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# Nonlinear scalarization mappings for set orderings*

C. Gutiérrez† B. Jiménez‡ E. Miglierina§ E. Molho¶

## Abstract

This talk focuses on scalarization mappings for sets of a topological linear space and the so-called lower set less order relation. It is motivated by solution concepts of a set-valued optimization problem based on the set approach. To be precise, three scalarization schemes that generalize the Gerstewitz nonconvex separation functional and the oriented distance are studied, taking special attention to their monotonicity and order representation properties. Moreover, relationships between them are emphasized.

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†Departamento de Matemática Aplicada, E.T.S. de Ingenieros de Telecomunicación, Universidad de Valladolid, Paseo de Belén 15, Campus Miguel Delibes, 47011 Valladolid, Spain. E-mail: cesargv@mat.uva.es

‡Departamento de Matemática Aplicada, E.T.S.I. Industriales, Universidad Nacional de Educación a Distancia, c/ Juan del Rosal 12, Ciudad Universitaria, 28040 Madrid, Spain. E-mail: bjimenez@ind.uned.es

§Dipartimento di Discipline Matematiche, Finanza Matematica ed Econometria, Università Cattolica del Sacro Cuore, via Necchi 9, 20123 Milano, Italy. E-mail: enrico.miglierina@unicatt.it

¶Dipartimento di Scienze Economiche e Aziendali, Università degli Studi di Pavia, via S. Felice 5, 27100 Pavia, Italy. E-mail: molhoe@eco.unipv.it