CoCoALib

	2019-6				2019-7				2019-8				2019-9				2019-10				2019-11			
	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
CoCoA																										
CoCoALib	**CoCoALib**																								
MinPolyQuot not documented																									
New function IsInSymbols																									
CoCoALib releases on redmine																									
CoCoALib - CoCoALib-0.99850																									
Release CoCoALib 0.99850																									
CoCoALib - CoCoALib-0.99880																									
Matrix equation solving; linear (...)																									
Improve threadsafety																									
Matrix equation solving: LinKer																									
Printing polynomials - spaces between (...)																									
Play with GIT																									
Error: ERR::NotNonZero instead (...)																									
Elim(vector<long>) as PPOrderingCtor																									
Syzygy for modules: non-homogeneous (...)																									
Error codes: use same code for (...)																									
LongRange: in which file should (...)																									
Impl small non-prime finite fields (...)																									
DistrMPolyClean does not use MemPool (...)																									
MatrixOrderingMod32749Impl: test (...)																									
Update normaliz interface?																									
Better errors: give supplementary (...)																									
SLUG: elimination																									
Test whether a symbol is in a ring																									
DivMask: extend interface?																									
Implement "elim" in CoCoALib																									
Cleanup MinPoly code																									

implicit, ImplicitHypersurface: (...)

Redesign ideals

LinSolve for matrices over FFp

strict enum types: C++11 extension

New function: cardinality of finite (...)

FlagManager for bool/bool3 flags

MachineInt or long for args which (...)

Separate configure scripts for (...)

MachineInt: change semantics?

IsRadical for ideal?

New function: multiplicity and (...)

Improve saturate

Slug: Polynomial ring contructor (...)

Revive code for SelfSaturating (...)

SLUG: factorization of x^9999

Separate install script for CoCoALib?

Canonical homomorphism for (some) (...)

interval arithmetic

Clean up SparsePolyOps-MonomialIdeals

Naming convention mistakes

IsZeroDet: new fn

New function: SubmoduleOfGBasis

Frobby version number

factor SEGV -- too large characteristic

C++14: Use type auto where appropriate

New function: MinPoly for pseudo-zero-dimensional (...)

Ideals with trivial GBasis

Tidy CoCoALib test directory

Determinant & Inverse of matrix (...)

Factor of multivariate sometimes (...)

exgcd over integers (ZZ)

PrimaryDecomposition: a interesting/pathological (...)

C++14: use the new for loop syntax (...)

ideal ctor where given gens are (...)

TmpLDP uses srand and time	
RingID counter increased inside (...)	
Type ideal for ZZ[x[1..n]]	
GlobalManager: create SignalWatcher (...)	
Oddly slow GBasis computation (slow (...)	
Make class RingElemVector?	
RadicalZeroDim with extra parameter (...)	
Remove flag IhaveGBasisValue?	
DenseMatrix: use template impl (...)	
HNF: Hermite Normal Form	
Start using C++14 "move" capability	
What is the difference between (...)	
mul(MAT,MAT,MAT)	
Simple syntax for making a quotient (...)	
Doc for normaliz fns	
Documentation for SparsePolyOps?	
Better test for univariate-ness (...)	
Unexpectedly slow example with (...)	
gfan does not "deinitialize"	
Default ctor for rings	
Doc for module term orderings	
matrix.H and MatrixView.H	
ker_H needs care	
Use noexcept	
DynamicBitset missing arg checks	
cmp for machine integers	
Detect updated versions of external (...)	
Clean time.C	
Documentation for PrimaryDecomposition	
Unused variables, params, data (...)	
NR for polys with coeffs in PID	
interreduce: make monic if over (...)	
rref slower than expected (maybe) (...)	
Improve CertifyNotPower	

txt2tags: problem with filenames (...)

geobucket: documentation

Compilation on Windows: problems (...)

GBasis over ZZ: port to CoCoALib

Generalize prim

Review File subtree hierarchy

Build also dynamic/shared library (...)

Review examples

release-source script: use shell (...)

Unsigned long for indexes (& sizes?)

IsIrred in ZZ[x,y]

RingBase::mySwap needed?

Shell scripts: Shebang line, etc

Threadsafety, multithreading: optional (...)

Symlink directory for external (...)

ProgressReporter: prepare for new (...)

Development releases?

ProductBigInt (also ProductBigRat???)

DivAlg in CoCoALib

Cruft in ExtLibs-Normaliz.C

ApplySPRCodomain: relax power/exponent (...)

FactorINT: funny order

Clean TmpGOperations, and remove (...)

Homogenization of an ideal with (...)

Suggestion about Graded polynomial (...)

MinGens gives non minimal gens (...)

MinGens could be faster

Implement Truncated GBases for (...)

Implement GBMill (aka Groebner (...)

July 2023

IdealOfPoints: allow duplicate (...)

deg(f) is slow if f is long

gcd(f,f) is slow

Verbosity messages: avoid printing (...)

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" muliple 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 DistrMPolyInlFpPP

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 (...)

DistrMPolyInlPP::myPushFront and (...)

IsIrred3: fast 3-way irred test (...)

myIsEqual, 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 (...)

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 (...)