



## From the Director's Desk: I Love It When My Friends Talk

I kicked off my summer with a trip to Warsaw, Poland, where the Climate and Clean Air Coalition had a meeting focused on heating stoves. Here's the nexus: people who live where it's cold need space heat—giant streams of energy; of all the needs in a house, heating is most likely to use solid fuel, which emits lots of air pollutants; and the snow that falls near cold regions could be affected by air pollutants like black carbon that warm the atmosphere. Closed loop.

Now, I've been talking cook stoves since 2001, and aerosol-climate interactions since 1995, and I have dear friends in both communities. Somehow I didn't anticipate how deeply moving I would find that room: being present with people I love, who were conversing for the first time. The people I cherish are the ones who make me think, who set me back, who pop my academic bubble, who don't fit in the mold and remind me that I shouldn't, either. I also treasure the people who are solid hard workers, who snarl at a tough problem and gnaw it to disintegration. I'm fortunate to know people like that. We're all lucky to be able to brush truth once in a while. Sometimes we see it in each other. Keep talking.

Best, *Tami*

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## Research Spotlight: Measuring the Elusive

Illinois graduate student Cheryl Weyant never pictured her career leading her to the top of a rickety, two-story scaffold surrounding a giant kiln exhaust stack in rural India. And yet, in the spring of 2011, that's exactly where she found herself — carefully inserting a pollution emissions sensor she built herself to measure the harmful gases and microscopic particulate matter going up with the smoke.

To earn her Ph.D. in Environmental Engineering from the University of Illinois at Urbana-Champaign, Cheryl is capturing some elusive data: how much air pollution — and what kind — coal-fueled Indian and Nepalese brick kilns contribute to the atmosphere. To do so, she's had to develop some of her own methods and tailor sensing technology to her needs.

For years, science's best guess about this topic came from emissions data created with fires lit under huge laboratory fume hoods. The funneled exhaust would be analyzed to determine the level of different pollutants produced by a specific amount of fuel. Were these lab-perfect results actually representative of what was happening in the world, though?

"I wanted to go to the field," said Illinois Professor Tami Bond, Cheryl's advisor. "I wasn't expecting a big difference between the lab-generated emissions factors and what we'd observe in the field, but I thought we ought to go check."

What they found spurred a complete retooling in the Bond lab.

[Continue reading Cheryl's story >>>](#)

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## **CACHE Director on the Road**

As a new center, CACHE is working hard to share its perspective on emissions measurement and technical intervention strategy with the atmospheric sciences community. For that purpose, Director Tami Bond has spent a several weeks of her summer speaking and meeting at international air quality conferences around the world. Here are a few of the venues at which she delivered keynote addresses, session talks, and facilitated discussions:

- Warsaw Summit on Black Carbon and Other Emissions from Coal Heating Stoves and Combined Cooking + Heating Stoves (May 29-30).
- Guest seminar at Lanzhou Joint Key Lab of Cryosphere and Environment, China (June 10).
- Association of Environmental Engineering and Science Professors annual Conference (June 20-22).
- Seminar at International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal (July 13).