

# Profiles *in* Teaching

By Kathleen McGarvey/Photographs by Adam Fenster

**T**HE GOERGEN AWARDS FOR EXCELLENCE IN UNDERGRADUATE TEACHING recognize the distinctive teaching accomplishments and skills of faculty in Arts, Sciences, and Engineering. Presented each year since 1997, the awards were established by trustee Robert Goergen '60 and his wife, Pamela, to recognize, reward, and encourage strong and innovative undergraduate teaching.

"The Goergen Awards have really driven a University-wide discussion about the importance of teaching," says Andrew Berger, a professor of optics and a recipient of the award in 2007.

As the College Class of 2011 leaves Rochester's classrooms, meet a few of the recent winners who have inspired them.

## ■ Carmala Garzione, 2010

It was love of the outdoors that first drew Carmala Garzione, an associate professor and chair of the Department of Earth and Environmental Sciences, to her field of sedimentology and tectonics—but more abstract attractions have provided its enduring appeal.

"Many geologists will tell you the ability to spend time outside is a big draw," she says, "and for me, early on, it was. But I also really like the big questions I ask in my research. What does the elevation history of mountains tell us about how they grew? How have mountains altered Earth's climate over time? What are the larger-scale tectonic processes at play in convergent tectonic settings?"

When Garzione teaches her undergraduate courses—Introduction to Geological Sciences and Sedimentology and Stratigraphy—she leads her students to the terrain of those large questions, but she never loses sight of their own grasp of the material.

"I think that's what's really important about teaching—you can't teach in the same mode for all levels," she says. "You have to understand where the students are in their understanding. You really need to develop a dialogue that's consistent with their level."

And dialogue is fundamental to Garzione's courses, even when she's lecturing. She aims never to convey facts and concepts alone, but to guide students to comprehend the thought processes behind them.

"It's a really active approach to learning," she says, and she works to-

ward solutions to problems in class rather than laying out information.

"I love to use chalk and overheads—which I know seems old-fashioned. But it allows me to write student feedback on the median. PowerPoint just isn't as dynamic."

Garzione teaches her introductory lab course as a workshop, breaking students into teams with a peer leader—a fellow student who's taken the course before and performed well—who helps guide the team by asking questions.

"The ideas in this course are more challenging than what they'd encounter in a typical lab, where the problems often have single-response answers," Garzione says.

She often includes undergraduates in her fieldwork teams in places such as Bolivia and Tibet, determining the age of rocks, collecting chemical information, and interpreting their depositional environment in a quest to unlock mountains' secrets about their growth mechanisms and the paleoclimate of the region.

"They usually do a lot of grunt work, but that's what we all do in the field as geologists."

Back in the classroom, she relies on a whittled down approach. "Initially I tried to put everything in my classes. But over time I've realized it's not the volume of information but the thought process that gives students an intellectual edge."

