



Professor Emeritus Samuel C. Fain, Jr.

Our department and the international physics community lost a dear friend and prominent member when Sam Fain passed away on May 26, 2009 after a long illness. He was 66 years old. Sam was born and raised in Tennessee. He attended Reed College in Portland, OR, where he received his BS degree in 1965. He was elected to the Phi Beta Kappa Honor Society. Sam attended the University of Illinois at Urbana-Champaign for his graduate studies. He earned his PhD in Physics in 1969. He interviewed for and was offered a position as Assistant Professor in our Department while still being a student. After a year at the University of Amsterdam with a NATO fellowship he joined our faculty in Autumn 1970. Sam's professional interests involved surface science, nanotechnology, and the teaching of experimental physics. He was passionate about having a laboratory with superb instrumentation to obtain a thorough understanding of the topic he was involved in. As an Assistant Professor he designed and built what was then one of the first and best in the world low energy electron diffraction (LEED), variable temperature spectrometers. With it, he and his students explored the structure, phases and molecular dissociation of the first layer of atoms or molecules deposited on the surface of graphite. The results that they obtained were, and still are, the standard in the field. When scanning tunneling microscopy was first developed, Sam and his students switched their field of research to investigate the topography of solid surfaces and the phenomena of surface melting in ice using tunneling and atomic force microscopy wherever appropriate. They initially built their own microscopes before they were commercially available, learning a great deal along the way. His laboratory now has a state of the art, commercially made variable temperature scanning probe microscope setup. During his years at UW, Sam was awarded an Alfred P. Sloan fellowship (1971-75) and elected Fellow of the American Physical Society (1984)

Sam contributed a great deal to the teaching mission of our Department making substantial improvements to all the laboratory courses, from the introductory to the most intricate senior level ones. In particular, his passion for photography and optics reflected in his very successful teaching of our Optics laboratory course. He guided 15 graduate students to the completion of their PhD dissertations, and advised and guided a very large number of undergraduate and graduate students who worked in his lab or just came to see or work with him. He was one of the original founders of the UW Center for Nanotechnology.

Sam's interests were broad, including photography, nature and social causes. Many events in the life of our Department and of his friends live in the hundreds of pictures he took, always with some of the latest affordable equipment he could find. Many of us saw for the first time the moons of Jupiter and other celestial objects through Sam's telescope, which he would carry to outings with friends and students. In late August, his sacks of small golden tomatoes that he grew at home and shared with many of us made our lunches together much more exciting.

Sam was an unassuming person, his understanding demeanor an example for all of us that science, faith, joy, sadness, friendship and life can peacefully coexist. We will all miss him.

A family obituary was written in The Seattle Times edition of Tuesday, June 9, 2009,  
<http://www.legacy.com/SeattleTimes/DeathNotices.asp?Page=LifeStory&PersonId=1282114>  
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