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# Global Invertibility and Implicit Function Theorems by Mountain Pass Theorem

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## Abstract

We formulate some global invertibility and implicit function theorems. We extend the result of Idczak, Skowron and Walczak on the invertibility of the operators to the case of the operators with critical points. The proof relies on the Mountain Pass Theorem combined with the Palais-Smale condition guaranteeing the claim by the invertibility of the first or the third derivative.

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