

Professor Pavel Jandera **Winner of the 2015 Chromatographic Society Martin Medal**

Professor Tony Edge

Vice-President, The Chromatographic Society & Chair of the Society's Awards Panel



Professor Pavel Jandera was born in 1944 and has had a prolific career in the field of separation science. He was introduced to separation science by Jaroslav Churáček during his undergraduate studies in Czechoslovakia. Initially looking at TLC he then started to develop his own HPLC instrumentation. In 1973 he completed his PhD thesis on the effects of working conditions in LC separations and joined the department of Analytical Chemistry at the University of Pardubice. In 1977 he spent a very influential three months at the institute in Saabrücken under the guidance of the late Professor Isztván Halász where he was taught to not only synthesise alkyl silica stationary phases and to pack the resulting particles but was also introduced to the Halász's late Friday afternoon seminar where he became acquainted with methodologies for improving the separation performance. He returned to Pardubice where he constructed his own column packing device and continued his research into efficient separation using HPLC and also CE. He continued to develop theoretical approaches to optimising a separation, and was able to extend the work of Lloyd Snyder in developing a more general form of the linear solvent strength gradient model to encompass ternary systems for reversed phase, normal phase and also ion exchange systems. This work formed the foundation stone for many commercial packages that allow for the interpolation of retention time values for a series of compounds. He was also able to explain how the instrumentation could also affect the separation explaining the effect of poor mixing on the retention mechanism of an individual compound.

He distinguished career developed from here and he has won many illustrious awards for his contributions to separation science including; Tswett Foundation Award (1988), Hanus medal of the Czech Chemical Society (2004), Honorary member of Slovak Pharmaceutical Society, (2004), Memorial medals: University of Turun, Poland, University of Messina (2005), and Waksmundzki medal of the Polish Academy of Science (2011)

He has worked with many notable academics in this field including the late great Georges Guiochon. He visited his laboratory at the Ecole Polytechnique, Palaiseau for six months in 1980. Later (in 1990/91) he spent one year as visiting professor in his group at the University of Tennessee in Knoxville, where he investigated modelling separations on overloaded columns under non-linear chromatographic conditions.

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Pavel has worked in many other areas including development of novel stationary phases, both in capillary format and in larger scales. He has looked at the use of differing polymers to synthesise monolithic stationary phases and has also looked at the use of molecularly imprinted polymers and also novel hybrid phases to alter the selectivity of the separation mechanism. The synthetic process has been coupled with an increasing understanding of the mechanisms by which retention occurs, and in particular there are some notable publications in the field of HILIC and Aqueous Normal Phase separations.

He has also investigated two dimensional separations and looked at ways in which orthogonal separations can be optimised using both RP-LC, HILIC and also MEKC as a separation technique. He has effectively used his modelling skills to develop predictive models to allow optimisation of a comprehensive 2D separation. In these cases he has used real practical applications to demonstrate the applicability of the technique.

As a consequence of all of these activities, the Chromatographic Society are very proud to confer the 2015 Martin medal on Professor Pavel Jandera.