

Karl Fuchs (1932 – 2021)



Prof. Dr. Karl Fuchs passed away on 22nd March 2021 after a short illness. He was a world-wide leading geophysicist who was responsible for many international and interdisciplinary research initiatives.

Karl Fuchs was born on 21st January 1932 in Stettin. After World War II his family fled to Germany where he went to school near Hamburg. He studied geophysics in Hamburg, London and Clausthal where he finished in 1957. In the same year he married his wife Cornelia (to many known as Corry) and took over a position in the oil exploration industry. He worked for Prakla Seismos G.m.b.H. (Hannover) as leader of geophysical field crews in Brazil and Algeria. After two years he returned to Clausthal for a PhD. He completed his dissertation on 'Investigations on the wave propagation in wedge shaped media' in 1963 and held postdoc positions in Clausthal, Saint Louis and Dallas before he became affiliated with the University of Karlsruhe in October 1965 where he stayed for the rest of his life. In Karlsruhe Karl Fuchs was responsible for the branch Applied Geophysics, deep seismic sounding and numerical wave propagation. In 1968 he submitted his habilitation on 'The reflexion of spherical waves at inhomogeneous transition zones with arbitrary depth distribution of the elastic moduli and the density'. In 1971 he became chair of General Geophysics.

The establishment of the reflectivity method to compute synthetic seismograms was a major achievement of Karl Fuchs. He combined this theoretical and computational work with its application to deep seismic sounding and became a leading scientist in the studies of the lithospheric structure and upper mantle in the 1960s – 1980s. Seismology was accompanied by his interest in petrophysical interpretations of seismic models. He initiated numerous projects on long-range seismic profiles in international collaboration leading to new interdisciplinary cross-national partnerships. In the 1980s and 1990s his focus shifted to the understanding of the stress field of the lithosphere (World Stress Map) and earthquake hazard projects. Karl Fuchs initiated and led several (inter-)national

research programs including the Collaborative Research Centre 'Stress and Stress Release in the Lithosphere', EUROPROBE and the International Lithosphere Program (ILP).

Karl Fuchs was co-editor of Journal of Geophysics, president and honorary member of the German Geophysical Society, president of ILP, vice president of the European Union of Geosciences, fellow of the American Geophysical Union (AGU), American Association for the Advancement of Science, and the Geological Society of London, honorary fellow of the Royal Astronomical Society, member of Academia Europaea, professor honoris causa of the University of Bucharest, member of the Heidelberg Academy of Science and vice-chairman of EUROPROBE. In 2002 Karl Fuchs received the prestigious Karl-Heinrich-Heitfeld-Price of the German GeoUnion Alfred-Wegener-Stiftung.

In Karlsruhe Karl Fuchs was a very committed mentor for this employees and PhD students, many of them now being also professors or in leading industry positions.

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