

Peter Havas

Peter Havas, an internationally known theoretical physicist who worked in many aspects of relativity, died from pneumonia on 25 June 2004 in Abington, Pennsylvania, two years after suffering a massive stroke.

Peter was born 29 March 1916 in Budapest, Hungary. In 1921, he and his family moved to Vienna, where he completed his elementary and high-school studies. He received the *Abolutorium* in 1938 from the Technical University of Vienna. At the University of Vienna that same year, his graduate class in cosmology, taught by Erwin Schrödinger, had only met a few times before it was abruptly canceled because of the German invasion and subsequent annexation of Austria. Prior to the annexation, Peter was active in the student underground. In the course of a demonstration, he met Helga Francis Hollering, who was to become his wife.

Having been a leader in the underground student organization that opposed the fascists in Austria, he fled to France with Francis. There, at the Institut de Physique Atomique (now Institut de Physique Nucléaire) in Lyon, he worked in experimental nuclear physics under Jean Thibaud and in theoretical physics with fellow Viennese expatriate Guido Beck. As were all male enemy aliens living in France, Peter was interned at the start of World War II. He was released after a few months by efforts of Francis and was allowed to continue his studies.

The defeat of France forced Peter and Francis to flee again—this time with their daughter. With the help of the International Rescue Committee, they obtained visas to come to the US. The Havas family sailed from Portugal and arrived in New York on 22 June 1941, the day German forces invaded the Soviet Union. Peter subsequently was appointed lecturer at Columbia University while he continued his graduate studies. In 1944, he completed his PhD under Willis Lamb with a dissertation on quantum electrodynamics (QED): “On the Interaction of Radiation and Two Electrons.” While lecturing at Columbia, Peter also served as an assistant to Enrico Fermi and to Edward Teller. During 1945–46, Peter taught at Cornell University; he replaced Hans Bethe, who was away doing war research. The following year, Peter accepted an appointment at Lehigh University in Pennsylvania and remained there for 19 years.

H. FRANCIS HAVAS



Peter Havas

Peter, for ethical reasons, refused to engage in war research. That refusal led to his most bitter disappointment when, in 1947, he was not invited to the famous Shelter Island Conference on QED or to the follow-up conference in the Pocono Mountains of Pennsylvania. Both conferences had been designed for those who had engaged in war research.

Thus left behind in QED, Peter changed fields to the classical special relativistic theory of elementary particles. That shift led him naturally to study the equations of motion of point particles and radiation damping in classical field theory based on the work of Paul Dirac. Subsequently, the main body of his work was on equations of motion for compact sources in the general theory of relativity (GRT). Together, with one of us (Goldberg), he constructed a Lorentz-invariant (fast motion) approximation scheme of the GRT equations of motion and carried out an analysis of the first approximation. He continued to study the relationship of conservation laws, equations of motion, and action principles throughout his life. As a means of understanding the Newtonian limit of general relativity, he wrote an important 1964 paper in *Reviews of Modern Physics* that showed that Newtonian gravity could be written in four-dimensional form. His further work on relativistic statistical mechanics and causality rested on the concepts developed in his previous work.

Peter was always interested in the history of ideas. The first part of many of his papers laid out the development of what was known and what was frequently forgotten. Authors who are

not aware that physics has a history offended him.

Peter spent the academic year 1953–54 at the Institute for Advanced Study in Princeton, New Jersey, and then several months at the Niels Bohr Institute in Copenhagen. During the summer of 1958, he was a resident research associate at Argonne National Laboratory, where he gave a series of lectures on classical field theory.

In 1965, Peter was appointed professor of physics at Temple University in Philadelphia, where he remained until his retirement in 1981. He was a visiting professor at Birkbeck College of the University of London with Roger Penrose in 1969 and at the University of Göttingen in Germany with Hubert Goenner in 1973. In 1976, he was a lecturer at the International School of Physics “Enrico Fermi” in Varenna, Italy. Peter was a member of the editorial advisory board for volume 2 of *The Collected Papers of Albert Einstein* (Princeton U. Press, 1989).

After retiring from Temple, Peter served as an adjunct professor of physics at the University of Pennsylvania from 1982 to 1988 and at the International Institute of Theoretical Physics at Utah State University from 1987 until 1990. His last published paper was in 1994 as part of a festschrift for Jerzy Plebanski in Mexico. Then, although he stayed active through contact with colleagues, macular degeneration severely curtailed his work. It also curtailed the long happy hikes in the mountains with Francis. Those remained after he stopped the rock climbing he so much loved. Sadly, only two months after Peter died, Francis, who had been active in cancer research, also died.

Peter is remembered as someone who spoke against injustice of all kinds. He opposed the Austrian fascists, the Vietnam War, the Strategic Defense Initiative, and the second Iraq war. In the university senate, he actively protected faculty prerogatives. He is missed.

Harry W. Woodcock
Philadelphia University
Philadelphia, Pennsylvania
Joshua Goldberg
Syracuse University
Syracuse, New York

Behram N. Kursunoglu

Behram N. Kursunoglu, noted theoretical physicist, widely known founder and director of the Center for Theoretical Studies at the University of Miami in Coral Gables, Florida, and organizer of the Coral Gables Conferences, died in Coral Gables on