

## **TEACHER'S BELIEFS ABOUT MATHEMATICS - A FCM APPROACH**

**W. RITHA AND M. MARY MEJRULLO MERLIN**

### **Abstract**

Educational change is a complex process in which teachers holds strong beliefs about the quality and the process of innovation. An efficient knowledge-based approach, utilizing the method of Fuzzy cognitive Maps (FCMs) for analyzing Teacher's Beliefs about Mathematics is presented in this research work. FCM is a modeling approach based on exploiting knowledge and experience. The novelty of the method is based on the use of soft computing method of fuzzy cognitive maps to handle experts knowledge and on the unsupervised learning (algorithm) for FCMs to assess measurement data and update initial knowledge. This paper proposes a framework of analyzing beliefs about mathematics on four aspects viz., the nature of and Reforming Mathematics education which are the necessary of the success of constructivist-oriented mathematics educational change.

---

Key Words and Phrases: Fuzzy Cognitive Maps, Mathematics Teachers Belief, Curriculum Reforming.