

By Gene Stowe

THE CENTER FOR MATHEMATICS AT Notre Dame held an international conference with some 80 participants as the conclusion of its thematic program, *Motivic Invariants and Singularities*. The program included a week of summer school for undergraduates and another for graduate students and postdoctoral associates before the conference.

Nero Budur, an associate professor in the Department of Mathematics, organized the event with François Loeser of the University of Pierre and Marie Curie in Paris, and Mircea Mustata of the University of Michigan.

"This particular subject fits into what's called algebraic geometry," Budur said. "It deals with solutions to polynomial equations. Polynomial equations model a lot of things in real life and in theoretical sciences." Rather than use figures as in traditional geometry, the field uses equations accessible to computers.

Participants said the conference stimulates new ideas both in the lectures and in the informal discussions during breaks and meals, an important face-to-face dimension even in an age when Internet

Center for Mathematics' International Conference Attracts More than 80 Mathematicians

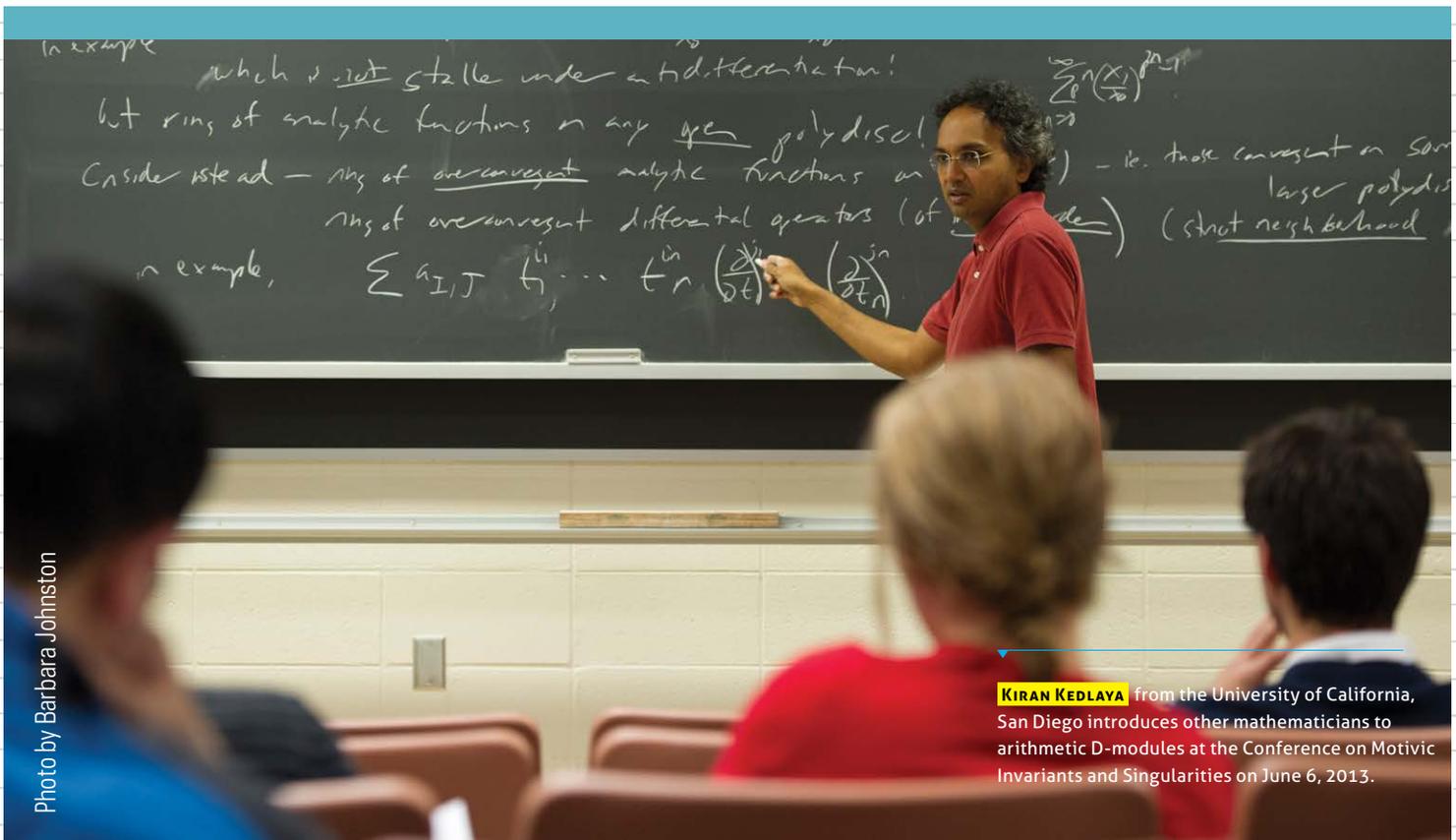
communication has enabled global collaboration. "It's very valuable to have a broad audience," said presenter Lars Halvard Halle of Oslo University in Norway. "At a conference like this with a main theme, there's a lot of variation within that theme so you get many different perspectives. You get interesting questions from people.

"Notre Dame has always been very strong in model theory," said presenter Julia Gordon of the University of British Columbia in Canada, who was a postdoc when she attended an American Mathematical Society meeting at Notre Dame in 2006. "Having a huge gathering like this is fantastic because you get to see people working on all aspects of these theories. My research is applications of model theory to representation theory. You get to see some European colleagues working on the same topics. It's always fantastic to have a chance

to find out what they're doing now and see if there are any connections."

Presenter Ana Reguera of the Universidad de Valladolid in Spain, who specializes in arc spaces, said the conference was an important opportunity to engage American and international scholars. "You get contact; you know what your colleagues are doing," she said. "Sometimes the talks are the excuse to start speaking, but the important thing is when you start speaking, the questions you have from the talk. Then afterwards we will be in contact by email. We need these kinds of meetings."

Motivic Invariants and Singularities was the third thematic program by the Center for Mathematics, with different organizers and themes each year. Some 35 people attended the undergraduate session and 70 attended the graduate and postdoc session. ■



KIRAN KEDLAYA from the University of California, San Diego introduces other mathematicians to arithmetic D-modules at the Conference on Motivic Invariants and Singularities on June 6, 2013.