

## SCIENTIFIC CURRICULIM VITAE of KÁLMÁN RAJKAI

He graduated from Eötvös Loránd University, Faculty of Natural Sciences as a certified biologist in 1974 and was admitted to the Institute of Soil Science and Agrochemistry of the Hungarian Academy of Sciences. Between 1976 and 2019, he worked at the Department of Soil Science of the Institute. Between 2001 and 2016 he was the head of the Department of Soil Science. From May 2021, he is a research professor emeritus at the Soil Science Institute of the Eötvös Loránd Research Network Centre for Agricultural Research.

In 1977, he obtained his doctorate in natural sciences at the Faculty of Natural Sciences of Eötvös Loránd University, Department of "Plant Systematics and Ecology".

He obtained his candidate's degree in 1985 with the thesis "Determination and application of soil physical properties for ecological purposes".

He received his MTA doctorate title in 2004 with his thesis entitled "Soil water management: Measurement, estimation and modeling".

His main research areas:

- Correlation analysis of soil and groundwater management properties; Development of pedotransfer functions;
- Development and application of soil moisture measurement methods;
- Measurement and modeling of groundwater circulation;
- Analysis of plant ecological aspects of soil properties;
- Geostatistical examination of the territorial pattern of soil properties;
- Adaptation, further development and extension of the electrical measurement method of root size and activity.

Since 1982, he has been supervisor of OKTH, OKKFT, MTA AKA and TK5 research programs. Until 2017, he successfully managed the themes and sub-themes of 6 OTKA applications, 2 Austrian and 4 EU research programs.

In 2004, the technical book "Amount, distribution and flow of water in the soil" was published by TAKI of the Hungarian Academy of Sciences.

Between 2005 and 2009, he taught the subject "Environmental economic models" to the Environmental Engineering students of Szent István University.

Between 2016 and 2021, he was a regular member of the Doctoral School of Biology of Szent István University, then of the Hungarian University of Agricultural and Life Sciences, and is a member of the Doctoral and Habilitation Council.

He co-supervised 3 PhD and 4 diploma theses.

From 1986, he was a member of the Soil Science and Agrochemistry Committee of the Hungarian Academy of Sciences, and between 2009 and 2011 he was its chairman, then from 2011 he was a member of the Soil Science, Water Management and Crop Production Committee, and from 2018 its chairman;

Since 1986, he has been a member of the Editorial Board of the journal *Agrokémia és Talajtan*, and from 2014 to 2021 its editor-in-chief.

His activities were recognized by the Hungarian Academy of Sciences with the Youth Award in 1978 and 1984, and with the shared Academic Award in 1991.

In 2016, he was elected a corresponding member of the Hungarian Academy of Sciences, and for his professional work he was awarded the State Cross of the Hungarian Order of Merit, and in 2017, he was awarded the Honorary Citizen of Budapest Terézváros. In 2022, he was elected a regular member of the Hungarian Academy of Sciences.