

Types of Language Safety

- Memory:
 - Type
 - Bounds
 - Lifetime
 - Initialisation

• Arithmetic

• Therefore

• Definitions of safety



Types of Language Safety

- Memory:
 - Type
 - Bounds
 - Lifetime
 - Initialisation
- Arithmetic
- Thread
- Definition safety

Reference semantics | Safety

Definitions

A safe operation cannot cause undefined behavior.
A safe language has only safe operations.

Technical debt

Spooky action

Incidental algorithms

Visibly broken invariants

Race conditions

Surprise mutation

Unspecifiable mutation



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Independence, and the
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