

## CHARACTERIZATION OF LIPSCHITZ LIKE PROPERTIES

RAFAEL CORREA, PEDRO GAJARDO, AND LIONEL THIBAUT

The aim of this talk is to show characterizations of various Lipschitzian like properties of functions and sets, in terms of subdifferentials, directional derivatives, tangential and normal cones. We consider the study of  $K$ -directionally Lipschitzian property for functions and sets which recover some well known concepts in variational analysis as directionally Lipschitzian and compactly epi- Lipschitzian behaviors. We extend some necessary and sufficient conditions, given for the geometrical Ioffe subdifferential (resp. Frechet and Mordukhovich subdifferential) and Geometrical Ioffe normal cone (resp. Frechet and Mordukhovich normal cone), to other subdifferentials (and normal cones) that satisfy multidirectional mean value inequalities. Characterization in terms of generalized derivatives and tangent cones will be also studied.

CENTRO DE MODELAMIENTO MATEMÁTICO (CNRS UMI 2807), DEPARTAMENTO DE INGENIERÍA MATEMÁTICA, UNIVERSIDAD DE CHILE, AV. BLANCO ENCALADA 2120, SANTIAGO, CHILE  
*E-mail address:* `rcorrea@dim.uchile.cl`