

# TWC: Small: Oblivious Cloud Storage Systems, from Theory to Practice

## — Simpler, More Efficient, More Robust

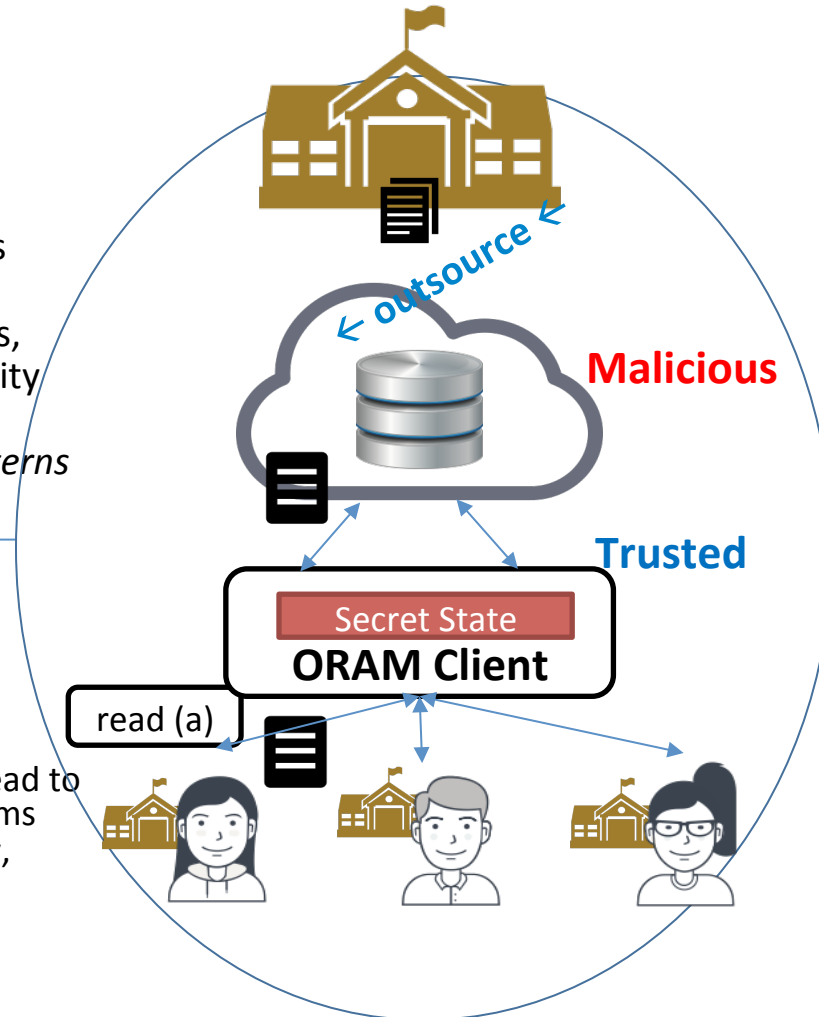


### Challenge:

- This project addresses adversarial threats to Cloud Storage services, specifically with security risks arising from the leakage of *access patterns*

### Solution:

- We design new ORAM schemes that support concurrent accesses.
- Such ORAM schemes lead to oblivious storage systems with wider applicability, better efficiency and robustness.



### Scientific Impact:

- Hiding access pattern is an important step towards building truly private cloud storage systems
- Understanding how to hide access pattern is necessary for understanding the security and privacy of any activities that involve dynamic data access.

### Broader Impact:

- Secure and efficient cloud storage systems benefit the society immediately, given their popularity.
- We open source our oblivious storage systems.
- Dissemination of knowledge of ORAM and oblivious storage systems through classes, workshops and conferences.