

Q & A for NHC



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What brings you to NHC?

I am the Joint Hurricane Testbed (JHT) liaison to the National Hurricane Center (NHC), and I come here once a week from the Hurricane Research Division (HRD) which is part of NOAA's Atlantic Oceanographic & Meteorological Laboratory on Virginia Key. Along with the JHT staff of Chris Landsea and Jose Salazar, we oversee all of the projects that are being transitioned from the research community to operations.

The most common question I receive is what is new in hurricane forecasting.

The main challenge is in intensity forecasting. HRD is certainly making new advances in this area. For example, the data from the tail Doppler radar is being transmitted from the NOAA hurricane hunter aircraft to the National Hurricane Center and to the modeling group at the Environmental Modeling Center. This data will give us a better understanding of the hurricane structure.

Are there other entities involved in the research?

There are a number of universities that are making advances through the JHT. There are several NOAA cooperative institutes that are building new technology used by

forecasters at NHC. There are also other federal offices, such as the Naval Research Laboratory and the Naval Post-Graduate School, doing upgrades to the Automated Tropical Cyclone Forecast (ATCF) software.

How did the JHT come about?

It started out a dozen years ago as a “Hurricanes at Landfall” program – learning how to improve our understanding of landfalling hurricanes. The effort began with NHC and HRD, but other entities joined, such as the Joint Typhoon Warning Center. The idea is to learn how to attack the forecasting problem and to provide improved guidance to the forecasters. I joined the JHT in 2005.

Was there something that triggered your DNA to become a meteorologist?

Like many of us, it was a weather event. For me, it was Hurricane Andrew. I am born and raised in Miami. Luckily, we weren't in the brunt of that storm, but just seeing all of the devastation it caused really sparked my interest in becoming part of the cadre of folks that help improve the forecasts. I wanted to help make a difference as best as I could and make my mark in this community. My undergraduate degree in Meteorology is from Florida State University and my graduate degree in Meteorology comes from the University of Hawaii.

How did you get into research?

I was fortunate enough to attend high school at Mast Academy, which is right down the street from HRD. Part of its graduation requirement was to do an internship. At that young age, I wanted to become a meteorologist and work at the hurricane center. But they told me about this NOAA research facility down the street, so I went down there and got interviewed. It completely changed my outlook of what a scientist does. So, I did my internship there and really enjoyed what I was doing.

What was it that stood out?

I felt part of the team there. I was a student and helping out on a project, and I thought they might just be giving me busy work. But the scientists there used the data that I was analyzing for their publication and research. At that young age, I felt that I was already accepted into the scientific community and that I was making a difference.

You travel cross-county to NHC once a week.

I meet with the other JHT staffers and NHC managers to go through the on-going projects, making sure they're running smoothly. We have projects running for two years, so there are progress reports that are due from the principal investigators (PIs). We want to make sure they are meeting their milestones. I also talk to the forecasters to make sure they are interacting with the PIs from the projects.

Is there a particular project that really has you excited?

One that I have seen through when I started, and fortunate that it was funded through the several cycles, is the wind probability product. That is one that the forecasters have really highlighted as a prime JHT focus to the public.

What's in the pipeline that excites you?

It's in my other job, where I actually fly into the storms. There's an instrument that measures significant wave heights. We've been testing it through the JHT and we're hoping this season for this data to flawlessly and smoothly come out from the plane to help the forecasters understand the wave height, and have nowcasting information for the significant wave heights in a hurricane. It's a reflection of surface wind speed, and can also lead to a better understanding of storm surge.

What do you do to escape?

It's difficult, but I do it. You have to have that balance in your life and be able to step away. I spend time with my family and I like to travel. I have a small garden and have vegetables and herbs that I like to grow. Sometimes the bugs eat them, but it's a fun trial and error.

Where do you see your career going?

I have been immersed in research for some time. Being at NHC once a week, I get to experience what it's like on the operational side. My feet are firmly planted in research and I see myself continuing in that realm. I've been taking leadership courses during the past year to improve my management and leadership skillset. So I may want to go into that sometime.

What advice do you have for a budding meteorologist?

If you are in high school, definitely talk to people in the field, and try to get as many facets of it as you can. Perhaps interview someone as part of a school project. And consider an internship. It will give you a picture of what it's like as a day to day career.

Send comments to: nhc.public.affairs@noaa.gov