Report on "Transposed Poisson structures on quasi-filiform Lie algebras of maximum length"

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Transposed Poisson algebras are a kind of new algebraic structures by exchanging the roles of the Lie and commutative associative structures in Poisson algebras. They attracted more and more attentions. As an important topic in the study of transposed Poisson algebras, it is always important and interesting to find more examples and then give their classification. In particular, to find and classify transposed Poisson algebraic structures on some known Lie algebras become an effective method and there have been plentiful results.

In this paper, the authors studied transposed Poisson algebraic structures on a class of Lie algebras, namely, quasi-filiform Lie algebras of maximum length in dimension $n \geq 7$. Such results are of course meaningful for the study of transposed Poisson algebras themselves and hence make certain contributions to this subject. However, the whole study in this paper looks quite "standard", that is, it seems that there is not any "essential difference" from the other "similar" studies on the transposed Poisson algebraic structures on other (a lot of!) Lie algebras. So as the first suggestion, I expect that the authors should explain well why transposed Poisson algebraic structures on quasi-filiform Lie algebras of maximum length are important. It would be much better if there are some further interpretations of these transposed Poisson algebras, such as some properties.

Moreover, I have to say that the presentation of this paper is quite poor.

1. The expression of most of results in Introduction is confused and unclear. Even some are misled. I strongly suggest that the authors should express the results in a clear and complete way. For example, "Twisted Heisenberg-Virasoro, Schrödinger-Virasoro and extended Schrödinger-Virasoro algebras were studied in [32]." What does it mean? It seems quite confused that "all transposed Poisson algebras that demonstrate quasi-filiform Lie algebras of maximum length." Hence I also suggest that the authors should rewrite Introduction.

2. There are many careless typos and English errors. Some typos are unacceptable such as the authors in Ref. [31].

So I think that the paper should be for a further consideration after the authors make an essential revision.