

# **Abstract**

**Hady Maged Raghieb EL Helw**

## **Simulation of Islanding Detection Scheme Based On Fast Angle Estimation Method for Grid Connected Photovoltaic Systems Using ADALINE Technique**

This paper introduces a proposed passive islanding detection technique for grid connected photovoltaic (PV) systems. This method is based on fast estimation of voltage angle and it is compared with the conventional passive islanding detection method based on power factor angle estimation. The two methods are simulated using MATLAB/SIMULINK program. Furthermore, an evaluation of the proposed method under the system dynamics is made. The main advantages of the proposed voltage angle detection method based on ADALINE algorithm are its independency of the load power factor, its quick response as it detects islanding condition in less than 0.1 second and a stable performance under system dynamics