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Dedicated to Prof. Hong-Kun Xu on the occasion of his 60^{th} *anniversary*

A parallel inertial S-iteration forward-backward algorithm for regression and classification problems

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ABSTRACT.

In this paper, a novel algorithm, called parallel inertial S-iteration forward-backward algorithm (PISFBA) is proposed for finding a common fixed point of a countable family of nonexpansive mappings and convergence behavior of PISFBA is analyzed and discussed. As applications, we apply PISFBA to estimate the weight connecting the hidden layer and output layer in a regularized extreme learning machine. Finally, the proposed learning algorithm is applied to solve regression and data classification problems.

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