

## CoCoALib - CoCoALib Closed Issues

#	Subject	Target version	Category	Updated	Assignee	Estimated time
<b>Data Structures (10)</b>						
1159	Add global enum "verify/DontVerify"	CoCoALib-0.99600	Data Structures	25 Jun 2018 15:06	John Abbott	1.1
1015	Bruns SEGV: SparsePolyIter/DMPI problem	CoCoALib-0.99550 spring 2017	Data Structures	28 Apr 2017 09:30	John Abbott	6.01
1065	Design: should we allow an ideal to change ring?	CoCoALib-0.99560	Data Structures	07 Sep 2023 08:25	John Abbott	2.2
379	Iter for subsets/tuples	CoCoALib-0.99850	Data Structures	13 Mar 2024 18:25	John Abbott	
37	matrix constructors	CoCoALib-0.99560	Data Structures	15 Dec 2017 15:18	John Abbott	5.0
202	MatrixView/function for viewing a single row or column (RowMat, ColMat)	CoCoALib-0.99850	Data Structures	20 Mar 2024 14:09	John Abbott	
1389	myZeroPtr and myOnePtr	CoCoALib-0.99700	Data Structures	13 Jan 2020 12:07	John Abbott	0.55
805	New type for "constant" matrices?	CoCoALib-0.99550 spring 2017	Data Structures	28 Apr 2017 09:30	John Abbott	7.51
152	Replace bool3 by tribool	CoCoALib-0.99800	Data Structures	29 Jan 2021 20:12	John Abbott	2.9
1647	Suppress zero from ideal generators? Detect 1 and simplify generators?	CoCoALib-0.99850	Data Structures	25 Mar 2024 19:02	Anna Maria Bigatti	
<b>Documentation (43)</b>						
63	Add links to examples in documentation	CoCoALib-0.9951	Documentation	30 May 2012 13:40	Anna Maria Bigatti	5.5
66	BigInt - NumTheory	CoCoALib-0.99533 Easter14	Documentation	15 Apr 2014 12:39	John Abbott	0.5
1700	boost_1_80_0	CoCoALib-0.99800	Documentation	23 Nov 2022 17:36	John Abbott	3.99
1063	Catching an (expected) error	CoCoALib-0.99560	Documentation	08 Nov 2017 14:24	Anna Maria Bigatti	
86	Clean up DivMask and doc	CoCoALib-0.9950	Documentation	06 Feb 2012 19:33	Anna Maria Bigatti	2.0
68	cleanup doc for matrix, MatrixViews, *Matrix*,....	CoCoALib-0.99534 Seoul14	Documentation	31 Jul 2014 16:56	Anna Maria Bigatti	
160	Cleanup doc for rings	CoCoALib-0.9951	Documentation	28 May 2012 14:11	Anna Maria Bigatti	
507	CoCoA website: CoCoALib-0.99532	CoCoALib-0.99532	Documentation	02 Apr 2014 15:40	Anna Maria Bigatti	1.0
29	CoCoA website: update web page for CoCoALib-0.9950	CoCoALib-0.99532	Documentation	02 Apr 2014 15:39	Anna Maria Bigatti	2.0
1058	CoCoALib version in Documentation and Examples	CoCoALib-0.99560	Documentation	19 Dec 2017 07:50	Anna Maria Bigatti	1.01
1591	Compilation of Normaliz	CoCoALib-0.99800	Documentation	07 Mar 2022 10:06	Anna Maria Bigatti	5.01
1353	configure script help	CoCoALib-0.99700	Documentation	13 Feb 2020 11:06	John Abbott	1.11
1413	configure script: MODE option obsolete?	CoCoALib-0.99700	Documentation	11 Feb 2020 13:13	John Abbott	0.25
61	Conversion functions -- documentation	CoCoALib-0.99532	Documentation	02 Apr 2014 17:43	John Abbott	3.0
140	Doc & example for convert	CoCoALib-0.9953	Documentation	29 May 2013 16:48	John Abbott	
847	Doc for BigInt, BigIntOps, BigRat -- should there be BigRatOps?	CoCoALib-0.99600	Documentation	03 Aug 2018 15:53	John Abbott	7.7
1674	DocTeX.t2t missing several "index entries"	CoCoALib-0.99800	Documentation	18 Mar 2022 10:26	Anna Maria Bigatti	2.01

