

CoCoALib

	2025-3				2025-4				2025-5				2025-6				2025-7				2025-8							
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		
CoCoA																												
CoCoALib																												
CoCoALib - CoCoALib-1.0																												
Sort out RingElem, RefRingElem, (...)																												
List of all functions in CoCoALib																												
printing polynomials																												
keywords in documentation																												
Cleanup header for ring classes (...)																												
Error Codes																												
automatic creation of all function (...)																												
Introduce PartialHom																												
Ideals of polynomials																												
LT over QQ: surprisingly slow																												
IdealOfPoints with generic coeffs																												
New datastructures directory																												
Convert DUPFF code to C++																												
Better GCD																												
Design problem in ideals																												
Convenience ring ctors and homs																												
Buchberger-Moeller (parent task)																												
Buchberger-Moeller: fast modular (...)																												
Buchberger-Moeller: impl via (...)																												
Buchberger-Moeller: input conversions																												
Makefile dependencies																												
RingOf rather than owner? (and (...))																												
Iterated CanonicalHom																												
GCD normalization (e.g. monic)																												
Convert old "task table" into redmine																												

IsStdGraded: add for PPOrdering, (...)
PPWithMask needs checking
Example for change of coordinates (...)
HilbertBasis from Normaliz: full-lattice (...)
Generator for random ring elements
Documentation for QBGenerator needs (...)
No test for QBGenerator
Approx QIR
Transcribe C4 code for GCD in QQ[x]
Multivariate lifting
Move the various <matrix>::mySetEntry (...)
Forward declarations
Eliminate class RefPPMonoidElem?
Store unique copy of FF(p) in GlobalManager
Global setting: to use IsProbPrime (...)
PrimeField -- new fn?
Modules design: brainstorming
Compilation on M\$Windows: Visual (...)
FreeModule: unique copy?
Add doc for ApproxPts2
submodule constructor different (...)
C++ nasty surprises
Why is DMPI slower than DMPClean?
Module homs
Missing documentation and tests (...)
CoCoAServer: what future, what (...)
Resolution/morse: integrate Mario (...)
add resolution data type
implement algorithm(s) for resolutions
PPMonoidElemAlias: redesign PPMonoidElem (...)
add myHilbertSeries member field (...)
add myJBMill member field to ideal
NewFreeModule of dimension 0
Minimal syzygies (optimized implementation)

Allow user to give a name to a (...)
Error names and error messages (...)
Semantics of IsPrintedWithMinus
Improve UPoly eval at BigRat for (...)
MemPool: order free blocks?
Polynomial multiplication (product (...)
Port RealRoots to C++
Eigenvectors
Which sets of generators in an (...)
LinearSimplify: port to CoCoALib
Unique copies of rings -- smart (...)
Clang: automatic bug finding
Documentation: write doc for RingDenseUPolyClean
Quick/correct flag for bool3 fns
Fn to "flatten" multiple polynomial (...)
Make squarefreefactor work in multiple (...)
FloatStr uses too much memory
Functions to clean up a factorization
elim using RingTwinFloat triggers (...)
add myResolution member field (...)
Reconsider overloaded virtual mem (...)
Subrings
Temporary file for experimentation
FloatApprox for TwinFloat values?
Documentation for ReductionCog
Allow use of RingElem instead of (...)
Split SparsePolyRing.H into two (...)
Investigate using cmake for configuration
New function for printing with (...)
Implement gin (generic initial (...)
Problem with template instantiation (...)
configure: check all libraries (...)
Redesign CRTMill
Wikipedia

Gaussian integer and rationals (...)
Complex twin-floats
Shadow CoCoA namespace to help (...)
What is test-Dynamic1.C
Buchberger-Moeller: add option (...)
Unique copies of free modules?
Optimized algorithms for implicitization (...)
Laurent polynomials
Integrate Janet/Pommaret basis (...)
factor: multivariate + finite characteristic
Matrix determinant over multivariate (...)
Credits to CoCoALib contributors
Accumulator (like a geobucket)
MemPool: make it easier to get (...)
PPMonoid: add fn to check for overflow (...)
Use DivMask inside QBGenerator
myAddMul in poly rings
PolyAlgebraHom (PolyRingHom) evaluate (...)
Fault tolerant rational reconstruction: (...)
Remove cruft from test files
Add more operations between modules (...)
Example database: Slow ideal equality (...)
Noncommutative algebra "of solvable (...)
Betti numbers, betti diagram
Extend homomorphism to polynomial (...)
Addition of sparse (multivariate) (...)
View PP exponent vector (and order (...)
Problem with GBasis in tower of (...)
Investigate using Boost.build instead (...)
configure: have option to say to (...)
GlobalManager: initialization compatible (...)
ExternalLib-CDD: (needed by GFan)
CoCoALib cone
PPMonoid with 1 extra "exponent"?

