me that you need to have a very, very good education to decide what you want to do. You could earn good money with the job that you did there, and I don't want to make that small, those were still important jobs, I just decided for myself that this is not what I want to do in my future. So I needed to make sure to get a good education. That wasn't clear at all because, in my family, there are no university professors or so. My dad studied, but I am the first one in my family to receive a Ph.D. We were not an academic family at all. In the beginning, I thought I would only go to school until 10th grade and then do something, whatever, but then it became very clear that I'll study something. And to become a scientist – I

think, first, I decided to study chemistry. It interested me; I was good at it in school (when I got the right teacher [laughing]). I thought that is something I can do and followed that without thinking too much about what I would do with it later.

However, now you are not working only as a scientist. Tell us about your current position.

To go back to my studies – I already decided in my bachelors to study chemistry with marketing. So I was already kind of taking that track of not purely academic science but combined with business. The business was very early what I wanted to do. That's also why I decided on Reutlingen, not just to stay close to my family, but that was also the only option in the whole of Germany where you could study chemistry combined with business. I went to an "open-door" event and that university. I walked to that info table and told them: "I am interested in studying chemistry here – why should I do that?" And the professor there said: "Well, there's the option to go to Dublin, Ireland for a semester abroad." It was my dream for many years – to be in Ireland for a while [laughing]. So that was kind of the last confirmation for me: "OK, I am here [laughing]." So my third semester was at Dublin City University.

To study chemistry, together with marketing, is an exceptional decision. Why marketing?

I don't think there was much focus on the marketing part. It was just something that has to do with business. I didn't want to do pure science. I wanted to combine it, be applied, and do chemistry but somehow make use of it. So people can have products or something practical about it. As I said, there were not many choices to choose from. So that was interesting, the combination was good, many courses were in English already, and the option of going abroad – the whole concept somehow convinced me.

Was there a special person in your life that inspired you to take that way? Or an event that inspired you. The first one you can think of.

Many people at the NMI inspired me. There would be a few names that I could name. There was always the spirit: "I am doing science, but I am thinking about a practical application of it." That thinking inspired me and pushed me to think about my work in the same way. That fit my idea from the beginning – from starting to study. I have several people in different areas and different phases of my life that inspired me, but I am not sure that I can name one.

Looking back at your Ph.D. years – does the perception on science change later in life? Do you have any advice for Ph.D. students at the beginning of their careers?

My advice to always give to Ph.D. students is: Finish! [laughing] Get it done. At one point, decide - it's done. Write what you have and make a story out of it. It seems like the point of your life for some years, but later the content doesn't mean a thing. You need to have it done. That's the main part. People struggle a lot when they think they need to make it better; they need to add more results or interpretations. They start a new job, they think they will finish their thesis soon, but they don't. That is a big problem – I think a third or so (I have heard a number once) of all Ph.D. students finished their Ph.D. The second advice is: Enjoy science while doing your Ph.D.! It's the only phase where you really can do science without thinking about where you can get the money from or about generating new ideas that will give you money. Later, after the Ph.D., it's not like people would

think – you are a scientist, you have those great ideas, you just follow what you want to do, and someone will give you money for that. It's more like: "OK, let's think of ideas that would be funded." That's something I have learned later. The whole begging for money part is completely different from what you would think of before.

Is there anything you did/achieved in your life that you are especially proud of?

[thinking...] I am definitely proud of finishing my Ph.D. in three years. Well, I am completely proud of my family, my kids, but I am not sure that's my achievement [laughing]. I am really proud of them, they are great, and somehow they came out of me [laughing], so I can be proud, but that they are good kids – I am not sure how much of my achievement is in there [laughing].

I also have to say that I am proud I went back to work when I thought it was right for me after giving birth to my kids (very early). And also, that I took on challenges. After my first kid, after my second kid, I took on new opportunities and challenges. I am proud that it all worked together – family and career. For example, I also received an additional business degree between the two pregnancies with my kids. I tried, I started, and it worked out somehow.

Learning never stops – what is a professional skill you are currently working on? What's the motivation for it?