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452	Documentation for adding functions to CoCoA-5 (BuiltInFunctions and BuiltInOneLiners)	CoCoALib-0.99534 Seoul14	Documentation	31 Jul 2014 12:31	Anna Maria Bigatti	2.0
252	Documentation for tmp.H (utils on vectors and other containers)	CoCoALib-0.99534 Seoul14	Documentation	31 Jul 2014 16:53	John Abbott	5.3
75	Documentation review by Caleo		Documentation	30 Nov 2012 16:26		75.0
288	DynamicBitset example using LPP	CoCoALib-0.99533 Easter14	Documentation	17 Apr 2014 15:23	Anna Maria Bigatti	1.0
580	Example for PPVector: ex-PPVector	CoCoALib-0.99534 Seoul14	Documentation	31 Jul 2014 12:28	Anna Maria Bigatti	1.5
1499	factorization: allow zero as exponent?	CoCoALib-0.99800	Documentation	26 Oct 2020 12:26	John Abbott	1.81
1791	Fix Google-search link in the html documentation	CoCoALib-0.99850	Documentation	14 Mar 2024 09:24	Anna Maria Bigatti	0.5
256	Improve doc about ordering/grading for poly rings	CoCoALib-0.99850	Documentation	14 Mar 2023 19:52	Anna Maria Bigatti	3.0
70	Index page for html documentation	CoCoALib-0.9951	Documentation	04 Jul 2012 10:50	Anna Maria Bigatti	5.2
467	Keep CoCoALib web page up to date! All pages!	CoCoALib-0.99800	Documentation	18 Feb 2022 15:32	Anna Maria Bigatti	1.51
65	matrix - MatrixView	CoCoALib-0.9951	Documentation	04 Jul 2012 10:49	Anna Maria Bigatti	1.5
1612	Merge the doc file RadicalMembership.txt into ideal.txt	CoCoALib-0.99800	Documentation	04 Mar 2022 17:36	Anna Maria Bigatti	1.51
1099	MinPolyQuot: missing doc	CoCoALib-0.99600	Documentation	03 Aug 2018 14:32	Anna Maria Bigatti	1.0
111	Mod fn for computing remainder	CoCoALib-0.99850	Documentation	13 Mar 2024 21:01	John Abbott	0.76
683	Module index component in internal compressed representation	CoCoALib-0.99560	Documentation	15 Dec 2017 16:37	Anna Maria Bigatti	10.0
1124	Move examples directory into doc -- or just change makefile?	CoCoALib-0.99600	Documentation	03 Aug 2018 17:04	Anna Maria Bigatti	5.01
966	New function or explain: first and last for a vector?	CoCoALib-0.99700	Documentation	14 Feb 2020 10:21	Anna Maria Bigatti	2.22
285	Notes for adding/removing files from documentation	CoCoALib-0.99533 Easter14	Documentation	17 Apr 2014 09:22	John Abbott	1.0
195	OrdvArith documentation needs rewriting	CoCoALib-0.99532	Documentation	03 Apr 2014 11:51	John Abbott	4.0
389	problem loading library.H (parallel make -j4)	CoCoALib-0.99531	Documentation	29 Oct 2013 13:31	Anna Maria Bigatti	
1618	Tidy ex-RingElem2	CoCoALib-0.99800	Documentation	04 Feb 2022 21:21	John Abbott	0.8
905	txt2tags: double quotes wrong in LaTeX	CoCoALib-0.99650 November 2019	Documentation	10 Oct 2019 19:06	Anna Maria Bigatti	0.66
1676	txt2tags: include in source distribution?	CoCoALib-0.99850	Documentation	04 Nov 2022 14:31	John Abbott	1.5
1317	txt2tags: LaTeX/PDF section numbers over 99 in TOC	CoCoALib-0.99650 November 2019	Documentation	10 Oct 2019 18:41	Anna Maria Bigatti	1.23
1265	Unregistered TXT files in doc	CoCoALib-0.99850	Documentation	23 Feb 2024 11:34	John Abbott	2.5
234	Update/Improve geobucket documentation	CoCoALib-0.99532	Documentation	03 Apr 2014 11:51	Anna Maria Bigatti	5.0
<b>Improving (89)</b>						
1238	ReadExpr is too slow on long lists of monomial with many indets: ---> use RingElems instead	CoCoALib-0.99700	Improving	12 Feb 2020 09:44	Anna Maria Bigatti	
910	BigRat: read from a string in "decimal" format?	CoCoALib-0.99550 spring 2017	Improving	18 Nov 2016 22:37	John Abbott	4.4
1064	Bug in MinPolyModular (ugly prime)	CoCoALib-0.99560	Improving	10 Nov 2017 12:16	Anna Maria Bigatti	6.01
1257	C++14: use nullptr	CoCoALib-0.99650 November 2019	Improving	15 Oct 2019 14:09	John Abbott	4.44

