

commemorate the awarding of the Nobel Prize to I. I. Rabi, associate director of the MIT Radiation Laboratory, the lab held a party, the highlight of which was Art's "Rabi Song." Art also composed other songs, many for his wife, Janice, to sing, including "Female Physicist" and "Lament of the Faculty Wife." He wrote about his songs in a November 1948 article published in *PHYSICS TODAY* (page 17) and many of his lyrics and recordings are available online at <http://www.haverford.edu/physics-astro/songs/roberts/roberts.htm>.

Art's last few years were clouded by Alzheimer's disease, but he retained his ability to play the piano until near the end. He died peacefully, surrounded by his family. So passed the "bard of physics." We miss him.

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Joseph Thomas Rogers

Joseph Thomas Rogers died of neuroendocrine cancer on 25 May 2004 in Ithaca, New York. He was an associate professor of physics at Cornell University who made a major effort on the design of the international linear collider.

Joe was born in Chicago on 22 October 1957 and lived most of his childhood nearby in Glen Ellyn, Illinois. He received a BS in physics from SUNY Stony Brook (now Stony Brook University) in 1980 and won the university's Outstanding Student Award. After graduating, Joe joined Quantronix Corp, a laser manufacturer in East Setauket, New York, as a research engineer.



Joseph Thomas Rogers

He was admitted to the University of Rochester's graduate program in physics in the fall of 1982 and began research on the use of superconducting microwave cavities to look for energy-dependent, long-range forces associated with Fermilab's proton beam. His PhD thesis, prepared under the guidance of Adrian Melissinos, was entitled "Limits on the Electromagnetic Coupling and Density of Galactic Axions." In that work, Joe showed great versatility in technology and physics as well as very broad scientific interests. Topics in astrophysics and cosmology, though, remained close to his heart throughout his career.

After earning his doctorate in 1987, Joe traveled to Rome, where he spent a year as a visiting scientist at the Istituto di Fisica dello Spazio Interplanetario. He returned to Rochester as a research associate stationed at Brookhaven National Laboratory, where he started working on an experiment that used high-field superconducting magnets and optical techniques to measure the birefringence of the vacuum. From 1987 to 1989, Joe wrote papers and internal notes on such wide-ranging topics as investigation of antihydrogen using a Penning trap and an idea to measure Hawking radiation emitted by an electron trapped in a circular orbit.

Brookhaven recognized Joe's talents early on and offered him a staff position at the National Synchrotron Light Source; that job sparked his interest in accelerators. He worked on advanced electron-beam diagnostic instrumentation relevant to both the storage rings and the Accelerator Test Facility.

In 1992, Joe took up an assistant professorship in accelerator physics at Cornell and immediately got involved in problems involving the Cornell Electron Storage Ring. He discovered the cause of an instability that had plagued the ring for many years: Electrons trapped in the combined magnetic field and electric field were leaking out of the pumping slots of the distributed pumps. The problem was solved by lowering the pump operating voltage. Another major contribution he made was the production of a multi-bunch feedback system, parts of which are still in use. Joe was one of the very first to write a practical "strong-strong" beam-beam interaction program, which was used to good effect in the effort to increase luminosity.

From 2000 until his death, Joe was deeply involved in the international efforts to evaluate the state of R&D on the linear collider, a key element in the technology choice accepted and announced by the International Committee for Future Accelerators in Au-

gust 2004. At the time of his death, Joe had been hard at work on an innovative scheme to sharply reduce the cost of the damping rings for the linear collider. Characteristically, he also had been working on the role that coherent synchrotron radiation might be playing in pulsars.

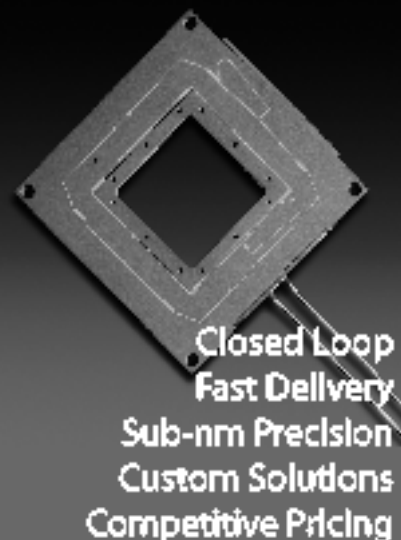
Joe had striking personal characteristics. His colleagues at Brookhaven described him as an easy person to like—cheerful, friendly, warm, and gentle. They recall that he had a gift for finding simple solutions to complex problems and could communicate his results in an elegant manner. He enjoyed his work, and that, combined with his quick intellect, led to thorough and superbly performing systems that remain in use today. One student in Joe's class commented that he was a genuinely nice man who was neither arrogant nor presuming. On an evaluation, the student wrote, "This class was the best physics class I've had at Cornell."

With Joe's passing, we have lost a brilliant scientist and teacher and one of the nicest people we have ever met.

Maury Tigner

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