

In Memoriam

Roman U. Sexl

Roman U. Sexl, Professor of Theoretical Physics and Didactics of Physics at the University of Vienna, Austria, and member of the International Committee on General Relativity and Gravitation during 1974–83, died on the 10th of July 1986, at the age of 46.

Born in Vienna, he studied physics and mathematics at the University of Vienna. After earning his Ph.D. in 1961, he spent several years in the United States. He visited the Institute for Advanced Study, Princeton, was an assistant professor at the University of Washington and at the University of Maryland, and was an associate professor at the University of Georgia. In 1969 he became an associate and thereafter a full professor of theoretical physics at the University of Vienna.

Roman Sexl started research in the field of theoretical solid state physics and quantum field theory. Soon he became interested in problems of general relativity and cosmology. He wrote a number of papers on the field theoretic approach to general relativity, thereby discussing the structure of alternative theories of gravitation. In collaboration with H. K. Urbantke, he published in 1967 a paper, "Cosmic Particle Creation Processes," in which the authors calculated the production of particles by the gravitational field. Years later, after S. Hawking showed that black holes should produce particles with a thermal distribution, quantum field theory in curved space-time became a major field of research. Sexl wrote several books on the theory of special and general relativity, such as *Gravitation und Kosmologie*, Bibliographisches Institut Mannheim (1975) and *Relativität, Gruppen, Teilchen*, Springer, Vienna/New York (1974) (both with H. K. Urbantke). The book *White Dwarfs—Black Holes*, written together with his wife as a semipopular introduction to general relativity and astrophysics, became a best-seller and was translated into several languages.

More and more his interest drifted toward teaching physics. His ability to explain abstract mathematical concepts in simple terms made his lec-

tures attractive not only to physicists but also to laymen. He initiated a reform of teacher education at the University of Vienna and coauthored a physics textbook for high school students, which became so successful that it has been translated to several languages. Sexl also realized the pedagogical potential of microcomputers and integrated them into his lectures and seminars. He initiated a series of programs on special relativity, sports, physics, and chaotic systems.

His contributions to teaching physics found world-wide recognition. He was a member of the editorial boards of several journals devoted to physics teaching and of the Advisory Board for Physics Education of the EPS as well as Chairman of the International Commission for Physics Education of the IUPAP. He was the first to receive the R. W. Pohl prize of the German Physical Society in 1980.

With the death of Roman Sexl the scientific community loses a colleague who devoted his ability and efforts toward a better understanding of modern physics.

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