

	2023-12				2024-1				2024-2				2024-3				2024-4				2024-5			
	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>CoCoA</b> Web site: mailto link for bugs, suggestions (...) Look of first Redmine page linked from CoCoA (...) <b>ApCoCoA</b> New ApCoCoA UI Interactive window and history mechanism Input tabbed windows associated to files ApCoCoA projects ApCoCoA: separate window for manual How to connect GUI to cocoa5 executable? <b>CoCoA-5</b> intersection Hermite normal form RingID: remove this function? Profiling with clang CanonicalHom Manual of functions vs ManExamples CoCoA-5 releases on redmine CoCoA-5 - CoCoA-5.4.2 Automatic mapping between (some) (...) theValue makes copy Elim ordering and matrix ordering (...) C++11 compatibility questions OpenOFile Functions throwing error even though (...) Janet Bases: port function into (...) CoCoA-5 Projects for students (e.g. (...) Installation instructions (on website)	<b>CoCoA-5</b>																							

port SmithNormalForm (CoCoA-4)package (...)  
EmacsUI Source/SourceRegion produce (...)  
Emacs UI; remove cruft  
Eliminate package BinRepr  
Review utility of package IO  
CoCoAManual: improve part on input/output  
Gaussian Elimination  
Prototype package for Linear Commutative (...)  
Speed of some Normaliz calls (NmzComputation)  
NotBuiltin.cpkg5: indent for MODULE  
Referring to indets with multiple (...)  
Implicit: make easier to use with (...)  
Add TUTORIALs to online manual  
Clean up CoCoALibSupplement  
Function "ideal" evaluates the (...)  
"universal denominator" (related (...)  
Microsoft (Windows 10, maybe other (...)  
Separators for elements of a list  
LinKerBasis is user-unfriendly  
CoCoAManual: AffHilbertFn accepts (...)  
Eigenvectors: inconsistent return (...)  
IsInRadical: for monomial ideals  
Use Flatpak and/or Snap on Linux?  
RealRoots: rational roots (but (...)  
MinPoly for matrix: fix in cocoalib (...)  
SLUG: filling an array  
append is slow  
ker: for PolyAlgHom from  $QQ[x,y,z]$  (...)  
GDPR: website, mailing list  
MSatLinSolve: req minor improvements  
Online manual entry for RingElem (...)  
ShapeLemma: no manual entry  
Split BuiltinFunctions-CoCoALib.C (...)  
Interpreter: fns which accept INT (...)

Vim Plugin for CoCoA  
Automatic conversion from RINGELEM (...)  
CoCoA-5 manual: incorrect empty (...)  
CoCoA manual: entry for operators, (...)  
Package Edgeldeal not documented  
New function: find ?  
GFan also for Microsoft?  
GUI with Qt5  
thmproving package  
Manual entry for NewPolyRing  
MakeTerm: implement in C++  
Stack overflow reading long list (...)  
HTML manual: search using keywords?  
Emacs UI: cocoa5-shell-check-process (...)  
Surprising parser error: INT+DOT+IDENTIFIER  
Automatic way to produce statically (...)  
Use symbolic links for release (...)  
Filenames in release CoCoAManual/html (...)  
IntersectList or IntersectionList  
Get indexed indets from a polyring  
Website: link to JSAG?  
HilbertSeries: make into proper (...)  
Lin alg with polys  
Documentation for making ring with (...)  
Emacs UI: indentation in a package  
SystemCommand in Microsoft version  
More flexible ring creation syntax (...)  
Initial ring  
Interpreter fn Value::from can (...)  
RingElem and IndetSymbols not compatible  
Install CoCoA-5 on MacOS-10.15+  
New functions: argmin, argmax  
foreach with ref to list entry?  
CoCoA coding conventions for parser/interpreter?

**CoeffOfTerm: in CoCoALibSupplement**  
**Man page for UniversalGBasis**  
**Add sagbi package**  
**Emacs: avoid making buffer visible (...)**  
**subst: not checking args properly**  
**DivAlg slower than NR**  
**elim for modules**  
**Geometrical theorem proving package**  
**RMap and image: obsolescent?**  
**ApproxSolveTF**  
**Slow sqfr: rad(f)**  
**New fn ElapsedTimeFrom?**  
**SqFreeFactor crashes over non-perfect (...)**  
**Doc for the various Builtin files**  
**EmacsUI: annoying colours**  
**NewMat: should be obsolescent?**  
**Use filesystem::path instead of (...)**  
**Missing/Incomplete manual entries**  
**MinSubsetOfGens sometimes very (...)**  
**RealRoots: crashes after interrupting**  
**Allow user to choose whether to (...)**  
**ApproxSolve and RationalSolve take (...)**  
**Potentially confusing prompt: waiting (...)**  
**Jordan Normal Form?**  
**GCDList not documented**  
**Refactor C++ impl in OnlineHelp**  
**BuiltinFunctions-GFan includes (...)**  
**Should Starting be case-insensitive?**  
**Manual entry for random (see also)**  
**Release CoCoA 5.4.2**  
**Preliminary packages**  
**Linux: just 1 executable, should (...)**  
**Documentation/Manual for HilbertFn**  
**ManExamples target: need to reset (...)**

