

# Grad Student Liu Garners 2004 Stix Prize

For years, two names in the field of physics have stood out for Wei Liu. The first is Albert Einstein, who became Liu's idol when the latter was a small boy growing up in China and fascinated by science. Later, as a college student at the University of Science Technology of China where he received a bachelor's in plasma physics and a master's in engineering, Liu heard a second name — Thomas Stix. He'd read, "The Theory of Plasma Waves," the classic text written by Stix in 1962, and knew of the physicist even earlier. "Stix was well known," said Liu.



*Wei Liu*

Liu wished to meet the professor he admired some day, but never got the chance; Stix died in 2001. In 2004, however, a link developed between the two when Liu was named the recipient of the Thomas H. Stix '54 Plasma Physics Prize. "It was an honor," said Liu, who is the second person to win the prize. Prateek Sharma received the first prize in 2003.

Stix was the founder and longtime director of graduate studies for the University's Program in Plasma Physics and a leader in the development of plasma physics. A fund was created in his memory to establish a prize for first and second-year graduate students studying plasma-related topics. The prize would enable international travel for conferences or research.

Liu, a second-year graduate student in Princeton University's Program in Plasma Physics, used the prize to attend the Computational Fluid Mechanics 2004 summer program at the Golm campus of the University of Potsdam in Germany. The program at Potsdam, from August 23 to September 17, focused on computational fluid physics and MHD [magnetohydrodynamics] simulations.

While at Golm, he gave an informal talk to those who attended the program, discussing the research he is involved in at PPPL on the Magnetorotational Instability (MRI) project. He also went to the University of Cottbus in Germany to visit a lab and hear plasma physics talks. In addition, he attended many dinners and participated in discussions with others in the program.

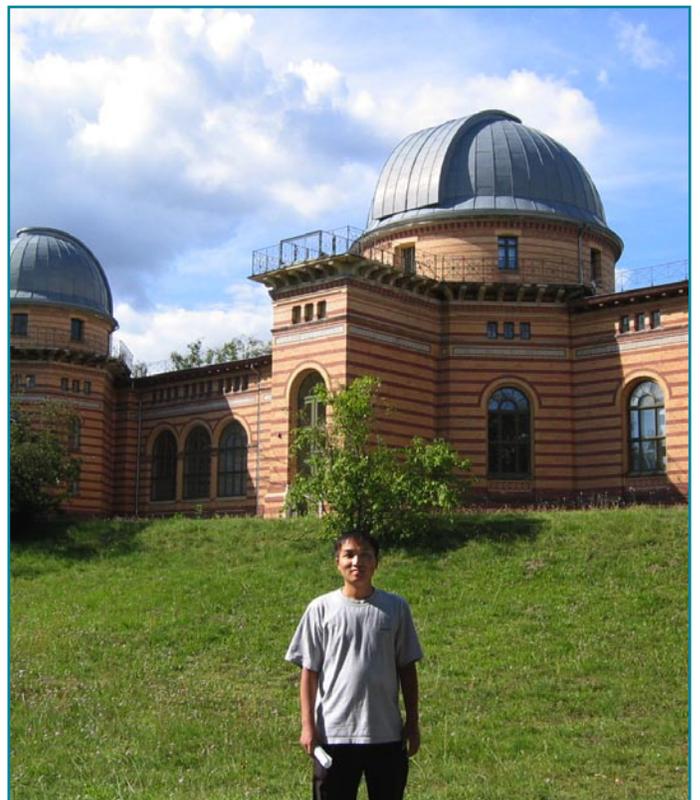
Attending the conference gave Liu many ideas about how to do the MHD simulations on MRI, now underway in the Lab's L-wing. "This summer school was very important to me," said Liu, who is advised by PPPL's Hantao Ji and Princeton University's Jeremy Goodman on the MRI project. "I think I have a further understanding about simulation and MRI. The experience was very helpful."

As a first-year graduate student, he did research on the Paul Trap Simulator Experiment with Ron Davidson as his advisor.

Liu said that besides his studies in Germany, he was able to see some of the sites, socialize with his fellow students, and learn more about the German culture. While there, he lived with a family. The experience was pleasant, but had one minor drawback — the family did not speak English and Liu does not speak German. "We had a little bit of difficulty understanding one another, but we used a sort of sign language to get by," said Liu.

A final treat for the program students was to visit Haver River and the home and office where Einstein lived and worked, as well as to attend a beer party featuring German refreshments and a boating expedition. Liu said he enjoyed making many friends in the field and developing contacts from all over the world. The 37 students involved in the summer program were from many countries.

"I attended lectures and classes, and participated in many discussions with scientists from 30 other countries. The most exciting thing is that Albert Einstein was working there before he came to the U.S.," said Liu. "Albert Einstein has been my idol since I was very, very young," he added. ●



*Wei Liu at the Observatory of the Astrophysical Institute of Potsdam, where Einstein had worked.*