

Math



Times

Department of Mathematics, Fall 2008

Exploring math still a joyful journey for Tondeur

By Jim Dey

Philippe Tondeur, an emeritus professor of mathematics at the University of Illinois, came late to his chosen field. He started out in engineering, but was uncertain if that's how he wanted to spend his life. When Tondeur discovered the certainty of math, he had no doubts about his future academic pursuits.

"I was fascinated by the beauty of it," said the 75-year-old Tondeur. "You can acquire knowledge without doubt. It's still the only thing about which I am certain."

It was a good decision. Tondeur's career as a prominent scholar and vigorous advocate of mathematics research and education helped him fulfill a youthful wish.

"One of my childhood dreams was to travel," he said. "I have met people all over the globe."

That includes his wife, Claire, a native of Switzerland he met while visiting Turkey. She taught French literature at Bradley University in Peoria.

The second youngest of five children, Tondeur was born in Zurich, Switzerland. His father worked in a bank, and he recalls his mother as a creative homemaker.

"My family background is that of a younger child enjoying being surrounded by people who knew more than me," he said.

Tondeur earned his doctorate in mathematics from the University of Zurich before traveling to the University of Paris for postdoctoral studies and then Harvard University as a research fellow.

In 1968, he joined the UI mathematics faculty, eventually serving as the department chair. He had no idea that he would make his life in the United States and his career at the UI.

"I was basically a young person looking for a job. The U.S. was very welcoming," he said.

Over the course of a long career, Tondeur wrote nine books and close to 100 articles, much of his work focusing on differential geometry and topology, which is shape recognition. After stepping down as department chair, Tondeur served as the Director of



the Division of Mathematical Sciences at the National Science Foundation, where he worked to secure government funding for mathematics research.

Now as an emeritus professor, Tondeur finds himself as busy as ever, but says he can now "shape my life as I see fit."

Dividing his time between Arlington, Va., and Champaign, Tondeur travels widely, advising governments about the importance of mathematics research and education.

Tondeur consults with governments in the United States, Canada, Spain, Japan and Australia about the life-changing power of mathematics. He said government officials generally agree with his advice, but that doesn't necessarily translate into action.

"Today, it's much easier than it was 10 years ago. But I have to convert their belief into budget decisions. That's not as easy," he said.

Still, Tondeur's successful efforts have been widely recognized. He recently received the Society for Industrial and Applied Mathematics Prize for Distinguished Service for his "extensive and highly effective advocacy for the mathematical sciences."

"I think math leads to better science and better science leads to solutions to society's problems," he said. "We are surrounded by mathematics, but most people don't know it. Everything is permeated by mathematics, and much of that mathematics is of recent vintage."

Tondeur is referring to mathematics' role in computer-driven high technology. Whether it's a surgeon performing a delicate operation, an economist studying the financial markets or a climatologist pondering climate change, they all depend on sophisticated math-based technology.

Tondeur said "computer modeling is really mathematics in action," and that's why he's constantly proselytizing bureaucrats about the need to devote financial resources to math research and education.

Tondeur jokes that he could "live 1,000 years and never get tired of" mathematics. But he has other interests. Besides their love of travel, he said he and his wife are voracious readers.

"Both our residences are filled with books," he said.

But mathematics is his passion, a source of endless intellectual inquiry and a powerful force for social advancement. He said that he benefitted tremendously from financial support for his mathematics research, and that "now I spend my life trying to help other people get similar advantages."

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