

# ***Interactive comment on “Inversion of Residual Gravity Anomalies using Tuned-PSO Technique” by Ravi Roshan and Upendra Kumar Singh***

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This manuscript discussed about the Tuned PSO technique and computed the synthetic gravity anomalies over the simplified body (i.e. sphere and cylindrical) using the Tuned PSO technique. Author has also used published data as a case studies to test the technique and find the match is agrre with the earlier published result. The paper is not much clear and written in hurdle. i mention many point in manuscript itself. Author should clarify these the point. Here are some comments that should be addressed by the authors before publication: 1. is it forward modelling or inversion of gravity data? 2. Explain in detail in introduction section that how Tuned PSO gives better result then other technique in terms of depth and size. 3. Can this technique resolve the depth accuracy for thin layered strucutre? 4. Selection of learning parameter is not clear. Author should elaborate it. 5. Author should estimate the leakage effect of the Tuned

PSO technique from taking into account of all parameter. 6. Considering the model fit, i am little surprised that how the all model (Figure 3, 5,6) is fit too well with changing learning parameters. 7. In Table 6, Author compare result with least square technique which is quite similar result using both technique. In depth 0.02 km difference is might possible within the error limit of both technique. Explain how the present technique gives better result. 8. Author should reply the comment raised in attached reviewed manuscript. 9. Author should correct typo mistake and improve the manuscript.

Please also note the supplement to this comment:

<http://www.geosci-instrum-method-data-syst-discuss.net/gi-2016-26/gi-2016-26-RC1-supplement.pdf>

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