**Mona: Secure Multi-Owner Data Sharing for Dynamic Groups in the Cloud**

**ABSTRACT:**

With the character of low maintenance, cloud computing provides an economical and efficient solution for sharing group resource among cloud users. Unfortunately, sharing data in a multi-owner manner while preserving data and identity privacy from an untrusted cloud is still a challenging issue, due to the frequent change of the membership. In this paper, we propose a secure multi-owner data sharing scheme, named Mona, for dynamic groups in the cloud. By leveraging group signature and dynamic broadcast encryption techniques, any cloud user can anonymously share data with others. Meanwhile, the storage overhead and encryption computation cost of our scheme are independent with the number of revoked users. In addition, we analyze the security of our scheme with rigorous proofs, and demonstrate the efficiency of our scheme in experiments.