

Curriculum Vitae Prof. Sergio Rinaldi

Sergio Rinaldi has been Professor of System Theory at the Department of Electronics and Information (DEI) of the Politecnico di Milano, since 1978 and is Research Scholar at the International Institute for Applied Systems Analysis (IIASA), Laxenburg (Vienna).

In the first ten years of his research activity, Sergio Rinaldi has concentrated on linear systems. In 1969 he has given the first course in Italy on linear system theory. The lecture notes of that course have been later collected into the first Italian book on the subject: *Teoria dei Sistemi*, Hoepli-CLUP, 1974.

Then in the period 1975-1990 Sergio Rinaldi has switched to more applied research by focussing on urban air pollution, flood prediction and control, river pollution, and renewable resources management.

His most significant publication of this period is the 1978 McGraw Hill book *Modeling and Control of River Quality*, written at IIASA.

From 1990 Sergio Rinaldi has renewed his interest for the theoretical aspects of dynamical systems by focussing, in particular, on nonlinear dynamics and cooperative systems. These studies have brought to a number of original results collected in the 2000 John Wiley book *Positive Linear Systems: Theory and Applications*.

In the context of non-linear systems he has been particularly active on bifurcation analysis, slow-fast systems and discontinuous systems. These three themes are basic for the understanding of evolutionary dynamics, which result from the interactions between slow innovation processes and fast competition processes, as described in a forthcoming book by Princeton University Press *Analysis of Evolutionary Processes: The Adaptive Dynamics Approach and Its Applications*.

Sergio Rinaldi is the author of more than hundred peer reviewed papers and of six books and is Associate Editor of *International Journal of Bifurcation and Chaos*, *Ecological Modelling*, and *Applied Mathematics and Computation*.

He has been Visiting Professor at Stanford, Berkeley, Vancouver, Kyoto, Wien and Linz and is presently Director of the Research Center for Environmental Modelling (CIRITA), Politecnico di Milano, and Professor of Systems Modelling at the Alta Scuola Politecnica.

Sergio Rinaldi was awarded the Italgas Prize for Scientific Research and Innovation in 1988 and the Calabria Prize for Literature and Science in 1996.