

Professor Karl Tapio Westerlund's Biosketch

Karl Tapio Westerlund is since 2017 professor emeritus of process design at Åbo Akademi University (ÅAU) in Finland and since 2016 docent (adjunct professor) of applied mathematics at the University of Turku. Since 2020 he is also docent (adjunct professor) of mathematics at ÅAU.

Professor Westerlund received his MSc, LicTechn and PhD degrees in process control at ÅAU in 1975, 1977 and 1980 respectively. During 1978 to 1979 he was visiting researcher at the Department of Engineering Cybernetics at the Norwegian Institute of Technology in Norway and from 1979 to 1985 he was senior lecturer of applied mathematics, docent (adjunct professor) of process control and acting associate professor of mechanical engineering at ÅAU. From 1985 to 2017 he has been professor of process design and head of the process design and systems engineering laboratory at ÅAU. In 1992 to 1994 he was the dean of the Department of Chemical Engineering. During the period 1998 to 2002 he was on leave from the chair of process design, first as research professor in a joint Nordic PhD research programme in process integration and thereafter as the head of the Research Institute of the Foundation of ÅAU. He is the founder of the Optimization and Systems Engineering (OSE) research group at ÅAU, which was a centre of excellence within research at the university during 2010-2014.

Professor Westerlund has been an active member of national and international scientific societies. Nationally he has been board member e.g. in the Technical Society of Finland (1984-1986), the Technical Scientific Commission at the Academy of Finland (1986-1988), the Finnish Institute for Future Studies (1993-1998) and the Swedish Academy of Engineering Sciences in Finland (2004-2009). Internationally he has been a member of scientific boards of a large number of conferences, committees and panels (evaluating research proposals, recruiting academic personal and assessing theses). He has also been member of several editorial boards of international scientific journals.

Major awards and honours: *The O Hugo Shuck Award for 1980* was awarded to him, by *The American Automatic Control Council* in 1981, for the best paper at *The Joint American Automatic Control Conference* in San Fransisco 1980. In December 2012, the President of Finland awarded Professor Westerlund to First Class Knight of the Order of the White Rose of Finland (FVR R I).

The research interests of Professor Westerlund are in the field of Process Systems Engineering with emphasis on developing mixed integer optimization methods for large-scale optimization problems in science and engineering. He has authored several book chapters in books published by the publishers Pergamon Press 1984, Academic Press 1996, Kluwer Academic Publishers 2001, Wiley 2008 and Springer (2006, 2009, 2012, 2020 and 2024). Articles published in scientific journals and conference proceedings, can be found in the list of papers. He has been the supervisor of thirty PhD-students.