

INTERVIEW

Hinke Osinga



Hinke Osinga was awarded her masters and PhD degrees at the University of Groningen in the Netherlands and then had post-doc positions at the Geometry Center (University of Minnesota) and CalTech. She became a lecturer at the University of Bristol in 2001 and moved to Auckland in 2011. A nice summary of her mathematical influences can be found by listening to her interview with Kathryn Ryan (Radio NZ, Nine to noon): radionz.co.nz/national/programmes/ninetoon/audio/201824228/royal-society-fellow-hinke-osinga-on-maths-and-crochet.

In the last few years Hinke has been the recipient of a number of significant honours, including an Invited Lecture at the International Congress of Mathematicians (ICM) in Seoul (2014), Fellowship of the Society of Industrial and Applied Mathematics (2015), NZMS Research award (2015), Fellow of the Royal Society of New Zealand (2016), Fellow of the NZMS (2016), Marsden grant (2016), and most recently being selected by the London Mathematical Society and the NZMS as the 2017 Aitken lecturer.

I caught up with Hinke recently and, after congratulating her on these successes, asked her which of them she is the most proud of. Without hesitation she replied that it was the ICM talk “because it came out of the blue. It was something I never dreamed I would ever be invited to. Suddenly I got noticed by different people so that made it very special. It was not my usual friends.”

She describes attending the ICM as incredible: “I’d never been at an ICM before. This was the one where we had the first female Fields medal, awarded by the first female president of the IMU, and presented by the female president of the Republic of South Korea. That was unheard of. It really made you feel you were part of a historical moment.

“As an invited speaker you get to sit in the front block of seats. You get special treatment as you have this big nametag. You are right there. That alone really made it.”

She had the opportunity to meet all of the Fields Medalists. “I congratulated all of them in person. Some people I spoke to more than just ‘congratulations.’ It was a shame Maryam Mirzakhani was there for only a short period. She had to cut her visit short and her lecture was cancelled. So I never heard her speak, which was a real shame. I was glad that I had the courage to walk over and just say that I wanted to shake her hand and congratulate her.”

I then asked about her plan for her Aitken lectures this year. She is going to visit the UK both in May and October for short visits. In May she will visit Bath, Cambridge, Exeter and Oxford. In October she’ll be in Bristol, Kent, Newcastle and Warwick. Regarding her talks, there is a choice of three titles, two of which can be given as public lectures. She intends to present work that has developed in the five or six years since she moved from the UK. “The public lectures are either on the Lorenz system or on research that I have been developing in collaboration with earthquake engineers. It is on buildings in an earthquake, which is much more New Zealand flavoured. Of course, if I go anywhere people are like ‘Where’s the crochet?’ so you have to anticipate that this is what people actually want to hear. Of course, many people have already seen the crocheted Lorenz manifold, but that is a long time ago. If people want the crochet talk then fine, I can give a talk on the crocheted Lorenz manifold with new details on recent developments.”

She found the move from Bristol to New Zealand liberating, mainly due to changing from an Engineering Science department to a Mathematics department. It means that she can pursue all her mathematical interests, both the applied and the theoretical, and feel that all aspects are equally valued in the department. “Coming here, Lorenz was suddenly allowed. We really made a huge advance into combining this pure theoretical stuff, where people get a bit stuck, and the numerical investigations which show which direction you should think of if you want to advance the theory further. This combination is what I like about the research that I do. Really giving an insight.” The warnings that she was moving to the middle of nowhere have proven to be completely false: with its many international visitors, she finds the Mathematics Department at Auckland an extremely vibrant research environment, and indeed, most of her international collaborators are always willing to visit New Zealand.

We also talked about the low participation of women in mathematics. “The Department of Mathematics at Auckland has quite a large number of women staff members and several of us are engaged in activities to encourage women pursuing careers in mathematics and science.” In particular Vivien Kirk is instrumental in fostering a Women’s Network across all of NZ; this initiative is also heavily supported by NZMS President Astrid An Huef. Furthermore, Claire Postlethwaite and Anna Barry have started the Undergraduate Women in Science (UWIS) network in the Faculty of Science, with activities to help undergraduate women meet each other and give them an opportunity to meet women role models. “I am always happy to volunteer to do a session, present a talk or participate in a panel discussion.” Hinke was very active on that front in England already. She was involved with the Athena Swan initiative, which is a way of quantifying a University or Department’s efforts to create a gender-equal work environment; A medal is awarded, and reviewed on a regular basis, as a measure of how effective these efforts are. “A similar scheme is now hopefully coming to NZ and particularly Astrid is trying to make this happen. My involvement is more in the background, I know quite a bit about what the pitfalls are and what is good and bad about Athena Swan from my experience in the UK.”

We discussed the conference pledge (to accept talk invitations only from conferences that have made serious efforts to include women). “I’m married to another mathematician in a similar field. We’ve been through a bit of a change. In the beginning my husband would be invited and then I would come along and think ‘Why didn’t I get invited? I could give that talk too.’ During the next wave, suddenly I was being invited but Bernd would be expected to come along and he was a bit like ‘Oh well it’s a good thing there is a female speaker,’ but you could see he was a bit disappointed. Now, if it is all male speakers then I say ‘Well they clearly don’t want me there so I’m not going.’ It has even gone as far that participants asked Bernd ‘where’s Hinke? We thought that an invite to you would automatically mean she’d come to the meeting too’ and he’s like ‘well, there were no female speakers and that’s why she’s not here.’”

The conference pledge is not an easy pledge to make. “I can see how difficult it is to hold onto the pledge, because conference attendance is of fundamental importance for career development. This pledge is something for the senior people to make. Junior people need to take every opportunity. It’s part of the collective effort that we should think about this more. We should at least raise awareness.” For example, Hinke mentions the Butcher-Kalman talk at the NZMS colloquium. “This is a recent initiative to invite an early-career researcher to give a talk, and I really like that a lot. At ANZIAM they have medals. The big ANZIAM medal for the senior person, well that person just gets the medal. But the Mitchell Medal for someone within ten years of their PhD, that person is

an invited speaker at the next meeting. At the NZMS colloquium it is exactly the other way around: The NZMS Research Award winner is invited to speak, while the NZMS Early Career Research Award winner just gets the award.

“It is very difficult to think how much having been at certain meetings impacts your career. But I would say, for me, it has been absolutely instrumental. I have been at certain meetings and I can trace back a lot of early-career successes from the fact that I was at that meeting and I met these people, and then those people knew I existed. I would even want to trace the ICM invitation directly back to having had very early-on exposure, meeting lots of people, working hard at it. You know that’s part of it: you don’t just go to the meeting but you try to talk to people. And then realising that these people talk to other people, and other people get to know you exist, and you get on people’s radar, which then maybe gets fed by the fact that you then give talks elsewhere. I do think that being a successful mathematician, if you think in terms of PBRF measures and having international leadership etc, is something that comes from being at conferences. The thing that marks us as successful is not that we run a lab, it’s that we’ve been a keynote speaker at some conference. So it means that collectively we find those conferences very important.”

Steven Galbraith