

Relationships between the Robinson robust stability and the Aubin continuity property of implicit multifunctions¹

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By constructing some suitable examples, Jeyakumar and Yen [SIAM J. Optim. 14 (2004), 1106–1127] have shown that the Robinson robust stability (Rrs) and the Aubin continuity property (Acp) of implicit multifunctions are not equivalent. This paper clarifies the relationships between the two properties of implicit multifunctions. It turns out that the (reasonable) sufficient conditions for having $(\text{Rrs}) \Rightarrow (\text{Acp})$ are quite different from those for the fulfilment of the reverse implication. The implicit function theorem due to Yen and Yao [Nonlinear Analysis (2008), doi:10.1016/j.na.2008.04.005] serves as a tool for our analysis of (Rrs) and (Acp).

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