

MIROSLAV KUTÍLEK

Professor of Soil Science, Soil Physics and Soil Hydrology

This thematic issue of Soil and Water Research is dedicated to Prof. MIROSLAV KUTÍLEK, who celebrated his 80th birthday in the past year. Prof. KUTÍLEK has been internationally recognised for his expertise in soil science, physics and hydrology not only in the former Czechoslovakia, but worldwide. I am delighted to recapitulate here briefly his personal professional highlights as a preface to this special issue in his honour.

Prof. KUTÍLEK was born on October 8th, 1927, in Trutnov in the Czech Republic. In 1951, he was graduated at the Faculty of Civil Engineering, the Czech Technical University in Prague (Ing. degree). In 1956, he defended his Ph.D. work (CSc. degree), and in 1966, he was awarded DrSc. degree, also by CTU Prague. He entered the faculty there as an associate professor and held this post from 1962 to 1965 and again from 1968 to 1973, and later served as a professor (1973–1990 and 1992–1993). He had also several long-term running lecturing and research contracts at many universities abroad: Baghdad University in 1960; the University of Khartoum, Faculty of Agriculture, Sudan, from 1965 to 1968; Bayreuth University, Fachbereich Geoökologie, Bayreuth, Germany, from 1990 to 1992; L'Institut de Mécanique, Université Grenoble, France, for many years (1979–1980, 1985, 1991); the University of California, Davis, USA, 1981–1982, and Die Technische Universität, Braunschweig, Germany, in 1989.

Prof. KUTÍLEK played a key role in the development of physical and mathematical methods aimed at replacing the empirical methods originally used in the soil science. These important contributions led to the foundation of a new interdisciplinary subject – hydropedology. Prof. KUTÍLEK attracted many bright minds to studying this subject and actually founded the Czech hydropedological school. He greatly influenced Slovak hydrological science as well. Many of his former students and colleagues are now also internationally recognised in the field of soil science and research. He is the author of three books on hydropedology, soil science, and porous media written in Czech. His book, *Vodohospodářská pedologie* (Soil Science in Water Management, SNTL/ALFA, Praha, 1966 and 1978), had been considered for many years as the definitive text for hydropedology, not only for university students but for researchers and practitioners as well. His second book, *Vlhkost pórovitých materiálů* (Moisture of Porous Materials, SNTL/ČMT, Praha, 1984), was also a valuable resource for those studying or working in soil water hydrology. Finally, together with J. Němeček and L. Smolíková, he wrote *Pedologie a paleopedologie* (Soil Science and Paleopedology, Academia, Praha, 1990), which was mostly concentrated on the processes in soil, soil genesis and polygenesis, soil classification, and soil paleoprocesses including the description of relict and fossile soils. Prof. KUTÍLEK is also the author of three books that were published in English. The best known of these is *Soil Hydrology*, written together with D.R. Nielsen (Catena Verlag, Cremlingen-Destedt, 1994), and used worldwide as a university textbook as well as a reference book for the soil science experts. The other two books are: *Direct Methods of Soil Moisture Estimation for Water Balance Purposes* (WMO, No. 286. Geneva, 1971), and *Physical Methods in Agriculture*, (Editor, together with J. Blahovec, Kluwer Academic, New York, 2002).

In addition to his impressive list of books, Prof. KUTÍLEK has also published 121 research papers on soil physics and soil hydrology in various international journals (*Soil Science*, *Water Resources Research*, *Journal of Hydrology*, *Soil Technology*, *Soil and Tillage Research*, and others) and in international conference proceedings. He has worked on an impressive array of topics, including adsorption of water vapour in soil and clay minerals, and on the role of soil humic fractions in adsorption processes. This study led to the research into non-Darcian flow. Further subjects of his research were the soil structure, methods of soil water content measurement, soil water storage and its clas-

sification, thermodynamics of soil processes, hydropedology, infiltration, evaporation from soil, soil hydraulic functions, soil hydrology, and soil porous systems. He was probably the first soil physicist who realised the model research in the investigation into the role of defined organic compounds in soil hydraulic conductivity, especially of quinolinium and pyridinium sorbed by clay minerals. His recent studies on the structural porosity and on the role of the soil structure in soil hydraulic functions are closely related to the influence of soil organic matter upon the structure and thus upon the soil physical properties.

Prof. KUTÍLEK played an active role in many international scientific organisations and professional activities. He was the vice-president (1968–1974) and the president (1986–1990) of the International Soil Science Society: I. Commission of Soil Physics. He was a member of New York Academy of Sciences (1998–2001), a member of the National Committee of the International Commission on Irrigation and Drainage (1956–1976), and has been a member of the International Council of Scientific Unions since 1986. He served as an expert for the WMO (1968–1970) and the IAEA (1981–1988). From 1992 to 1995, he was vice-president of the European Cultural Club in Prague. During his career, he was a member of seven editorial boards of international journals and a convener at 16 international conferences on soil science, soil physics, hydrology, and agrophysics.

His significant contributions to the soil research and to teaching led, not surprisingly, to many honours over the years. In 1975 he obtained Felber award in Technical Sciences at the CTU Prague, and in 1987, Mendel award from the Academy of Sciences in Prague in recognition of his effort towards combining plant physiology and soil biology with soil physics. In addition, he was elected the Honorary Member of the IUSS (International Union of Soil Science) in 1998, and the Honorary Member of the Czech Soil Science Society in 1999.

But science is only one part of Prof. KUTÍLEK's rich life: he is a true renaissance man, with keen interests in arts, music, and literature. In addition to his many research publications described above, he published five novels and two books of "fablories", a sort of combination of fables and short stories, all in Czech and mainly under the penname Marek Hofman.

Prof. KUTÍLEK is professionally still very active. Since 1998, he has worked as the Editor-in-Chief of Soil and Tillage Research (Elsevier), and he has continued to teach in international post-doctoral courses at the College of Soil Physics of the International Centre for Theoretical Physics, Trieste, Italy since 1987. He continues to publish his contribution in scientific journals, and each year he actively participated in scientific conferences as a session convener, contributor, and speaker. It was my distinct pleasure to cooperate with him on two research projects dealing with the impact of the soil structure on the soil water flow and solute transport processes in soil over the past 4 years.

On behalf of all of his colleagues and friends, as well as the authors and guest-editors of this thematic issue, I wish to convey very hearty congratulations to Prof. KUTILEK in honour of his 80th birthday, and also for his very significant and lifelong contributions to the field of the soil science. We wish him incessant enthusiasm, good health, joy, scientific inspiration and continuing professional successes.

*Doc. Ing. RADKA KODEŠOVÁ, CSc.
Czech University of Life Sciences Prague, Prague, Czech Republic
e-mail: kodesova@af.czu.cz*