

CoCoALib

		2024-4				2024-5				2024-6				2024-7				2024-8				2024-9							
		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39		
CoCoA																													
CoCoALib		CoCoALib																											
Documentation review by Caleo																													
test-Normaliz1.C																													
C++ integer shift operators																													
CoCoALib - CoCoALib-0.99550 spring 2017		CoCoALib-0.99550 spring 2017 100%																											
libcocoa sometimes built without (...)		Closed 100%																											
XelMat, StdDegRevLexMat, ... should (...)		Closed 100%																											
Release: CoCoALib-0.99550 (together (...)		Closed 100%																											
Use symbolic links for external (...)		Closed 100%																											
Review design of ConstMatrixView		Closed 100%																											
In test files: when is assert.H (...)		Closed 100%																											
test-OrderedRing: activate or eliminate?		Closed 100%																											
Rename file PPMonoidEvZZ		Closed 100%																											
RingDistrMPolyInIFpPPIImpl::mySummandPool (...)		Closed 100%																											
New type for "constant" matrices?		Closed 100%																											
DiagMat: mySetEntry checks the (...)		Rejected 100%																											
PPOrdering: matrix ordering, what (...)		Closed 100%																											
GlobalManager: Imminent disaster (...)		Closed 100%																											
Should ElimMat return a ConstMatrix		Closed 100%																											
NewPositiveMat also for matrices (...)		Closed 100%																											
NearestInt can needlessly throw (...)		Closed 100%																											
MantissaAndExponent2 for twin-float		Closed 100%																											
floor for TwinFloat can produce (...)		Closed 100%																											
Twin-float: comparisons and equality (...)		Closed 100%																											
Check impl of RingTwinFloatImpl::myIsRational		Closed 100%																											
Assignment of rings (esp. derived (...)		Closed 100%																											
Compilation Error: C++11 and old (...)		Closed 100%																											

configure script: give summary (...)	Closed 100%
NumDigits: sometimes gives wrong (...)	Closed 100%
IsMaximal, IsPrimary for IDEAL (...)	Closed 100%
New function: FrobeniusMat	Closed 100%
BigRat: read from a string in "decimal" (...)	Closed 100%
GBasis verbose mode	Closed 100%
ReadExpr: cannot handle exponent (...)	Closed 100%
ReadExpr: misreads $2/3^4$	Closed 100%
New function: IsSqFree	Closed 100%
new file for old functions: obsolescent.C	Closed 100%
RandomUnimodularMat - random unimodular (...)	Closed 100%
determinant: fails for 0x0 matrix (...)	Closed 100%
New function: HasGBasis	Closed 100%
New function: ReducedGBasis	Closed 100%
CheckForInterrupt does not work (...)	Closed 100%
Which ostream for verbose/obsolescent (...)	Closed 100%
In scripts: use portable test for (...)	Closed 100%
square function	Closed 100%
Bruns SEGV: SparsePolyIter/DMPI (...)	Closed 100%
ReducedGBasis for RingWeyl (and (...)	Closed 100%
CPP flags in installed library	Closed 100%
LogStream: stream for log output	Closed 100%
Several tests fail when threadsafe-hack (...)	Closed 100%
ExternalLibs: function for getting (...)	Closed 100%
CoCoALib - CoCoALib-0.9950	
MachineInteger --> MachineInt	
Rename NumTheory and NumTheoryQQ	
rename RingQ, RingZ --> RingQQ, (...)	
Saturation	
DMPI vs DMPII is slower than expected	
Clean up DivMask and doc	
ordering matrices with rational (...)	
