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# STRONG CONVERGENCE OF AN INERTIAL FORWARD-BACKWARD SPLITTING METHOD FOR ACCRETIVE OPERATORS IN REAL BANACH SPACE

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**Abstract.** The main purpose of this paper is to introduce a modified inertial forward-backward splitting method and prove its strong convergence to a zero of the sum of two accretive operators in real uniformly convex Banach space which is also uniformly smooth. We then apply our results to solve variational inequality problem and convex minimization problem. We also give a numerical example of our algorithm to show that it converges faster than the un-accelerated modified forward-backward algorithm.
**Key Words and Phrases**: Monotone inclusion problem, inertial iterative algorithm, Banach space, forward-backward splitting method, inertial extrapolation.
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