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*differential inverse variational inequalities in finite dimensional spaces*

A new differential inverse variational inequality is introduced and studied in finite dimensional Euclidean spaces. Some results concerned with the linear growth of the solution set for the inverse variational inequalities are obtained under different conditions. Some existence theorems of Carathéodory weak solutions for the differential inverse variational inequality are also established under suitable conditions. An application to the time-dependent spatial price equilibrium control problem is also given.