Teaching at Hampton University by Jia Yue

[Editor’s Note: Maura Hagan introduced the notion of a postdoc exchange program at Minority Serving Institutions into the NCAR Strategic Plan in 2009. This article represents that idea come to fruition. Also, special thanks go to the NCAR Diversity Fund for making this experience possible]

The story began more than a year ago when Paula Fisher and Chris Davis announced an NCAR/Historically Black Colleges and Universities (HBCU) partnership program (please see sidebar on Page 2 for more information). A former ASP postdoc, Song-Lak Kang, was the first ASP postdoc to secure a teaching position at an HBCU, Howard University, in 2009. His teaching experience was a success story. When Paula announced the names of the HBCUs, Hampton University in Virginia drew my attention immediately. One of the senior professors in the atmospheric science department, Dr. James Russell, is a famous figure in the field of satellite remote sensing of the middle and upper atmosphere. I realized that teaching at Hampton University would not only grant me first-hand teaching experience, but also give me an opportunity to work closely with Dr. Russell and NASA satellite missions. My initial thoughts were strongly supported by Chris and Paula. The conversation between NCAR and Hampton University was initiated through email exchanges among the department chair, Dr. Loughman, Chris, and me. In the meantime, I worked with Paula and Chris to apply for financial support from the NCAR Diversity Fund. I began to clarify my goals when we were awarded money from the diversity fund a few months later. That led to a short visit to Hampton in spring 2011. I gave a seminar in the department and met the faculty members. We touched base on the courses I could teach. I was assigned to teach a graduate course: Atmospheric Measurement. I was also able to find a place to live near Hampton. After a busy summer of research and travels, I drove to Hampton from Colorado and prepared for the fall semester. The first week was bumpy, with both Hurricane Irene and an earthquake shaking the east coast.

The lectures that I gave to the graduate students were wonderful. An old Chinese proverb says, “giving a man a fish is not as good as teaching him how to fish”, so I decided to help the students develop their own thinking skills to apply first principles to solve practical remote sensing problems. To stimulate the students, each concept was accompanied by examples from everyday life. For example, the wavelength dependence of Rayleigh scattering can be well illustrated by the explana-
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Even though he took the same class last year.

Besides teaching, I also served as an ambassador from NCAR. Hampton University is not yet a UCAR member. However, after my visit, joining the UCAR family is now on the dean’s agenda. Networking is another advantage of living on the east coast for a few months. First, I got the chance to talk to scientists at the NASA Langley Research Center at Hampton and at NASA contracting companies. In addition, the CEO from a local research company, GATS, Inc., sponsored the class with a free subscription of their online spectral calculator worth $1000. Finally, Dr. Russell sponsored me to participate in a meeting at Virginia Tech.

Continuing to do research with colleagues at NCAR was no longer easy. Because this was my first-ever course to teach, weekdays were almost completely occupied by preparing for the lectures and grading homework. Weekends were the only available time to keep the research projects moving. Nevertheless, I managed to submit a NASA proposal with my colleague, Han-Li Liu at HAO, and Dr. Russell.

I would absolutely recommend teaching at an HBCU to any current or incoming postdocs if you plan to apply for a faculty position. This experience makes our CVs stand out from many other candidates. Adapting ourselves into a culture with minority groups helps prepare us to leave for a new position after our postdoc term ends. Also, the teaching semester is not counted toward the 2-year ASP postdoc term, which is helpful for our research goals.

For me, the most satisfying result is that my students really learned from the course. A quote from one of the cards the students sent me after the final read “I have been fortunate to have you here at Hampton for a semester. I have learned a lot in the last few months. I enjoyed your elaborate teaching method. I think the project and presentation assignments all help us focus and organize the material we learned. Thanks a lot. You will be missed at Phenix Hall”.

There is nothing more rewarding than this!

Engaging Students and Faculty at Minority Serving Institutions

Would you like to gain some teaching experience? ASP is prepared to help support postdocs interested in going to one of NCAR’s Historically Black College or University (HBCU) partners or to any U.S. Minority Serving Institution (MSI) to teach and conduct research. Support, which may come from ASP and/or the NCAR Diversity Fund, includes salary, additional living expenses, and travel costs. This could be for a semester or for a short course.

Perhaps you have another idea for engaging students at an MSI. If so, please let us know. There may be funds to support your idea through ASP and the NCAR Diversity Fund. The Diversity Fund proposal cycle is annual with proposals typically due in November. However, ASP has separate funds to support these activities as well.

Contact Paula Fisher (paulad@ucar.edu) or Chris Davis (cdavis@ucar.edu) if interested in pursuing teaching, or something entirely different. We’d love to hear your ideas.

Jia in action at Hampton