

#### Pointer Races

Observation: In every ABA participates at least one dangling pointer. operations involving dangling pointers operations that observe reclamation

Pointer races

Pointer race freedom \(\iff\) no ABAs + memory safety





#### Pointer Races

Observation:

# In every ABA participates at least one dangling pointer.

- Pointer races
  - → operations involving dangling pointers
  - → operations that observe reclamation
- Pointer race freedom 
  — no ABAs + memory safety

#### Pointer Race Check

### Type system:

→ to establish:

## Data structure + SMR spec - Pointer Race Freedom

- → that is parametrized by the SMR spec
- → externalizes shape analysis to a GC tool