

IN CLASS WITH HARKNESS FELLOW DAVID MUMFORD '53

By Jeff Ibbotson

It was an exciting moment for the students in Math 510. In response to a student's question, David Mumford leaned back in his chair and offered, "Well, that's an interesting question...perhaps we can look at curvature in a different way?"

The exchange took place on a grey Friday afternoon in November. The day, however, was full of bright conversation and deep questions as students in my Multivariable Calculus class got to interact with a major figure in the world of modern mathematics, who just happened

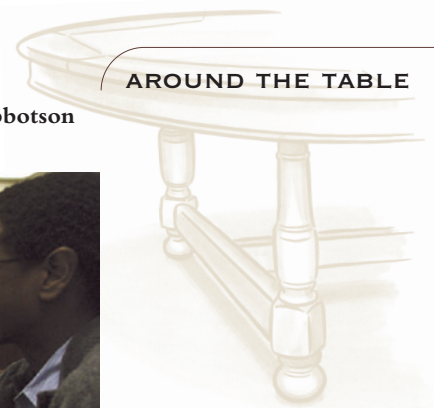


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to be an alumnus of Exeter. David Mumford '53, winner of the math world's highest honor—the Fields Medal—had returned to Exeter to participate in the 75th anniversary celebration of Harkness pedagogy. It was only his second visit back since graduating as a self-professed science “nerd” in 1953. Mumford delivered a lively assembly that Friday morning in which he sketched the importance of both the pure and applied sides of the world of mathematical research.

Since winning the Fields Medal in 1974 for groundbreaking work in the very abstract subject of algebraic geometry, he went on to stun the mathematics community by shifting his focus to applied mathematics in the 1980s. Since that time he has served in many prestigious roles (president of the International Mathematics Union, for instance) and made his home at Brown University's Division of Applied Mathematics. Some of his more recent work there has involved understanding the process of vision for application to computing machinery.

Mumford's visit to Exeter furnished him with an opportunity to visit math classes and speak to students. Many wanted to know about his experiences as a global leader in mathematics, but he quickly sidestepped such recognition and instead recommended that they “follow their bliss” and that everything of value would follow logically from that. His visit to other classes allowed students to see how a practicing mathematician exercises his insight in defining what is an “interesting” question. For the students in Math 510 it was a chance to cut loose and test their understanding of concepts in a variety of contexts. Following Professor Mumford through the maze of neighborhoods of families of curves and homotopy of curves on surfaces, they were treated to a mathematical offering that showcased some of the subtle connections underlying commonplace objects such as curves and surfaces. Breathlessly reaching the denouement of this mathematical feast, both Mumford and students parted with glowing impressions of one another. For just this once, it seemed like “H” format ended too early.



AROUND THE TABLE

75th
HARKNESS
ANNIVERSARY

A self-described science nerd while at Exeter who went on to become a MacArthur Fellow, David Mumford '53 (second from right) served up a “mathematical feast” to students in instructor Jeff Ibbotson's Multivariable Calculus course. (The doughnuts were good, too.)

Harkness Fellows: Coming Attractions

February 18-19: The Honorable Tim Wirth '57, former senator and congressman from Colorado and, from 1993 to 1997, undersecretary for global affairs in the Clinton administration. Since 1998, Wirth has served as president of the United Nations Foundation, which seeks to support and strengthen the work of the U.N., with a special emphasis on the environment, women and population, children's health and peace, security and human rights.

March 4-5: Maria Cabildo '85, executive director of the East L.A. Community Corporation, whose mission is to build grassroots leadership, self-sufficiency and access to economic development opportunities for low- and moderate-income families in sections of East Los Angeles, with a focus on housing, education and employment issues.

April 8-10: Donald Hall '47, U.S. Poet Laureate. For more on Hall's life and career, see page 28.