1067-68-609   **Qin Wu*** (`qinwu@math.wvu.edu`), Department of Mathematics, West Virginia University, Morgantown, WV 26506, and **Eddie Fuller** and **Cun-Quan Zhang**. *Weighted Graph Model for Document Classification.*

In this paper, we propose a novel weighted graph model for document classification. The traditional methods use bag-of-word approach and they disregard any dependencies that may exist between words in the text. We introduce a new approach that utilizes not only the keyword frequency but also their location and ordering. We derived a weighted directed graph model using the distances between the keywords as the weights of arcs. We then developed a keyword-frequency-distance based algorithm. This method is applied to the detection of plagiarism papers in IEEE journals and the result is much better than traditional methods. (Received September 22, 2010)