

Portrait

Text

Femke Kools

Photography

Sem Shayne

I'm a sjeng squared

In primary school, his nickname was whirlwind—and that same energy comes across during the interview. “I’ve never been diagnosed, but I do think I have ADHD,” says the cheerful physics professor Marcel Merk. He never imagined returning to live (partly) in his hometown of Maastricht before retiring. “I’m an opportunist, a family man, a Carnival nut. And I’m gripped by the question: why is there something rather than nothing?”

Aristide Briandstraat
RUIMZICHT WEST

→
Professor of
Collider Physics
Marcel Merk

MAASTRICHT
UNIVERSITY

Marcel would walk through a door whether it was open or closed—this was how Merk once heard himself described as a boy. Even now, at 61, he talks quickly, easily and candidly about his life. His fascination with elementary particles started in high school, helped along by his best friend, who sat next to him on his very first day of primary school and whose life has unfolded almost in parallel ever since. “Eric Laenen was calmer than me, and a little more serious about studying, but our personalities are very complementary.”

Writing an encyclopaedia

When they finished high school, they threw a party together. They both went on to study physics in Nijmegen, both became research group leaders at Nikhef, and they lived across the street from each other in Diemen. They still share a guilty pleasure for fantasy novels. “When we were about 10, we both joined the Dutch Association for Meteorology and Astronomy and went with our mothers to the annual meeting in Utrecht. We decided we were going to write the Encyclopaedia of Astronomy together.

Sjeng: a term for a male inhabitant of Maastricht, used both by locals and by other Limburgers.



Science is about building bridges and listening.

The plan was to write 20 volumes: we bought binders and typed away on typewriters. I only ever got as far as Part 1, Chapter 1, Section 1.1, but I’ve still got it at home.”

An appetite for particles

Without his friend Eric, he may well have taken a completely different path. As for his specialisation in elementary particle physics: this was partly down to the professor who later became his PhD supervisor. “In my final year of school, Professor Van der Walle wrote a series for the journal *Natuur & Techniek* about elementary particles. I devoured it. Nature is lovely, but physics—the processes behind it all—that’s just beautiful.”

He enjoys sharing his subject through Studium Generale lectures, particularly with laypeople who have an interest in physics. “That’s a wonderful audience to spar with, maybe even more fun than scientists. Non-specialists dare to think outside the scientific box. It’s very refreshing.”

Beauty quarks

His research, based at CERN in Geneva with the Large Hadron Collider ‘beauty experiment,’ tackles the question of why matter ‘won out’ over antimatter after the Big Bang. “Everything you see is made of matter, and for every particle of matter there’s an identical counterpart with the opposite electrical charge. When matter and antimatter collide, they destroy each other, releasing a flash of energy. But how is it possible that, just a fraction of a second after the Big Bang, there was ever so slightly more matter left behind, out of which came everything we know today? In short: why is there something rather than nothing?”

He focuses on ‘beauty quarks,’ fundamental building blocks produced when protons collide. His group in Geneva investigates the radioactive decay of beauty quarks and compares them with their anti-particles. “We’re looking for incredibly rare quantum effects, which sometimes occur only once in a billion collisions. That means working with massive datasets. But we’ve recently seen some hints of a possible new force of nature, and with the planned upgrade of our measurement and analysis instruments, I’m hopeful we’ll be able to explain the dominance of matter within the next decade.”



Marcel Merk has been professor of Collider Physics at the Faculty of Science and Engineering since 2020. He combines this role with his work as a researcher at the National Institute for Subatomic Physics (Nikhef), where he has worked since 1994. Merk studied physics and obtained his PhD in particle physics in Nijmegen.

Slow science

Science is always a marathon, not a sprint—and never more so than in this kind of research. “I’m still working on the same experiment we set up at CERN in 1994. We’re now building the third version. My work encompasses project management, building of detector components, and data collection and analysis with students. Over time, I’ve come to enjoy creating and leading a group. Plus there’s ‘the pleasure of finding things out,’ as the physicist Richard Feynman put it. I don’t need to discover anything new, but I enjoy understanding for myself how something works—the logic of nature, the beauty of quantum physics. In that respect, my life has already been more than successful.”

Social team

The pleasure of leading people was something he developed during his 19 years as head of Nikhef’s B-physics group. “It was only meant to be five years, but everyone seemed satisfied and nobody was in a rush to take over. Our group was known as the ‘social team.’ I made a point of focusing on the social side, going out with PhD candidates until late at night. Everyone worked hard and did their jobs well. For me, science is about building bridges and listening.”

The last of those 19 years were gruelling. The war between Russia and Ukraine brought political tensions even into CERN’s international collaboration, and Merk had to navigate this as a representative of the Netherlands. “It also pretty much coincided with Covid, so I found myself Zooming with employees for 12 hours a day. The energy ran out, I had sleeping problems—it was time to hand over the baton.”

Maastricht dialect

By nature, he’s not a worrier. “Sometimes it helps not to talk about problems, whether at work or at home. The next day I’ll think: wasn’t something up? Oh well.” In that respect, he’s fine with the fact that his wife isn’t in the same field. He met Esther a few months after starting his studies in Nijmegen. “She’s from the centre of Maastricht, I’m from the east—so I married up,” he laughs. They raised their two children in the Maastricht dialect, although they lived near Amsterdam. “If we’d lived in Germany, we wouldn’t have spoken German to them, would we? Our Maastricht language is in our hearts.” He’s never missed Carnival in the city. “Because the problem is: if I’m not there, it won’t happen.” He roars with laughter. “I’m a *sjeng* squared.”

Opportunist

He and his wife thought they might move back to Maastricht after retiring. But he was offered a part-time professorship at UM, and Esther also recently found a job in the city. Now they live in Maastricht again for a few days a week. “I’ve never planned my career; I’m an opportunist. I try everything, and if two out of ten things succeed, that’s fine. Maybe I’ve also been lucky at times.”

He counts himself fortunate in his parents, who gave the whirlwind—and occasional know-it-all—the space to develop. They ran a chemist’s shop on the Scharnerweg until the big chains came along and forced them out. “There was no money left, but no debts either. My parents had zero pension, but still a good life afterwards. That’s how I learnt that in the Netherlands you don’t really need to worry.”

A kind of friend

It helped that his father, who lived longer of the two, was content with little. “He never once got on a plane. If he could have a drink at his local pub every day, he was happy. We often did that together—he was a kind of friend of mine. I’m still proud of my mother, too, of how she handled the end of her life. When she was told at 73 that she only had a few weeks left, she said, ‘I’ve had a good life, it’s fine, just let me go.’ I find that so admirable. I hope I’ll be able to do the same, though I doubt it. First I want to enjoy life in Mestreech a while longer. And who knows, maybe one day I’ll see the next generation, too.” <