CoCoALib - CoCoALib-0.9951	
SwapRows, Cols	

<p> Add links to examples in documentation matrix - MatrixView Index page for html documentation QuotientRing problem Shorter simpler names for some (...) gcd: multivariate over non-prime (...) Brand new symbol(s) Separate ThreadsafeCounter from (...) Cleanup doc for rings Integer operations CoCoALib - CoCoALib-0.9952 p-th root CFApprox: division by zero Normaliz: "double" cone for speed (...) NBM: add SparsePolyRing as argument (...) Better RingElems Leading form AreMonomials Rings: default ctor & assignment Review the utility of RefRingElem CoCoALib - CoCoALib-0.9953 polynomial coefficient extraction (...) implement creation of a PPMonoidElement (...) Rename PPMonoidEvZZ? Polynomial content Names for random streams MachineInt or long as fn arg type (...) CoCoA4io Porting "IdealOfPoints" change long args in matrices into (...) Revise interface to SmallFpImpl (...) Doc & example for convert IsHomog: should it throw an error (...) Add homog (homogenized) for ideal </p>	
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<p>Exponent range (in power products)</p> <p>PPMonoids: check for exponent overflow (...)</p> <p>Rational approximation</p> <p>Add fault tolerant rational reconstruction (...)</p> <p>PPMonoid pseudo-ctors without symbol (...)</p> <p>Equality of (sub)modules</p> <p>DenseUPolyClean uses size_t</p> <p>"configure" does not set BOOST (...)</p> <p>IdealOfPoints: gens are actually (...)</p> <p>New function BinRepr (was BinExp, (...)</p> <p>Store unique copy of QQ[t_1..t_n] (...)</p> <p>CoCoALib - CoCoALib-0.99531</p> <p>Squarefree factorization - Alessio (...)</p> <p>Squarefree factorization - overhead</p> <p>Squarefree factorization - generic (...)</p> <p>Squarefree factorization - for (...)</p> <p> Squarefree factorization - (...)</p> <p> Squarefree factorization (...)</p> <p> Squarefree factorization (...)</p> <p> Squarefree factorization - (...)</p> <p> Squarefree factorization - (...)</p> <p>Buchberger-Moeller: generic impl</p> <p>add CoeffVecWRT to cocoalib</p> <p>Colon of zero ideal fails (zero-divisors)</p> <p>problem loading library.H (parallel (...)</p> <p>CoCoALib - CoCoALib-0.99532</p> <p>CoCoA website: update web page (...)</p> <p>Squarefree factorization</p> <p> Squarefree factorization - (...)</p> <p>Conversion functions -- documentation</p> <p>OrdvArith documentation needs rewriting</p> <p>Function to get the Hilbert Polynomial (...)</p> <p>ReadExpr: input polynomials in (...)</p> <p>myDeriv for RingDenseUPolyClean (...)</p>	
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AsINT and AsRAT -- ConvertTo<BigInt> (...)
 Update/Improve geobucket documentation
 IsDivisible for RingElem with nice (...)
 NewZZmod and NewRingFp: improve (...)
 LongRange(a,b) returning vector (...)
 function (CoCoALib) for minimal (...)
 Check consistency of template class (...)
 RingElem ctor from mpz_t (from (...)
 design of factorization template (...)
 OrdvArith: use of a single buffer (...)
 New fn: NumPartitions
 ex-Normaliz2-overflow.in too long (...)
 ConvertTo with optional arg to (...)
 Zero to the power zero, 0^0
 ideal: minimize or minimized?
 CoCoA website: CoCoALib-0.99532
 CoCoALib - CoCoALib-0.99533 Easter14
 Coefficient extraction
 implement "binomial" (coefficient) (...)
 BigInt - NumTheory
 Rename MatrixViews
 ZeroMat & FilledMat
 Recognizing finite fields
 Automatic conversion from bool3 (...)
 How to return a Hilbert Series (...)
 Notes for adding/removing files (...)
 DynamicBitset example using LPP
 Valgrind: keep CoCoALib at 0 memory (...)
 Remove denominators: $QQ[x] \rightarrow ZZ[x]$ (...)
 Problems with DenseMatImpl::myResize
 IsZeroDivisor
 add DeleteCol, DeleteRow
 IsDivisible -- exact semantics?
 deg(F,X) instead of MaxExponent(F,X) (...)

