

Sharmila Gunasekaran

IMAPP

Radboud University Nijmegen

sharmila.gunasekaran@ru.nl

Column New Impulse

Across the pond from Toronto to Nijmegen

In this column, researchers who have been recently appointed to one of the Dutch mathematics institutes, introduce themselves.

My name is Sharmila Gunasekaran. I am an assistant professor in mathematics at Radboud University. I'm originally from Coimbatore, Tamil Nadu, India. After high school, I pursued a combined undergraduate and master's degree called Integrated Master of Science in Physics. It's a 5-year program. Then, I moved to Canada for my graduate studies, where I lived for the last ten years before becoming an assistant professor in Nijmegen.

I always wanted a research career, but I didn't settle on mathematics until later. I initially studied physics, but it was during my fourth year when I learned about general relativity that I started leaning toward mathematics. So, I decided to pursue a PhD focusing on mathematical problems in general relativity. I did an MSc in mathematics to fill in some gaps before starting my PhD.

During my postdoc at the University of Alberta, I worked on Quasi-Einstein manifolds with Eric Woolgar, Eric Bahuaud and Hari Kunduri. My time in Alberta was enriching, even though it was during the pandemic with lockdowns. I also spent a year at the Fields Institute as part of a thematic program before coming here.

It was during my postdoc in Toronto that I learned about an opening at Radboud University. I wasn't considering moving continents, but the presence of many international researchers at the Fields Institute's program meant I could explore and discuss opportunities. A colleague, Annegret Burtscher, encouraged me to apply. I liked that there's a great concentration of people working in all aspects of general relativity here, so I decided to make the jump across the pond. I'm grateful for Annegret's support since I decided to move.

Navigating the academic landscape here has been a learning curve, with variations in structures, lecture arrangements, assessment methods, and research funding compared to North America. Adapting to these differences has been an ongoing process, but amidst the professional challenges, I find solace in

the fact that the university and city have ample opportunities for relaxation and recreation. Outside of work, I find joy in playing badminton and volleyball and listening to music (for example Hindustani music played by Saskia Rao de-Haas on her cello), debates and podcasts (like *The New Yorker's* fiction and poetry podcasts or *99% invisible* on art, architecture and design). I indulge in some light reading. I was taking music lessons during my PhD which was interrupted due to scheduling conflicts, but I hope to revive that soon.

I miss some small everyday pleasures like being able to read and understand ads placed at bus stops and shops and the names of local restaurants and coffee shops. Overall, not knowing Dutch has a substantial effect — hopefully, I can change that in a few years. The familiarity of the hills and mountains in Canada is something I long for, a stark contrast to the flat landscapes here.

Research-wise, the department is diverse and international. There is a chance for me to use the diverse expertise here to solve interdisciplinary problems and work on questions relevant to current gravitational experiments. I hope to do this long-term. 