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1462	Change CoCoA_ERROR into CoCoA_THROW_ERROR	CoCoALib-0.99800	Improving	14 Oct 2020 14:06	John Abbott	4.71
1467	Change syntax apply(phi,M) into phi(M)?	CoCoALib-0.99800	Improving	18 Feb 2022 15:24	John Abbott	2.01
1162	Check semantics of NoSmallFactorSeq	CoCoALib-0.99600	Improving	03 Aug 2018 16:01	John Abbott	5.55
971	CheckForInterrupt does not work in the expected way	CoCoALib-0.99550 spring 2017	Improving	28 Apr 2017 09:30	John Abbott	3.01
1755	CheckForInterrupt: give more info?	CoCoALib-0.99850	Improving	22 Dec 2023 20:56	John Abbott	1.9
721	CheckForInterrupt: string arg to specify where it was called?	CoCoALib-0.99536 June 2015	Improving	01 Jul 2015 18:12	John Abbott	2.2
1009	coefficients for MinPoly e Frobenius	CoCoALib-0.99600	Improving	03 Aug 2018 17:16	Anna Maria Bigatti	2.51
976	configure: auxiliary scripts should be consistent about error messages	CoCoALib-0.99700	Improving	09 Jan 2020 22:10	John Abbott	2.9
1181	CpuTime is costly!	CoCoALib-0.99600	Improving	31 Jul 2018 14:25	John Abbott	8.51
1377	CpuTimeLimit: limit "intervals" between full checks	CoCoALib-0.99700	Improving	11 Feb 2020 12:09	John Abbott	5.33
1558	CpuTimeLimit: more frequent clock checks	CoCoALib-0.99800	Improving	20 Sep 2021 15:41	John Abbott	6.99
705	DetDirect calls myAddMul with 0 argument -- funny compilation problem??	CoCoALib-0.99536 June 2015	Improving	26 Jun 2015 16:15	Anna Maria Bigatti	3.0
1110	Determinant of matrix over QQ (whose entries are actually integers)	CoCoALib-0.99600	Improving	03 Aug 2018 15:56	John Abbott	19.9
773	DMPZmerge: make non-recursive	CoCoALib-0.99540 Feb 2016	Improving	23 Mar 2016 15:00	John Abbott	3.9
764	ExternalLib: simplify configuration	CoCoALib-0.99600	Improving	03 Aug 2018 17:33	Anna Maria Bigatti	1.55
1203	factor over algebraic extensions	CoCoALib-0.99600	Improving	31 Jul 2018 13:13	Anna Maria Bigatti	3.51
1719	FactorINT has got worse	CoCoALib-0.99880	Improving	22 Apr 2024 20:00	John Abbott	4.25
1302	Factorization mod p	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 19:12	John Abbott	0.21
689	Fault tolerant rational reconstruction: make bad factor publicly accessible	CoCoALib-0.99536 June 2015	Improving	01 Jul 2015 18:04	John Abbott	
1769	FixedDivisor is sometimes surprisingly slow	CoCoALib-0.99850	Improving	22 Dec 2023 20:57	John Abbott	2.22
931	GBasis verbose mode	CoCoALib-0.99550 spring 2017	Improving	29 Apr 2017 08:36	Anna Maria Bigatti	3.0
1434	GBasisByHomog for DegLex	CoCoALib-0.99700	Improving	06 Mar 2020 17:41	Anna Maria Bigatti	
1376	GBasisTimeout: not working as expected	CoCoALib-0.99800	Improving	16 Sep 2021 13:51	John Abbott	5.23
1641	gcd does not recognize univariate input	CoCoALib-0.99850	Improving	21 Mar 2024 20:18	John Abbott	5.33
952	GCD very slow	CoCoALib-0.99650 November 2019	Improving	30 Oct 2019 22:39	John Abbott	0.33
962	General verbose mode?	CoCoALib-0.99560	Improving	08 Nov 2017 16:29	John Abbott	6.6
1789	GradingMat with negative weights should complain (or deal with them properly!!)	CoCoALib-0.99850	Improving	18 Mar 2024 16:15	Anna Maria Bigatti	
1589	IdealOfPoints: allow matrix of points to be defined over "wrong" ring	CoCoALib-0.99800	Improving	04 Feb 2022 22:07	Anna Maria Bigatti	1.11
1035	Improvement: how to sort QuotientBasis?	CoCoALib-0.99560	Improving	06 Nov 2017 15:53	John Abbott	0.77
718	Insert calls to CheckForInterrupt	CoCoALib-0.99880	Improving	22 Apr 2024 21:35	Anna Maria Bigatti	2.22
1739	IsHomog for ideals	CoCoALib-0.99850	Improving	01 Mar 2024 14:57	Anna Maria Bigatti	2.01

