

# ***Interactive comment on “Sparsity-based compressive reservoir characterization and modeling by applying ILS-DLA sparse approximation with LARS on DisPat-generated MPS models using seismic, well log, and reservoir data” by Mohammad Hosseini and Mohammad Ali Riahi***

## **Anonymous Referee #1**

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For an extended review see Attached pdf-file.

This reviewer works in the image and signal processing area and has no particular knowledge of geophysics or geoscience. Thus, this review will only consider the general appearance of the paper and the parts of the paper related to image and signal processing, especially sparse coding and dictionary learning.

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The paper, in its current state, is unclear in most parts. There are several errors and concepts that are not correctly used or explained. The idea of the paper, to use sparse approximation on reservoir models, may be a good idea for further research and eventually one or several papers. This reviewer thinks that a major revision is needed before this paper is published. Perhaps it is better to start a new paper.

Please also note the supplement to this comment:

<http://www.nonlin-processes-geophys-discuss.net/npg-2016-46/npg-2016-46-RC1-supplement.pdf>

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Interactive comment on Nonlin. Processes Geophys. Discuss., doi:10.5194/npg-2016-46, 2016.

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