

5. DS code + SMR code

6. reclamation

VerificationChallenges

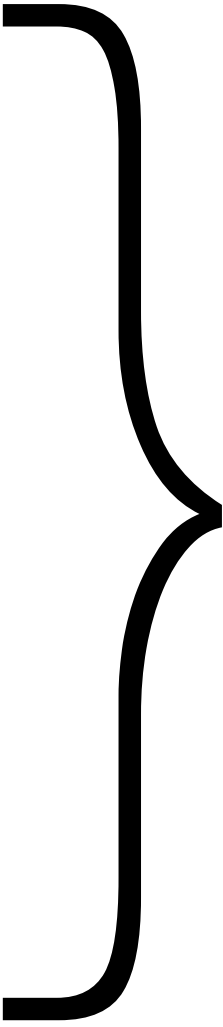
1. unbounded shared heap
2. unbounded data domain
3. unbounded number of threads
4. fine-grained concurrency

GC-techniques do **not work (well)!**

In particular: ownership reasoning

Automated Verification for GC

- Vafeiadis, CAV'10 + VMCAI'10
- Abdulla et al., TACAS'13
- Zhu et al., CAV'15
- Abdulla et al., SAS'16 + ESOP'18



GO

GO

(non-blocking data structure)²



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Our Approach



Data structure + **SMR impl** \models **Property**