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1569	IsInRadical too slow (test-RadicalMembership)	CoCoALib-0.99850	Improving	01 Mar 2024 18:40		
1030	IsInRadical: case of homog ideal	CoCoALib-0.99560	Improving	28 Nov 2017 17:56	John Abbott	
1136	IsInRadical: sometimes a bit slow	CoCoALib-0.99700	Improving	09 Dec 2019 13:34	John Abbott	
1754	IsSqFree poorly implemented	CoCoALib-0.99850	Improving	23 Feb 2024 11:39	John Abbott	2.88
1042	LF curiously slow (breaking a poly into homog pieces)	CoCoALib-0.99560	Improving	06 Nov 2017 15:17	John Abbott	2.99
1768	Limit indentation in verbose mesgs?	CoCoALib-0.99850	Improving	22 Jan 2024 10:36	John Abbott	1.23
1036	LogStream: stream for log output	CoCoALib-0.99550 spring 2017	Improving	22 Apr 2017 22:52	John Abbott	1.9
1380	Make IsZeroDim more robust	CoCoALib-0.99700	Improving	10 Jan 2020 12:29	John Abbott	1.11
1633	Make polynomial multiplication interruptible?	CoCoALib-0.99800	Improving	04 Feb 2022 21:24	John Abbott	0.99
1457	Make SmoothFactor interruptible	CoCoALib-0.99800	Improving	26 Oct 2020 21:37	John Abbott	0.99
1761	MakeTermOrdMat: improve error mesg	CoCoALib-0.99850	Improving	13 Mar 2024 21:16	John Abbott	0.99
691	Matrix determinant over ZZ	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 18:46	John Abbott	1.33
786	MemPool: review min and max loaf sizes	CoCoALib-0.99800	Improving	16 Sep 2021 13:38	Anna Maria Bigatti	4.44
1165	MinPoly over QQ: verification may be very slow	CoCoALib-0.99600	Improving	03 Aug 2018 17:37	Anna Maria Bigatti	7.7
1088	MinPolyQuot: runs out of primes	CoCoALib-0.99560	Improving	08 Nov 2017 14:39	Anna Maria Bigatti	2.0
1086	New design for interrupt mechanism	CoCoALib-0.99560	Improving	08 Nov 2017 16:31	John Abbott	11.11
747	New function for making list of symbols (indeterminate names)	CoCoALib-0.99538 summer 2015	Improving	01 Feb 2016 14:21	John Abbott	3.0
1347	New function: ctor of PPVector with vector<RingElem>	CoCoALib-0.99650 November 2019	Improving	29 Oct 2019 19:44	Anna Maria Bigatti	1.51
1329	New syntax for creating homomorphisms (PolyAlgebraHom)	CoCoALib-0.99650 November 2019	Improving	09 Nov 2020 10:03	Anna Maria Bigatti	
1330	New syntax for NewQuotientRing	CoCoALib-0.99650 November 2019	Improving	15 Oct 2019 17:52	Anna Maria Bigatti	
895	NumDigits: sometimes gives wrong answer	CoCoALib-0.99550 spring 2017	Improving	28 Apr 2017 09:30	John Abbott	1.51
1466	Ops += *= etc for Matrices?	CoCoALib-0.99850	Improving	08 Aug 2022 20:01	John Abbott	
969	Output to bad stream (operator<< and myOutput): just return immediately	CoCoALib-0.99700	Improving	11 Feb 2020 18:07	John Abbott	4.4
1105	Primary Decompositon (zero-dim) slow cases	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 19:20	Anna Maria Bigatti	
1249	principal ideal has a Gbasis	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 19:12	Anna Maria Bigatti	3.01
1283	Printing for (prime) finite fields	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 18:46	John Abbott	1.01
1319	Problem rebuilding dependencies when file PREPROCESSOR_DEFNS.H does not exist	CoCoALib-0.99700	Improving	11 Feb 2020 12:22	John Abbott	1.77
1735	PushFront/PushBack without checks?	CoCoALib-0.99850	Improving	08 Mar 2024 14:38	John Abbott	1.11
1716	Qn: factor for BigInt	CoCoALib-0.99850	Improving	14 Mar 2023 21:32	John Abbott	1.49
736	QuotientRing: is it correct to prohibit quotient by ideal(1)?	CoCoALib-0.99700	Improving	27 Jan 2020 17:43	Anna Maria Bigatti	1.11
1423	Radical 0-dim NYI? missing case for GBasisByHomog	CoCoALib-0.99800	Improving	25 Sep 2020 16:58	Anna Maria Bigatti	0.51
1375	Radical 0-dim: varied timings	CoCoALib-0.99800	Improving	04 Feb 2022 21:20	John Abbott	4.9

