

Seminar Optimization and Equilibrium

Speaker: Prof. Nicolas Hadjisavvas, University of the Aegean, Greece.

Title: A general asymptotic function with applications

Abstract: Due to its definition through the epigraph, the usual asymptotic function of convex analysis is a very effective tool for studying minimization, especially of a convex function. However, it is not as convenient, if one wants to study maximization of a function " f "; this is done usually through the hypograph or, equivalently, through " $-f$ ".

We introduce a new concept of asymptotic function which allows us to simultaneously study convex and concave functions as well as quasi-convex and quasi-concave functions. We provide some calculus rules and relevant properties of the new asymptotic function for applications purposes. We also compare with the classical asymptotic function of convex analysis.

By using the new concept of asymptotic function, we establish sufficient conditions for the non-emptiness and for the boundedness of the solution set of quasi-convex minimization problems and quasi-concave maximization problems. Applications are given for quadratic and fractional quadratic problems.

This a joint work with F. Lara and D.T. Luc.

Fecha: Miercoles, 1 de Julio a las 10 Horas

Google meet.

Enlace de la Conferencia: meet.google.com/orv-dnim-cyq