

# Review of: "Backstepping Control Design in Conjunction with an EKF-based Sensorless Field-Oriented Control of an IPMSM"

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Potential competing interests: No potential competing interests to declare.

In this paper, a backstepping sensorless control algorithm for IPMSM is proposed. From the reviewer point of view, the paper can be improved based on the following issues:

1. The novelty of this work is rather limited since all solutions can be found in the literature.
2. The introduction is very comprehensive and contains well-known information; therefore, it could be reformulated to indicate the novelty of the paper.
3. It is not indicated how the proposed solution differs from others known from the literature.
4. The chapter on FOC may be omitted as it contains information well known from the literature.
5. The quality of Fig. 2 and 3 is poor. The scale of the waveform shown in Fig. 6 was selected incorrectly. It is impossible to assess the quality of load compensation.
6. The authors indicate that the selection of Q and R matrices is critical in the process of EKF synthesis. However, they do not provide a universal selection method.
7. The work does not include the results of experimental tests confirming the effectiveness of the proposed solutions in real conditions.