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1517	RandomLinearForm	CoCoALib-0.99800	Improving	04 Feb 2022 21:31	John Abbott	0.9
881	ReadExpr is too slow on large polys	CoCoALib-0.99560	Improving	08 Nov 2017 15:59	John Abbott	12.12
1052	ReadExpr(P, string) and RingElem(P, string) in CoCoALib	CoCoALib-0.99560	Improving	10 Nov 2017 12:34	Anna Maria Bigatti	
1579	Readexpr/RingElem: unhelpful error message when input is wrong	CoCoALib-0.99850	Improving	23 Feb 2024 12:39	John Abbott	3.01
936	ReadExpr: cannot handle exponent which is not integer literal	CoCoALib-0.99550 spring 2017	Improving	18 Nov 2016 22:22	John Abbott	1.5
1557	Reading list of rationals is too slow	CoCoALib-0.99850	Improving	10 Mar 2023 18:23	John Abbott	3.11
1458	Redesign interrupt mechanism?	CoCoALib-0.99800	Improving	07 Mar 2022 10:07	John Abbott	0.51
1016	ReducedGBasis for RingWeyl (and other non-commutative rings)	CoCoALib-0.99550 spring 2017	Improving	28 Apr 2017 16:05	Anna Maria Bigatti	1.01
1606	Return type with const	CoCoALib-0.99850	Improving	21 Mar 2024 20:24	John Abbott	1.66
1391	RingElems: syntax with [ and ] ?	CoCoALib-0.99800	Improving	08 Jan 2021 13:03	Anna Maria Bigatti	5.77
1598	RingHom: implement phi(X) as apply(phi, X) also for X vector and matrix	CoCoALib-0.99800	Improving	18 Feb 2022 15:24	Anna Maria Bigatti	8.51
1250	SEGV: CoCoALib with Normaliz in multithreading	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 19:12	Anna Maria Bigatti	2.11
897	SimplestBigRatBetween: why is it so slow?	CoCoALib-0.99800	Improving	16 Sep 2021 13:47	John Abbott	2.49
1309	SmoothFactor: allow limit = 1?	CoCoALib-0.99650 November 2019	Improving	10 Oct 2019 18:45	John Abbott	1.01
730	Stats in GBMill (GReductor)	CoCoALib-0.99560	Improving	20 Nov 2017 16:12	Anna Maria Bigatti	4.0
64	submat takes only vector<long>	CoCoALib-0.99850	Improving	08 Mar 2024 17:17	John Abbott	2.06
908	Sum of ideals: what are the generators of $(x) + (0)$ ?	CoCoALib-0.99850	Improving	08 Mar 2024 14:34	Anna Maria Bigatti	2.01
1205	SyzOfGens: bug with zero generators	CoCoALib-0.99600	Improving	03 Aug 2018 18:09	Anna Maria Bigatti	5.01
1511	Use C++14 constexpr	CoCoALib-0.99850	Improving	16 Mar 2024 21:55	John Abbott	2.99
1627	Use keyword "delete" for deleted functions	CoCoALib-0.99800	Improving	04 Feb 2022 21:23	John Abbott	3.6
722	valuation slow for large inputs	CoCoALib-0.99800	Improving	07 Oct 2020 22:11	John Abbott	2.0
1721	Verbose messages: print level?	CoCoALib-0.99850	Improving	12 Apr 2023 14:56	Anna Maria Bigatti	

