

Formalisation of Affine Arithmetic in Coq

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Motivation

- Computers represent continuous real numbers with finite memory
- Finite representation causes rounding errors
- We measure the errors with static analysis



Affine Arithmetic

- Arithmetic on first-order polynomials
- Tracks the rounding error in analysis
- Formalisation provides correctness guarantees

**Thank you
for attention!**

More details are on the poster