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### **Reduction of Electromagnetic Interference in Three-Phase Inverters**

Amarasinghe S. A. D. N. P., Mapa M. M. U., Udeshika B. H. S. D. and  
Perera P. D. C.\*

*Department of Electrical and Information Engineering, Faculty of Engineering,  
University of Ruhuna*

*\* Corresponding Author: [chandana@eie.ruh.ac.lk](mailto:chandana@eie.ruh.ac.lk)*

Electromagnetic interference (EMI) creates from unwanted electrical signals emitting from a piece of electrical or electronic equipment. These signals interfere with the operation of other equipment as well as its own operation. Recently, due to the advancement of power semiconductor devices and power electronic techniques the three-phase inverters are widely used in many power conversion applications. The rapid change in voltages and currents due to switching in a three-phase inverter, it becomes a source of EMI. The transmission of EMI is in two forms, that is radiated and conducted. When designing three-phase inverters, a special attention is required to reduce the EMI to an acceptable level. The objective of this work is to investigate the techniques for reducing EMI in three-phase inverters and verify the effectiveness of them. A prototype voltage source inverter incorporated with space vector modulation has been built in the laboratory to verify the effectiveness of the selected techniques.

**Keywords:** electromagnetic interference, switching, three-phase inverters



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