What I am thinking about a lot is my leadership style. That's something I like to do, and I believe (or believed) that I am good at. In the past months, I had a few situations where I thought my kind of leadership style is not helping, so I might need to change. Maybe also to lead different people differently. However, that's more learning by doing and talking to mentors again. I did the training, I have the experience, and I could do another course, of course, you can always do a course.

We had the phase of "kurzarbeit" (transl. from german, short-time work), and I had to think about how to treat people and how to talk to people and communicate. Also, changing everything to digital – how do I lead people only digitally, and things like that. So I am thinking a lot if I should change something, learn something, be different. I am not sure how yet.

What do you think it's most important to build and maintain a successful team?

The team should be diverse – there should be different roles, and as I said, you have to think about how to lead each person differently so that everybody can develop to their full potential. Especially in science, it is important to acknowledge that leading people is an important task and something to improve and take seriously. It is an entirely [stressing out] different job to do – to lead a team or to think about scientific ideas, have scientific projects, and all that. Always improve and ask for feedback, talk to people. Talk, talk, talk, - communication! My team is already annoyed by it, but I am always stressing out – we have to talk, people! [laughing]

What personal trait you most attribute your success to, and why?

I would say not giving up and sticking to things. I am a person who sometimes sticks too long to stuff before giving it up. You asked for good traits, and this trait is something good, but sometimes you also have to stop doing stuff. The second one is self-organization. What are my goals, priorities, top three priorities this week, and how do I manage to do that? Especially when combining family and career. It's always about the priorities because only the priorities get done. There is no free time to finish the to-do list from two weeks ago. To organize that,

you have to think in advance – when are the kindergarten-free days, when do I have time for a meeting,... to be well self-organized.

Do you read books? What kind of books? Is there one that you think everybody should read once in their lives?

Of course, there is one [laughing]. It's Lean In from Sheryl Sandberg. Every young woman should read it. There's also other literature, but this one was the one that convinced me a lot. It was about focusing on yourself and not others.

I normally read more books in parallel. A novel that I read in the afternoon or evening when I have free time, or during holidays. A book about health or spiritual books sometimes. At the moment I am reading a book about comparing different world religions. That is something I read in my morning coffee time – so more educational books, and novels or female empowerment books in the evening. I read a lot of feminist literature. Actually, that should be also read. But we are not doing a book club here, so [laughing] next time maybe.

Back to your work – what exactly do you offer, what kind of services?

We do microtechnology, so thin-film technology with biocompatible materials.

We help when a microdevice prototype (mostly for life-science applications) is turning to serial production. We can take over parts of production. Sometimes, there are special steps that a company can't do because the company doesn't have the equipment or is too expensive, so we take over parts of it and send it back and forth. Or we do a complete tech transfer – there is a prototype that came out of a research project, and we transfer it to production, making sure it can be produced reasonably.

From little steps to a whole production.

What clients do you work with? Mostly StartUps or established companies?

Mostly StartUps and young established companies. Basically, everything, except big established companies.

What kind of projects do they ask for?

It is from taking over one step in their production to taking over the whole production.

Sometimes also customized solutions, so little projects for one customized microdevice that is unique, and sometimes we do more like an entire series.

What project types are the most exciting for you?

They are all exciting [laughing]. I like working with StartUps because they always have a clear view of what they want to do and what they want to change globally. They are very ambitious. I enjoy being able to help them to achieve something.

For a broader perspective, what kind of studies can be done within NMI and NMI TT in the field of microdevices?

At the NMI, we can do research projects, development. We are particularly good at the life-science part, but we also have other partners in other industries. Basically, if you have an idea, or problem, which is somehow related to microdevices, microtechnology, then you can

talk to us, and I am pretty sure we will find somebody at the NMI that has the experience, an idea about it, or technology that would help.

Is there a lecture that 2020 – a challenging year, taught you?

[laughing] Making plans doesn't always work!

I am a big plan-maker. As I said – self-organization, I plan my week, and especially this year, that made no difference. Now, I am only planning the next day. What 2020 taught me is to look at the next two days, maybe even one day; make sure what is your priority, how to organize it, how you will also enjoy the day, and do that. I couldn't do much more than that for the last several months [laughing].

