

Paolo d'Alessandro was born in Brescia (Italy) in 1945.

He holds a degree in Electronic Engineering (1968) and a postdoctoral degree in Computer and System Engineering (1971), both from University of Rome "La Sapienza".

In 1968 he joined the Department of Computer and System Sciences of University of Rome "La Sapienza".

He has held professorships at four Italian Universities.

In 1980 he got his full professorship at the Department of Electrical Engineering of University of L'Aquila.

In 1992 he joined (as cofounder) the Department of Mathematics of the Third University of Rome.

From 1975 to 1976 he has been visiting first the Division of Applied Physics at Harvard University and then the Department of System Science at U.C.L.A. supported by two NATO fellowships.

Paolo d'Alessandro has authored or coauthored more than 60 papers on System Theory, Optimization, Decision support and other fields. Most of them are published in various books and 19 international journals, including: Mathematical System Theory, Siam Journal on Control, Applied Mathematics and Optimization, Systems and Control Letters, RAIRO OR, Optimization, Decision Support Systems, Journal of Multicriteria Decision Analysis, IEEE Transactions on Automatic Control, JOTA and Brain Research.

He authored the book: "A conical approach to linear programming - scalar and vector optimization problems" published by GORDON and BREACH in 1997.

He has been reviewer for Zentralblatt für Mathematik for papers and books in the areas of Optimization, System Theory and Decision Support Systems and occasionally reviewer for various Journals.

A few upshots of his research activity. He started working on linear time-varying and on bilinear systems. Then he turned to foundations of system theory and of probability theory. Regarding the foundations of system theory, in 1985, he coauthored a paper on infinite dimensional linear systems over Hilbert spaces, which shows that there is an "universal" strongly continuous semigroup, that allows to implement an arbitrary linear system. The investigation on this topic has been resumed recently.

In the early eighties he started research on range space conic methods in Optimization, which went on for the part in finite dimensions up to 2006. He has introduced a range space, conic approach to linear (scalar and vector) programming. In this context he has devised three new algorithms of linear programming and algorithms for vector linear programming (without resorting to scalarization) and published the above mentioned book in 1997.

He has then developed a theory of social choice that preserves the vectorial nature of both individual and group decisions without scalarizing the first, as in famous 1951 book of K.J. Arrow. This theory was published in 1993.

From early eighties to 2001 he has applied the theory of convex cones and the machinery of the range space and conic approach to linear programming to various control problems, introducing the theory of an optimal regulator

based on inequative feedback, developing a theory of controlled invariance and a generalization of the theory of positive systems. The result are published in a series of 8 coauthored papers.

In 2008 he published a paper on retinal curvature and geometry of image formation (on the Journal Brain Research).

In 2011 and 2012 he published two papers (one for a Hilbert space setting and the second for a Banach space setting) on application of the theory of convex cones to the Maximum Principle.

Current orientation of research has evolved toward the theory of polyhedra in infinite dimensions, further work on norm optimal control for PDE, and convex hypersurfaces in infinite dimensions. The results of this researches will appear in a forthcoming research monograph.