**NewPolyRing with indices -- better (...)**  
**Continued fraction: arg type RAT (...)**  
**GenReprCompute: SERIOUS ERROR**  
**Do not use random inside tests!!**  
**Makefile problem: needlessly relinks (...)**  
**CoCoA-5 - CoCoA-5.4.4**  
**Approximate BuchbergerMoeller: (...)**  
**CoCoAManual: General part of the (...)**  
**Emacs UI: keywords in multiline (...)**  
**Emacs UI: send-file (C-c C-f) should (...)**  
**Manual: remove old stuff about (...)**  
**Revive old CoCoA4 package called (...)**  
**Emacs UI: slow with long lines**  
**Poor memory management?**  
**Disable readline if input is redirected**  
**SLUG: RationalSolve slow and stupid**  
**Add CoCoA5 function NmzHilbertBasisKer**  
**BuiltinOneLiners -- less precise (...)**  
**CantStop playing CantStop**  
**Unexpected or unhelpful error using (...)**  
**Refine Poset impl & doc**  
**Verbosity level in CoCoA5**  
**EvalPolyAtMat**  
**Make it easy to run the tests in (...)**  
**Better error mesg for 1.2.3.4?**  
**CoCoA web site "analytics"**  
**Difference between seealso and (...)**  
**Add CoCoA-5 syntax: syz(<F,> list (...)**  
**New function ModuleElems? (like (...)**  
**CoCoA-5 - CoCoA-5.?.?**  
**(short) manual for emacs interface**  
**GUI: open file "with C5"**  
**Error/warning if fn-proc is neither (...)**  
**sort is too slow**

BringIn should map only the indets (...)  
rethrow in Try .. UponError .. (...)  
I:f (IDEAL and RINGELEM) -- (...)  
Qt GUI: Make better distinction (...)  
GUI: Add an edit menu to the top (...)  
C-c C-p in emacs goes to wrong (...)  
Negate LIST, MAT,...  
Template for unaryMinus?  
InputForm for output readable as (...)  
Appunti per (eventuale) tesi triennale (...)  
More curiously slow code -- squaring (...)  
Add LucasTest to cocoa5?  
TeXmacs interface  
--fullCoCoALibError prints too (...)  
Which functions are defined in (...)  
Documentation for Parser/Interpreter  
GUI: message "running.." (close (...)  
system variables  
Colon operator, 2nd arg  
allow single function call in "use" (...)  
Hilbert: Redesign hp.cpkg5 and (...)  
port optimized resolutions to CoCoA-5  
intersection (all lower case)  
Allow user to give a name to a (...)  
Bug or feature for protected name? (...)  
Emacs UI: Name of emacs init file  
Emacs UI: very slow when input (...)  
Assignment to protected variable  
Port function NewSymbol/NewSymbols (...)  
Automatic conversion from INT (or (...)  
interpolate  
Emacs UI: indentation is wrong (...)  
Eliminate keyword Alias?  
gcd too slow for large degree univariate (...)

Unique copies of rings in CoCoA-5  
Warning about variable hiding another (...)  
ScalarProduct accepts MatrixRow?  
Cleaning: Cruft in CoCoA-5 packages  
New C5 fn for adjusting the warning (...)  
Toric: resurrect function TestSet (...)  
New operators: += -= \*= /=  
Resurrect MakeCheck()  
GUI: better name for the graphical (...)  
efficient subalgebras  
Interpreter.C: remove calls to (...)  
GUI: gutting provokes Imminent (...)  
Add functions based on MayerVietorisTree  
Output Betti numbers  
Windows-GUI: compilation with MinGW  
New operations? ScalarProduct(MODULELEM,LIST), (...)  
Unique copies of free modules?  
Emacs UI: use "warning colour" (...)  
MakeSet can be very slow  
eval: in which ring should the (...)  
use command, ring syntax, RingOf  
Ring ID: separate index values (...)  
Emacs UI: endfunc does not indent (...)  
Emacs UI: C-c C-\ copies line cursor (...)  
NUL char in input terminates CoCoA-5  
Emacs UI: swapped splitting  
Credits to CoCoA-5 contributors  
Add more operations for modules  
External Libs: missing dependencies (...)  
External libs: specifying I/O streams (...)  
Primary Decomposition in CoCoA-5  
Elementary transcendental functions (...)  
IsDefined does not follow reference (...)  
New function: LeastDegPolynomial (...)

