

Abstract Conflict-Free Checker

For every pair of **abstract** states σ_i, σ_k :
if st_i in σ_i and st_k in σ_k **may happen** in parallel
A = combine σ_i, σ_k and $(tid_i \neq tid_k)$
if $Aloc(st_i)$ and $Aloc(st_k)$ **may equal** in A
exit (“Program may be **non-deterministic**”)

temporal check

exit (“Program is **deterministic**”)

spatial check

- Combine means meet in the domain
- Note: thread constraint $(tid_i \neq tid_k)$ not expressible in polyhedra)