

**ABSTRACT.** Let  $\{C_0, C_1, \dots, C_m\}$  be a collection of closed convex subsets with nonempty intersection  $C$  in a Hilbert space  $X$ . A geometric characterization is given of those collections for which the Karush-Kuhn-Tucker (or Lagrange multiplier) conditions are valid for characterizing optimal minimal solutions for any convex continuous function  $f : C \rightarrow R$  over  $C$ . They are precisely those sets  $\{C_0, C_1, \dots, C_m\}$  which have the “strong conical hull intersection property” that was introduced in [5].