

Jinny Nathans: This is Jinny Nathans, AMS archivist. It is April 17th, 2018. And I am here at the Hurricanes and Tropical Meteorology Conference talking to – and you're going to have to say your name for me.

Mrinal Biswas: Mrinal Biswas.

JN: Mrinal Biswas. OK, thank you. And take it away.

MB: Oh, OK. So I am Mrinal Biswas. I am a project scientist at National Center for Atmospheric Research in Boulder, Colorado. It's a very nice place to work – beautiful mountains, the Rocky Mountains – yeah. Maybe I can start with my descent to become a meteorologist?

JN: Yes.

MB: So in the beginning, I was interested more in mathematics. I had my bachelor's in mathematics. Then I thought, OK, maybe I should do something which is more applied science, so I moved on to geophysics, which my master's degree in geophysics – there's a master's in science – technology in there.

Within the geophysics program, we had two specializations. We had the exploration geophysics, which is all oil exploration, water – yeah. That's a very good career. Jobs in the oil industry are very well paid.

Meteorologists in India – still the private sector is not that active, or the insurance companies. It's mostly the government jobs. But what made me really choose meteorology as my specialization is in 1999, there was a very severe cyclone that made landfall in Odisha. That's the eastern part of India. My hometown is close to that state. I'm from West Bengal, India, and Odisha is just south of West Bengal. There were 10,000 people who died in that cyclone. Yeah, so that's really huge casualty.

At that time, I think India was not prepared for a big cyclone like that. The disaster management were not up to the standards. Same with the emergency management. The forecasting was not that great. So that made me think probably I should think about meteorology as an option. One of my professors, he was a very good tropical meteorology teacher, and we had a class on tropical cyclones, so that made me move into that area.

But I was still new. When I was studying master's, it was not very clear what field I should go in. So from there, I completed my master's in India, then moved on to my PhD. So first I went to Indian Institute of Technology in Delhi. There, I first had my hands on mesoscale modeling. At that time, MM5 was the big thing. So I worked on MM5 – first time I learned how to run a mesoscale model on a supercomputer. That's how I went into the area of meteorology and the supercomputing – without that, you cannot do anything.

Then I moved into a different institute in India. I was working on nonlinear scale interactions. Then I came to Florida State University as a research associate with Dr. T.N.

Krishnamurti, who just passed away, yeah. So I worked with him for many years, and maybe I am touching this as one of my –

JN: Yes, that's absolutely fine.

MB: Yeah, so I went to FSU, he told me to work on hurricanes, because that was one of the projects. So I was very excited, and FSU had a nice statistical model, which is called the FSU Superensemble. So I worked on the superensemble, and I think one of the most significant work I have done on meteorology – I think one of the first ones is that in 2004, if you remember, there were a lot of hurricanes. I think in Florida, Orange County, there were four hurricanes that hit that particular Orange County in 2004. FSU Superensemble was, I think, the best model among all of the forecast guidance that NHC forecasters get. So that was one of the, I would say, best time of my life, that I could give something back to the society.

Then I worked with him for a few years and finished my PhD and then moved to NCAR and got a job there. Right now, I would say we are mostly doing community support for the Hurricane WRF model – that's the HWRF model. So we provide the code for the community to run HWRF on their systems. So yeah, that's how I am in this field and what I'm doing now. It's all hurricane-based. Yeah, so if you have more questions –

JN: How long have you been a member of AMS?

MB: How long? Maybe a few years. I can't remember exactly how many years, yeah. But I think there were a few years where I probably forgot to renew or something happened, but been there a few years.

JN: That's all right. Has the Society helped you in your work and in your career?

MB: Oh, yes. There's no doubt about – without AMS, I think starting from the meetings, the conferences – I think I am attending the tropical conference from 2006, so every two years this happens. Without the AMS journals – you cannot do research without BAMS, MWR, Weather and Forecasting. And one of my recollections of reading AMS journals, because when we were in India, I knew that the internet was not that really accessible, so we had to read the books or the journal itself. So I remember reading one of the articles – maybe it was Monthly Weather Review or something – it was by Ooyama in 1969. That intrigued me about how the modeling was for tropical cyclones. So yeah, AMS had been a huge influence in my life, and I think all of the people here who have (inaudible) – AMS is big.

JN: Are there any other particular articles that made a big impression on you?

MB: Yeah, there have been many. I like to read articles – obviously, we read articles that are most relevant right now, so there are many HWRF-related articles, and then I do like to read something about the global warming and climate change and how it relates to hurricanes, so I've read many of Kerry Emanuel's papers. Though I haven't worked on that topic as of now, because I didn't get a chance, because you know how the funding works – wherever you get the

money from, you work on that project. But yeah, there are many. It's difficult to – on the top of my head, I can't say, OK, this is the article and then – yeah.

JN: Oh no, that's quite all right. What do you think about the BAMS State of the Climate every year – that special issue?

MB: Yeah, I don't think I know much about that. I'm more concentrated on probably the Monthly Weather Review, Weather and Forecasting – yeah, climate is not my forte, so I don't pay too much attention to that. Yeah, so I don't have a very good idea.

JN: OK. No, that shows that I don't understand, not you. (laughter)

MB: Oh, no, no, no. No, it means – I read many articles which are not in my area. So our work on tropical cyclones – these are more short-term forecasts, like we will worry about what will happen in next five days. And climate people – OK, what will happen in 10, 20 years?

JN: I understand.

MB: So yeah, I've seen these issues. (inaudible) probably I've read here and there, but not (inaudible).

JN: Thank you. Any other thing you would like to mention? I think we covered a lot.

MB: Yeah. When you talk about teacher and mentor, T.N. Krishnamurti, he was a huge influence in my life, in my career. He was like a father figure to me. So he made a (multiple conversations; inaudible).

JN: Very, very significant.

MB: So very significant, yes.

JN: Well, thank you. Thank you very much.

MB: Thank you. Thank you so much.

JN: And thank you for coming by.

MB: No problem. My pleasure.