

## Challenges help us Grow!

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I come from the state of Odisha, the land of Lord Jagannath. Both my parents are academicians, and my elder brother is an electrical engineer. Our family life is centred around my three-year-old nephew these days. I currently stay in the Netherlands and am a postdoctoral researcher at the University of Twente. I moved here in September 2022. Before that, I worked as an Assistant Professor at IIT Surat for a year.

My answer may sound silly, but to be honest, the only reason I had back in 2014 when I joined IITH for my doctoral degree, was its proximity to my home state. It is just a day's train journey from Hyderabad to Bhubaneswar, which somehow seemed important back then. Now that I have passed out and I gained some experience, I can give a sophisticated answer to this question. But I am afraid that won't be the correct one.

As part of my coursework, I attended lectures for only four subjects, and I did like them all. But if I have to pick one, then VLSI Technology. Primarily because it dealt with the practical aspects of things I have always found intriguing. Apart from research, and irregular outings with friends, I would say none. I was somehow not very active socially at IITH. I usually preferred to spend most of my time in and around the lab. And once I was off the lab, I liked having the rest of the day to myself. This is not something I am proud of, but I feel this has something to do with my practices and preferences being a writer. Mostly, I spent my time reading literature; poetry in particular. I was also very much occupied with my theatre activities in Hyderabad. Back then, I was regularly writing plays for a theatre group called Kash.

Being a PhD Scholar, everything I did was in some way part of specialized training. And not just for me, this would in general be true, for all doctoral students across departments at IITH. Even the simplest of experiments we do in the lab was in a way stepping stones for something greater. That's how we learn, isn't it? I was rather fortunate that I got to work on a couple of interdisciplinary applicational problems, which required a lot of preparation on my part. It was definitely challenging, but at the same time, it helped me grow as a researcher.

I currently work as a Postdoctoral Researcher at the University of Twente, and most of my work here involves microfabrication inside a cleanroom. I acquired the necessary skillset at IITH while working in the NanoX facility. My current project also involves biosensing at the single particle level, using a technique called impact electrochemistry. This is obviously new for me and is exciting. I have learnt the basics of Electrochemistry and other associated analytical techniques during my doctoral work at IITH. That experience is now proving very helpful in approaching the current challenges. But to be very honest, it cannot just be the technical skills I acquired or the tools I learnt or the training I received at IITH, that prepared me for this job. It has to be much more than that. I feel, my tenure at IITH had prepared me to look beyond my comfort zone, and always try something new and challenging. This has been a driving factor in my journey post-IITH.

From a researcher's point of view, I think it has to be the moment when our COVID-19 test kit COVI-HOME received validation from CCMB Hyderabad. The test kit was developed with a lot of hard work and commitment, during the lockdown. Those were testing and stressful times. But somehow we did not give up, despite all the challenges. And when the product was validated after the medical trial, it was a moment of pure joy for the entire team.

Maybe I can just share a quote by Fabiola Gianotti, which I have found very inspiring. Miss Gianotti is a particle physicist at CERN, Switzerland, and she is rather well known for her contribution to the discovery of the Higgs boson. She says, "This job is a great scientific adventure. But it's also a great human adventure." We must all remember this, don't we?



Please feel free to drop an email to the alumni ID.

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I think IITH is providing really great facilities to its researchers today and is constantly evolving as a premier research destination. This is a matter of pride for all the alumni. I hope in the coming years, we work a bit more towards maintaining a better work-life balance in our community. The mental health of students has been an alarming issue lately, across institutions in India. I am sure our authorities must already be thinking about this.

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*Dr Surya with his mentor Prof SG Singh at IIT Hyderabad*