Subdifferentials Whose Graphs Are Not Norm×Weak* Closed

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Abstract. In this note we give examples of convex functions whose subdifferentials have unpleasant properties. Particularly, we exhibit a proper lower semicontinuous convex function on a separable Hilbert space such that the graph of its subdifferential is not closed in the product of the norm and bounded weak topologies. We also exhibit a set whose sequential normal cone is not norm closed.