1129-94-186 **Chi Sing Chum** and **Xiaowen Zhang*** (xiaowen.zhang@csi.cuny.edu), 2800 Victory Blvd, 1N-215, Department of Computer Science, College of Staten Island, Staten Island, NY 10314.

Bloom filters and their applications in searchable encryption schemes.

Bloom filter is a probabilistic data structure and a space-efficient tool for testing set membership with a lot of practical applications. It can be used to store indexes of documents in large databases to facilitate the search. It has been used in searchable encryption schemes in which both documents and indexes are encrypted. But false positive exists. We propose a new Bloom filter structure to cut down both false positive rate and filter size meanwhile fulfilling the user requirements. (Received March 15, 2017)