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	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
CoCoA Web site: mailto link for bugs, suggestions (...) Look of first Redmine page linked from CoCoA (...) ApCoCoA 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? CoCoA-5 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)	CoCoA-5																											

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

New function: gin for algebraic (...)
CoCoA should read unicode
Allow Interruption of printing?
incr and decr are slow
New Fn: make a homogeneous list (...)
LinearSimplify: sometimes not optimal
Matrixrow-functions
Create a directory
Emacs UI: open manual pages in (...)
Clean up package points.cpkg
User forum?
Windows: Qt-Gui does not link correctly
Daft slug

CoCoALib

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

CoCoALib

<p> 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 constructor (...) CoCoALib - CoCoALib-0.99900 Redmine Administration Design new errors using inheritance Which names to use? Intersection/saturation (...) New function: IdealWithIncrementalGBasis(l, (...) Documentation: translation table 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++ </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 (...)