<p> Rename MatrixArith to MatrixOperations PPMonoidOv is not threadsafe factorization: public data fields, (...) Use -fopenmp flag when compiling (...) NewPolyRing_DMPI has no constructor (...) make check in examples/ directory (...) IsIntegralDomain, lamIntegralDomain3 Renaming: SqfreeFactor to SqFreeFactor SyzOfGens (CoCoALib): fix shifts Rename file TmpFactor to factor MaxSquarableInteger gives wrong (...) Fn to test if an integer is a power (...) Release: CoCoALib-0.99533 Convert BigInt/BigRat to string IO: move GlobalInput etc to CoCoA (...) Compilation problem in TmpMorsePaths.C Progress reporter CoCoALib/io.H CoCoALib - CoCoALib-0.99534 Seoul14 polynomial coefficient extraction (...) cleanup doc for matrix, MatrixViews, (...) MatByRows, MatByCols Repeated rows/cols in submat Usefulness of ring casting fns (...) FractionField -- only of TrueGCDDomain? CoCoALib normaliz interface Automatic mapping of RingElems Documentation for tmp.H (utils (...) Compilation problem with "degree.H" (...) Module ordering and grading (and (...) ordering and grading (weights) (...) Remove AsPolyRing etc? Documentation for adding functions (...) Release: CoCoALib-0.99534 </p>	
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<p>CoCoALib-Normaliz interface: cannot (...)</p> <p>Valid symbol heads</p> <p>CmpAbs for RingElem</p> <p>Hilbert crashes with > 100 indeterminates</p> <p>Example for PPVector: ex-PPVector</p> <p>BaseRing for all rings</p> <p>(Hilbert-) quasi-polynomials</p> <p>CoCoALib - CoCoALib-0.99535 Sep14</p> <p>Subtle ref count bug for poly rings (...)</p> <p>problem with "matrix" argument (...)</p> <p>Release: CoCoALib-0.99535</p> <p>CoCoALib - CoCoALib-0.99536 June 2015</p> <p>Compute inverse in quotient ring (...)</p> <p>Release: CoCoALib-0.99536</p> <p>Modulus (for CRTMill) ambiguous</p> <p>Inverse of a matrix over ZZ</p> <p>NumTheory: sieve of Eratosthenes</p> <p>Ambiguous: rank for matrix (in (...))</p> <p>Clean test-FreeModule1</p> <p>Move code in test file into namespace (...)</p> <p>QBGenerator crashes</p> <p>RatReconstructByLattice fails in (...)</p> <p>power for PPs is too slow</p> <p>Fault tolerant rational reconstruction: (...)</p> <p>DetDirect calls myAddMul with 0 (...)</p> <p>Interrupt mechanism</p> <p>CheckForInterrupt: string arg to (...)</p> <p>Move code in examples into namespace (...)</p> <p>CoCoALib - CoCoALib-0.99538 summer 2015</p> <p>Release: CoCoALib-0.99538 (together (...))</p> <p>RandomSubsetIndices, RandomTupleIndices?</p> <p>New function for making list of (...)</p> <p>CoCoALib - CoCoALib-0.99540 Feb 2016</p> <p>Janet Bases: check and include (...)</p>	
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<p> BigInt ctor from a machine integer OrdMat: should it be a reference (...) Make SmallFpImpl safer to use Convert a PPMonoidElem to RingElem (...) ExternalLib-GFan: first prototype DMPZmerge: make non-recursive FloatStr prints a NUL character abs for MachineInt Add new fn InvModNoCheck ZeroMat and IdentityMat should (...) AssignZero for matrix ILogBase: change name? Add new fn SimplestBinaryRatBetween Rename isqrt to FloorSqrt (following (...) GradingMat: does anyone need it? NewMatMinimize, NewMatCompleteOrd (...) IsTermOrdering Fn names: LexMat or MatLex; StdDegRevLexMat (...) Use MachineInt instead of long (...) primary.cocoa5 Fix test failures (after revising (...) SmallFpImpl: export fns for a fixed (...) CoCoALib - CoCoALib-0.99542 spring 2016 Implement MinPoly in CoCoALib CoCoALib - CoCoALib-0.99560 matrix constructors GlobalManager: registration of (...) Use BOOST lib default location (...) BOOST -- how it could help in CoCoALib implement IsPrime3, IsMaximal3 Release: CoCoALib-0.99560 (together (...) Tidy CoCoA root directory Temporary directories used during (...) Add graeffe function? </p>	
