



CARL library: basic arithmetic datatypes and computations
[Sapientia'18, NFM'11, CAI'11]

Basic modules

Preprocessing/simplifying modules

SAT solver

CNF converter

Non-algebraic decision procedures

Bit-blasting

Equalities and uninterpreted functions

Bit-vectors

Interval constraint propagation

Pseudo-Boolean formulas

Algebraic decision procedures

Gauß+Fourier-Motzkin

Simplex [ISSAC'21]

Linearization

Gröbner bases [CAI'13]

MCSAT (FM,VS,CAD) [2xSC²'19]

Subtropical satisfiability

Virtual substitution [SC²'17, FCT'11; PhD Corzilius]

Cylindrical algebraic decomposition [JLAMP'21, SYNASC'21, SC²'21, CADE-24, JSC'20, SC²'20, SC²'17;

PhDs Loup, Kremer, Nalbach]

Generalized branch-and-bound [CASC'16]

Cube tests