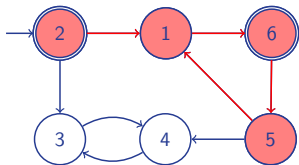


Model Checking by Accepting Cycles

LTL Model Checking

- ▶ A **buggy run** in a system can be viewed as an **infinite word**
- ▶ Absence of bugs: emptiness of some Büchi automaton
- ▶ Graph problem: **find a reachable accepting state on a cycle**
- ▶ Basic algorithm: Nested Depth First Search (NDFS)



This talk

- ▶ We propose **parallel NDFS**, scalable
- ▶ So far, thought to be impossible
- ▶ Focus: algorithm (experiments)