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<p>Time limit: let user specify time (...)</p> <p>Module index component in internal (...)</p> <p>Makefile_dependencies in src/tests/</p> <p>Stats in GBMill (GReductor)</p> <p>frobby (v0.9.0) does not compile (...)</p> <p>Configuration: where to keep source (...)</p> <p>NumTheory: behaviour of InvMod (...)</p> <p>compilation on fedora 23: some (...)</p> <p>CoCoALib function for radical (or (...)</p> <p>PPOrderingCtor: name of mem fn (...)</p> <p>ReadExpr is too slow on large polys</p> <p>My first compilations with clang</p> <p>General verbose mode?</p> <p>configure: possibly ignore GMP (...)</p> <p>SmallestNonDivisor -- new fn</p> <p>configuration: include -std=c++03 (...)</p> <p>IsInRadical: case of homog ideal</p> <p>Split poly into homog parts</p> <p>Improvement: how to sort QuotientBasis?</p> <p>LF curiously slow (breaking a poly (...)</p> <p>ReadExpr(P, string) and RingElem(P, (...)</p> <p>New function: IdealOfGBasis, IdealOfMinGens (...)</p> <p>CoCoALib version in Documentation (...)</p> <p>Catching an (expected) error</p> <p>Bug in MinPolyModular (ugly prime)</p> <p>Design: should we allow an ideal (...)</p> <p>makefile: ungraceful when interrupted</p> <p>ideal() * RingElem gives error</p> <p>factor in ZZ[x] gives errors</p> <p>MinPolyQuot: check input (was: (...)</p> <p>New design for interrupt mechanism</p> <p>MinPolyQuot: runs out of primes</p> <p>ExternLib-MathSAT: first prototype</p> <p>Rename ERR::SERIOUS to ERR::ShouldNeverGetHere</p>	<p>Closed 100%</p>
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<p> Bug in MinPolyModular (insufficient (...) Implement RootBound New fn: IsCoprime (whenever gcd (...) Compilaton with --debug configuration (...) Polynomial multiplication wrong (...) File names, coding conventions: (...) CoCoALib - CoCoALib-0.99600 Porting "IdealOfProjectivePoints" New file: BigRatOps port to CoCoALib: Homomorphism (...) ExternalLib: simplify configuration IsPositiveGrading -- really need (...) Doc for BigInt, BigIntOps, BigRat (...) New function: MinPoly of RingElem (...) New function: PrimaryDecomposition0 (...) Makefile: install target for CoCoALib coefficients for MinPoly e Frobenius MinPolyQuot: missing doc Determinant of matrix over QQ (whose (...) PrevPrime and NextPrime anomalies Move examples directory into doc (...) New function: SubmoduleOfMinGens Sturm sequence File names, coding conventions: (...) Release: CoCoALib-0.99600 (together (...) SmallFpImpl: new ctor arg to say (...) Create a new "prime source" iterator New function: MinPolyQuotHeuristic (...) Add global enum "verify/DontVerify" Check semantics of NoSmallFactorSeq Split SparsePolyRing.C in smaller (...) MinPoly over QQ: verification may (...) New class VerificationLevel New function: RandomLinearForm (...) </p>	<p>Closed 100%</p>
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File names: use "SparsePolyOps" (...)
 New function: myPrimaryDecomposition_0dim
 BigRat(0) unexpectedly compiles! (...)
 CpuTime is costly!
 "mod" for BigInt
 factor: multivariate, wrong RemainingFactor (...)
 Release: CoCoALib-0.99580 (together (...)
 GCD bug with high degree arg
 factor over algebraic extensions
 SyzOfGens: bug with zero generators
 CoCoALib - CoCoALib-0.99650 November (...)
 Bareiss algorithm
 Matrix determinant over ZZ
 Replace auto_ptr in preparation (...)
 txt2tags: double quotes wrong in (...)
 GCD very slow
 Rename iroot?
 Primary Decompositon (zero-dim) (...)
 gcd crashes (Floating point exception)
 New function: HasPositiveGrading
 HilbertSeries should check grading
 NewPolyRing default indet names
 IsPrime(0)
 MinPolyQuot: guaranteed and ideal (...)
 principal ideal has a Gbasis
 SEGV: CoCoALib with Normaliz in (...)
 New function: radical for monomial (...)
 RingID: different values in test-output (...)
 C++14: use nullptr
 ThreadsafeCounter is now obsolete?
 Release 0.99650
 Printing for (prime) finite fields
 Never use "using namespace .." (...)
 New fn: FixedDivisor (formerly (...))