CoCoA type "cone"  
Emacs UI: send-region and send-line (...)  
floor, ceil, and NearestInt for (...)  
append has bad complexity  
Interpreter is too slow reading (...)  
subst: allowed also for indets (...)  
LOGAR: make CoCoA-5 easier to use  
Escaped newline to allow a long (...)  
When is a semicolon needed to end (...)  
use command: unhelpful error if (...)  
CallOnGroebnerFanIdeals: better (...)  
Empty matrix: warning, error, or (...)  
ciao, exit, quit can be used not (...)  
Improve coverage of CoCoA-5 tests  
Managing credits  
New function: IdealAndSeparatorsOfPoints  
New function: MakeMultiset?  
CoeffSize: function to measure (...)  
GroebnerFanIdeals: order matrices (...)  
init file obligatory?  
New function: RingQQi()? extension (...)  
New syntax for creating poly rings?  
External dependencies for building  
Example of slow LEX GBasis computation  
ScalarProduct: exact defn and manual (...)  
Improve error message when args (...)  
CoCoAManual: improved search, or (...)  
PolyRing constructor: NewOrdvArith (...)  
EmacsUI: interrupt copies line (...)  
GUI: bugs and slugs  
CoCoA Online: install (using InteractiveShell)  
Port RowMat, ColMat, MatByRows,... (...)  
Generic Timeout for CoCoA-5?  
Latex: matrix



<p> <b>New function: gin for algebraic (...)</b>  <b>CoCoA should read unicode</b>  <b>Allow Interruption of printing?</b>  <b>incr and decr are slow</b>  <b>New Fn: make a homogeneous list (...)</b>  <b>LinearSimplify: sometimes not optimal</b>  <b>Matrixrow-functions</b>  <b>Create a directory</b>  <b>Emacs UI: open manual pages in (...)</b>  <b>Clean up package points.cpkg</b>  <b>User forum?</b>  <b>Windows: Qt-Gui does not link correctly</b>  <b>Daft slug</b>  <b>CoCoALib</b>  <b>CoCoALib - CoCoALib-0.99880</b>  <b>Matrix equation solving; linear (...)</b>  <b>Improve threadsafety</b>  <b>Matrix equation solving: LinKer</b>  <b>Printing polynomials - spaces between (...)</b>  <b>Play with GIT</b>  <b>Error: ERR::NotNonZero instead (...)</b>  <b>Elim(vector&lt;long&gt;) as PPOrderingCtor</b>  <b>Syzygy for modules: non-homogeneous (...)</b>  <b>Error codes: use same code for (...)</b>  <b>LongRange: in which file should (...)</b>  <b>Impl small non-prime finite fields (...)</b>  <b>DistrMPolyClean does not use MemPool (...)</b>  <b>MatrixOrderingMod32749Impl: test (...)</b>  <b>Update normaliz interface?</b>  <b>Better errors: give supplementary (...)</b>  <b>SLUG: elimination</b>  <b>Test whether a symbol is in a ring</b>  <b>DivMask: extend interface?</b>  <b>Implement "elim" in CoCoALib</b> </p>	<p> <b>CoCoALib</b> </p>
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<p> <b>Cleanup MinPoly code</b>  <b>implicit, ImplicitHypersurface: (...)</b>  <b>Redesign ideals</b>  <b>LinSolve for matrices over FFp</b>  <b>strict enum types: C++11 extension</b>  <b>New function: cardinality of finite (...)</b>  <b>FlagManager for bool/bool3 flags</b>  <b>MachineInt or long for args which (...)</b>  <b>Separate configure scripts for (...)</b>  <b>MachineInt: change semantics?</b>  <b>IsRadical for ideal?</b>  <b>New function: multiplicity and (...)</b>  <b>Improve saturate</b>  <b>Slug: Polynomial ring constructor (...)</b>  <b>CoCoALib - CoCoALib-0.99900</b>  <b>Redmine Administration</b>  <b>Design new errors using inheritance</b>  <b>Which names to use? Intersection/saturation (...)</b>  <b>New function: IdealWithIncrementalGBasis(l, (...)</b>  <b>Documentation: translation table</b>  <b>CoCoALib - CoCoALib-1.0</b>  <b>Sort out RingElem, RefRingElem, (...)</b>  <b>List of all functions in CoCoALib</b>  <b>printing polynomials</b>  <b>keywords in documentation</b>  <b>Cleanup header for ring classes (...)</b>  <b>Error Codes</b>  <b>automatic creation of all function (...)</b>  <b>Introduce PartialHom</b>  <b>Ideals of polynomials</b>  <b>LT over QQ: surprisingly slow</b>  <b>IdealOfPoints with generic coeffs</b>  <b>New datastructures directory</b>  <b>Convert DUPFF code to C++</b> </p>	
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**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 (...)  
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 (...)