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- Capability of detecting signals from extremely small material concentrations or volumes
- Application of lowest laser power
- Ultrafast Raman Imaging

WITec Modularity

- Combination of Raman, AFM and/or SNOM
- Correlate chemical and surface structural information
- Achieve more comprehensive material characterization

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US minority faculty numbers still low

African Americans and Hispanics continue to be underrepresented in US physics department faculties, but their numbers are growing, according to a recent report based on a 2008 survey by the American Institute of Physics. (See also the Opinion piece on page 47 of this issue.)

In 2000, US physics departments had a total of 155 Hispanic and 141 African American faculty members among their ranks. Eight years later those numbers had grown to 262 and 183, respectively. The wider gap between the two groups is likely due to the growth in PhDs awarded to Hispanics: In 2000 African Americans earned about 2.6% and Hispanics were awarded 2.1% of all physics PhDs; in 2008 those percentages had reversed.

Nearly 70% of all physics departments had neither African Americans nor Hispanics on their faculties. Historically black colleges and universities accounted for more than half of African American faculty members, although one-fourth of HBCUs had none.

Astronomy departments lagged behind physics in the percentages of both minority students and faculty members.

This and related information is available in *African American & Hispanics Among Physics & Astronomy Faculty*. The report can be downloaded free of charge at <http://www.aip.org/statistics/trends/facultytrends.html>.

Toni Feder

Race and ethnicity of physics faculty

	Physics			All disciplines*
	2000 (%)	2004 (%)	2008 (%)	2007 (%)
African American	1.8	2.0	2.2	6.9
Asian	9.9	10.6	13.2	6.2
Hispanic	2.0	2.7	3.1	4.1
White	84.2	82.2	80.0	82.2
Other	2.0	2.2	1.5	0.6

*Data for all disciplines (which includes nonscience disciplines) found at <http://nces.ed.gov/fastfacts/display.asp?id=61>.

to performing. It was not a big jump to do standup.

It's really funny, my energy on stage or in front of a lecture hall depends so much on the energy of the audience. It's really amazing how there is a real interaction—the facial expressions of the audience, the time delay to the “aha” moment, the dB level of the laughs. . . .

PT: Do you have a favorite joke? Or an anecdote?

Goldblatt: A few months ago I was performing at Stanford University. I did a joke on the Heisenberg uncertainty principle, where I implied that a more advanced civilization would have resolved the uncertainty—in other words, the uncertainty would go away if only we had a deeper understanding of the physical world.

Some guy came up to me and told me he was highly offended. He was so serious. And I went away with a big smile on my face because I had really touched this guy. Can you imagine anybody getting so exercised about something so geeky? How marvelous!

PT: How do you work on comedy?

Goldblatt: I am always thinking about it. I always have a voice recorder to capture ideas. I hone new material at small clubs. It requires a lot of time on stage to see what will be a hit. The whole act

is very crafted. It has to be done in a specific order. With my material, the setup often includes a cheery introduction to an arcane topic. Later, it's fun to refer to it again.

My hope is that the audience will leave feeling smart. They got it! Never intimidate is the whole idea. That makes my writing a whole lot harder. It's part engineering and part psychology. Of course, if the audience is technical, I'll structure the act accordingly.

PT: Does doing comedy affect your research?

Goldblatt: Of course it's not supposed to. But once I thought it would be hysterical to leave out data points that didn't fit my theory. Isn't that hilarious? No, seriously, I often get a kick out of watching myself do things. I was at work and had a lot of data. I heard the new [Microsoft] Excel was going to have a million rows—actually 1 048 576, but who's counting?—so I downloaded a trial copy. I wanted to see for myself. Everyone flocked into my office to see the millionth row. We were all so excited. Isn't that sad?

I make fun of us nerds, but it doesn't mean I take science any less seriously. I love math. I love physics. I am consumed by it.

Toni Feder