

# Design of magnetic orientation system based on GMR sensor and MCU

Lu Z., Mi D., Xu Z., Yao Z., Zhang W.

Department of Electric Engineering, Mechanical Engineering College, Shijiazhuang, Hebei,050003, China;

Department of Missile Engineering, Mechanical Engineering College, Shijiazhuang,Hebei,050003, China;

Wuhan Ordnance N.C .A Academy of PLA, Wuhan,430075, China

**Abstract:** A newly developed high accuracy, low cost magnetic orientation system is introduced in this paper. The constitution of the orientation system is presented. We get the data of geomagnetic field by the GMR sensor. Because of the complex noise mixing in the signal, we need to decrease the noise so that we can pick up purer geomagnetic signal and realize exact orientation. In the end, we briefly describe the application and the prospect of magnetic orientation system. © 2010 IEEE.

**Author Keywords:** De-noise; GMR; MCU; Orientation system

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Authors with affiliations:

1. Lu, Z., Department of Electric Engineering, Mechanical Engineering College, Shijiazhuang, Hebei,050003, China
2. Mi, D., Department of Electric Engineering, Mechanical Engineering College, Shijiazhuang, Hebei,050003, China
3. Xu, Z., Department of Electric Engineering, Mechanical Engineering College, Shijiazhuang, Hebei,050003, China
4. Yao, Z., Department of Missile Engineering, Mechanical Engineering College, Shijiazhuang,Hebei,050003, China
5. Zhang, W., Wuhan Ordnance N.C .A Academy of PLA, Wuhan,430075, China