Operations with monotone operators and the monotonicity of the resulting operators

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Abstract

We provide estimates for the parameters of monotonicity of two composed operators and for the sum of two operators, on the Euclidean space, as well. The estimates are given in terms of the parameters of monotonicity of the involved operators and they produce examples of h-monotone operators which are not Minty-Browder monotone. As an application to the estimates for the inferior parameter of monotonicity associated to the sum of two operators we prove a global injectivity result.