

# Abstract

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## **MICRO GRID STUDIES DUE TO FAULT OCCURRENCE USING IMMUNITY TECHNIQUE**

In this paper, micro grids resulted due to transient fault occurrence are studied utilizing Artificial Immunity System (AIS). Transient fault detection is analyzed, studied &#97;&#110;&#100; protected using the concept of wide area measuring, protection &#97;&#110;&#100; control (WAMPAC). WAMPAC gives the opportunity of having a wide information system &#97;&#110;&#100; sending ed local information to remote locations. The existence of Phasor Measurement Unit (PMU) overcomes the problem of real time monitoring problem &#97;&#110;&#100; it help to put a defiance strategy which is designed to answers the following inquiries: a- detecting abnormal condition, b- taking Special Protection Schemes (SPS) action, c- initiating SPS action, &#97;&#110;&#100; d- taking SPS action in certain place. The technique is based on a technology called Artificial Immunity system (AIS). It is used as a predictor to decide if the system is stable not, &#97;&#110;&#100; determines the main generating groups which can construct proper operating islands. The proposed system is applied on New England IEEE 39 – Bus system. The proposed defensive approach shows accepted results in mitigating the power system transient instabilities.