**Problem**

- Weakness of Trust Evaluation
  - Social Network: How much do you believe him/her?
  - Infrastructure Network: How much does a node believe its neighbors?
  - Sometimes honest, but sometimes dishonest
  - Difficult to predict next behavior

**Solution**

- Observation of previous behaviors
  - How many times it has met your expectation in previous behaviors
  - How many times it has disappointed you in previous behaviors

- Dynamic Sliding Window (DSW)
  - Fixed Window Observes honest behaviors in a specific number of previous behaviors
  - Dynamic Window Observes dishonest behaviors in a dynamic number of previous behaviors
  - When the trust is low, remember more previous behaviors
  - Allowing trust redemption
  - Many consecutive honest behaviors will fill the fixed window and the dynamic window with honest behaviors

**Dynamic Sliding Window Size**

- Depends on current trust

**Dynamic Sliding Window**

- Low Trust doubt an Attack
  - Observe more previous behaviors

**Fixed Sliding Window**

- Observes previous behaviors
  - Case of Fixed Window

**Result and Impact**

- Trust Value over Time with On-Off Attack
  - 3 Honest behaviors and 1 False behavior
  - Threshold : 0.4

- CONFIDANT will never achieve trust of the node below the threshold.
- DSW allows for detection of sophisticated On-Off attack on many kinds of networks

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