<p> CoprimeFactorBasis: mishandles (...) New function primorial Factorization mod p SmoothFactor: allow limit = 1? RealRoots: gives odd number of (...) txt2tags: LaTeX/PDF section numbers (...) New syntax for creating homomorphisms (...) New syntax for NewQuotientRing New function: vector of RingElem (...) Rename SparsePolyOps-MonomialIdeal (...) Problem with linking the library New function: ctor of PPVector (...) CoCoALib - CoCoALib-0.99700 Makefile problem in ROOT and/or (...) Squarefree GCD-free basis Return type & name for "indets" (...) Squarefree(?) GCD-free basis Rows and Columns of a matrix Constructor for vectors? CoCoAVector Indets actually in a poly (or vector (...) QuotientRing: is it correct to (...) configure: search for libgmp too (...) CoCoALib configuration: BOOST dependency ElimMat, ElimHomogMat: complain (...) New function or explain: first (...) Output to bad stream (operator<< (...) configure: auxiliary scripts should (...) Catching interrupts in example (...) IsInRadical: sometimes a bit slow Split NumTheory.C into several (...) should BeginIter(RingElem) be in (...) ReadExpr is too slow on long lists (...) Fix file permissions after using (...) Remove unnecessary files before (...) </p>	
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<p> Gaussian row reduction test-GFan1 fails Problem rebuilding dependencies (...) Release CoCoALib-0.99700 configure script help GBasis verbose mode: some output (...) Should configure remove the file (...) CpuTimeLimit: limit "intervals" (...) Fails to recognize zero-dim ideal Make IsZeroDim more robust myZeroPtr and myOnePtr gfan: installation problem: configure (...) IsPrimary sometimes wrong configure script: MODE option obsolete? IdealOfProjectivePoints and MinGens Main Makefile: does not rebuild (...) New function: LawrenceMat GBasisByHomog for DegLex CoCoALib - CoCoALib-0.99710 New fn ConstantTerm? myTestIsPrimary & Co. : fix design Bivariate factor bug: sometimes (...) Release CoCoALib-0.99710 CoCoALib - CoCoALib-0.99800 Adjoint of a non-invertible matrix object files collected in one directory Porting "LinKer" Replace bool3 by tribool Keep CoCoALib web page up to date! (...) C++14: MachineInt Instructions for compiling libnormaliz valuation slow for large inputs MemPool: review min and max loaf (...) ar gives warnings on fedora 23 </p>	
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Function MakeTermOrd should be (...)
 Janet basis code: TmpJB files give (...)
 SimplestBigRatBetween: why is it (...)
 SmoothFactor: slow when a factor (...)
 Split MatrixOps
 Reconsider design for accessing (...)
 FreeModule: get canonical basis
 Tidy up code for matrix determinant
 adj: for matrices 7x7 and bigger
 Radical 0-dim: varied timings
 GBasisTimeout: not working as expected
 RingElems: syntax with [and] (...)
 SHA checksum for released code
 New fn: interreduction
 Radical 0-dim NYI? missing case (...)
 Flatten for a matrix
 Make SmoothFactor interruptible
 Redesign interrupt mechanism?
 Name of TensorMat; change to KroneckerProd?
 Change CoCoA_ERROR into CoCoA_THROW_ERROR
 SmoothFactor: use FactorMultiplicity
 Change syntax apply(phi,M) into (...)
 isystem not working as expected
 Release CoCoALib 0.99800
 IsPowerOf2 for rationals
 ker bug (quotientinghom for R/ideal())
 New function: MinusOneToPower
 Normaliz 3.8.9
 factorization: allow zero as exponent?
 IsDivisible in a field?
 Indets in coeffring are ringelems (...)
 RandomLinearForm
 Input fns: action when when istream (...)
 MacOS compilation with clang

<p>INPUT questions</p> <p>RingElem from string (ReadExpr)</p> <p>Require decimal mode for ostream?</p> <p>Software licence</p> <p>CpuTimeLimit: more frequent clock (...)</p> <p>BigRat: ctor from machine int</p> <p>IsInRadical: gives "weird" error</p> <p>FloatStr sometimes produces NUL (...)</p> <p>New fn prim for polys</p> <p>CRASH/ABORT: GMP overflow</p> <p>IdealOfPoints: allow matrix of (...)</p> <p>CRASH: LinKerZZ</p> <p>Compilation of Normaliz</p> <p>Normaliz 3.8.10</p> <p>RingHom: implement phi(X) as apply(phi, (...)</p> <p>Compilation ambiguity</p> <p>binomial: domain of defn?</p> <p>CoCoALib - CoCoALib-0.99850</p> <p>submat takes only vector<long></p> <p>C++11 compatibility questions</p> <p>Mod fn for computing remainder</p> <p>MatrixView/function for viewing (...)</p> <p>W.Bruns's wish list</p> <p>Improve doc about ordering/grading (...)</p> <p>Iter for subsets/tuples</p> <p>Make RingBase::myCharacteristic (...)</p> <p>Which ubuntu / debian packages (...)</p> <p>Automatic mapping of RingElem: (...)</p> <p>Makefile; limit dependencies on (...)</p> <p>PPMonoidSparse: impl of sparse (...)</p>	
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