

## Accepted Manuscript

Mini-Batch algorithms with Barzilai-Borwein update step

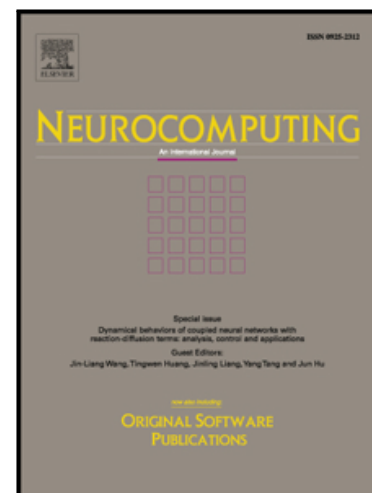
Zhuang Yang, Cheng Wang, Yu Zang, Jonathan Li

PII: S0925-2312(18)30738-0  
DOI: [10.1016/j.neucom.2018.06.002](https://doi.org/10.1016/j.neucom.2018.06.002)  
Reference: NEUCOM 19680

To appear in: *Neurocomputing*

Received date: 28 July 2017  
Revised date: 9 May 2018  
Accepted date: 4 June 2018

Please cite this article as: Zhuang Yang, Cheng Wang, Yu Zang, Jonathan Li, Mini-Batch algorithms with Barzilai-Borwein update step, *Neurocomputing* (2018), doi: [10.1016/j.neucom.2018.06.002](https://doi.org/10.1016/j.neucom.2018.06.002)



This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Highlights**

- We integrate the BB update step into mS2GD, thereby obtaining a new method, mS2GD-BB.
- We prove that mS2GD-BB converges linearly in expectation for strongly convex and nonsmooth functions. We analyze the complexity of our mS2GD-BB method.
- We conduct experiments using mS2GD-BB to solve logistic regression. The experimental results demonstrate that our proposed method obtains a rapidly updated step size sequence, and achieves better performance than some state of the art methods.

Download English Version:

<https://daneshyari.com/en/article/8960128>

Download Persian Version:

<https://daneshyari.com/article/8960128>

[Daneshyari.com](https://daneshyari.com)