CRTMill::myAddInfo accept modulus (...)
Makefile: problem not seeing when (...)
GroebnerFan/ExternalLib-GFan: improve (...)
threadsafety: Scott Meyers's advice (...)
finite fields: global register (...)
Remove refcounts from RingElem?
No doc for DistrMPolyInIFpPP
Clean code for DistrMPolyClean
SmallFpImpl: make it faster
vector of "indets" in each PPMonoid?
PPOrdering: use it to compute WDeg?
Alg Extn by non-zero dim ideal
FastCmp for degree -- useful?
PPMonoid pseudo-ctor without explicit (...)
GenRepr in CoCoALib?
F5 with 3 args?
Sparse matrices
MachineInt: function for checking (...)
Generalize grading matrix
UIBC: need include file in RingWeyl.C
Make Mario's new code threadsafe
factor is very slow on some simple (...)
Differential algebra
SparsePolyIter: make more compatible (...)
GINV: alex basis
NewPolyRing: tidy up the many different (...)
PPMonoidSparse: comparisons are (...)
IsIrred: correct design?
SmallFpImpl: different repr for (...)
bool3: add some logical operations?
factor: too slow on largish multivariate (...)
Impl faster multiplication for (...)
DistrMPolyInIPP::myPushFront and (...)
IsIrred3: fast 3-way irred test (...)

mysEqual, myCmp: direct comparisons (...)
SmallFpDouble: which impl of InvMod (...)
External libraries: keep copy of (...)
Read input from SymbolicData database
New function: quorem for univariate (...)
Hilbert Driven GBasis
Design GBMill
Fn to read symbol range (SymbolRange)
Documentation: check layout of (...)
Printing TwinFloat as (rational) (...)
LinDepMill: Mill for linear dependencies
Slow NF example
Weights in ElimMat?
ex-PolyIterator
QIR/RealRootRefine: improve behaviour (...)
GFan: require version newer than (...)
GCD: add special case if args are (...)
Poly ring homomorphism to change (...)
C++11: Mario's Hilbert scheme code
GlobalManager: name of object in (...)
RowMat, ColMat with arg an empty (...)
New "LF" function which is based (...)
JanetBasis gives error indet index (...)
GroebnerFan: slow examples
Printing ring for ideals (or just (...)
GroebnerFan: ERROR: Matrix must (...)
Slug: MakeTermOrd (rk calls in (...)
invalid pointer in "free"
WEB SITE: HTML is not clean!
Ctors for exceptions/errors
Pseudo-zero-dim ideals
Better printing of negative coeffs
SqFreeFactor: should it work over (...)
Organize better the documentation (...)

<p> mySquare and myPowerSmallExp New fn: transform ideal with ring (...) Printing for RingElem Clean up revised RatReconstructByContFrac (...) Upper bound for value of poly in (...) Matrix rank is slow (over QQ) Non-standard DegRevLex (NonStdDegRevLex, (...) New function: Threadsafe RandomLinearForm (...) exgcd; solve Bezout equation Make a poly ring QQ[x,y,z] also (...) Ideal equality Ideal Ops: sort-cuts for trivial (...) Port old "clever" code for matrix (...) Improve RealRoots: compute sqfr (...) Improve RootBound All PPs of given wdeg gcd: low degree but big coeffs (...) RandomUnimodularMat is slow with (...) French students' example with GFan Create two separate radical fns (...) DynamicBitset::lamAll1s Unified Gaussian reduction impl Benchmarks? C++17: notes about updating slimgb: Brickenstein, singular Clean out OLD CODE? </p>	
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