

Characterization and Calibration of a Fluxgate Magnetometer Sensor 539

Authors : Luz Yoali Alfaro Luna, Angélica Hernández Rayas, Teodoro Córdova Fraga

Abstract : This work characterizes and calibrates a fluxgate 539 magnetometer sensor, implementing a real-time monitoring interface to measure magnetic fields with high precision. The objective is to develop an innovative prototype integrating the Fluxgate 539 sensor, a WX-DC2412 power supply, and an Arduino UNO. Methods include interface programming and data conversion to Gauss units. The results show accurate measurements after calibrating the sensor, establishing a foundation for further research in magnetobiology.

Keywords : calibration, fluxgate 539, magnetobiology, magnetic field measurement, monitoring interface, sensor characterization

Conference Title : ICMAPS 2025 : International Conference on Mathematical and Physical Sciences

Conference Location : London, United Kingdom

Conference Dates : January 23-24, 2025