### Makefile (7)

340	"configure" does not set BOOST if there are multiple copies in "standard" location	CoCoALib-0.9953	Makefile	28 May 2013 18:41	John Abbott	
793	compilation on fedora 23: some worrying "error messages"	CoCoALib-0.99560	Makefile	15 Dec 2017 16:59	John Abbott	3.1
1360	configure script: add flags for "only cocoalib" or "both cocoalib and cocoa5" (for boost)	CoCoALib-0.99850	Makefile	07 Mar 2023 21:00	John Abbott	14.01
1426	Main Makefile: does not rebuild dependencies	CoCoALib-0.99700	Makefile	04 Mar 2020 14:20	John Abbott	0.95
2	Makefile problem in ROOT and/or src/AlgebraicCore	CoCoALib-0.99700	Makefile	12 Feb 2020 15:00	John Abbott	1.99
701	Makefile; limit dependencies on external libs	CoCoALib-0.99850	Makefile	14 Oct 2022 16:51		
24	object files collected in one directory	CoCoALib-0.99800	Makefile	14 Oct 2020 15:35	Anna Maria Bigatti	1.01

### Maths Bugs (44)

10 May 2024

#	Subject	Target version	Category	Updated	Assignee	Estimated time
1331	adj: for matrices 7x7 and bigger	CoCoALib-0.99800	Maths Bugs	28 Oct 2020 23:17	John Abbott	1.17
1449	Bivariate factor bug: sometimes a factor is reducible	CoCoALib-0.99710	Maths Bugs	20 May 2020 13:26	John Abbott	5.99
1729	Bug HilbertPoly of zero-dimensional ideals	CoCoALib-0.99850	Maths Bugs	12 Apr 2023 14:45	Anna Maria Bigatti	
1101	Bug in MinPolyModular (insufficient rational reconstruction)	CoCoALib-0.99560	Maths Bugs	15 Dec 2017 16:42	Anna Maria Bigatti	3.0
199	CFApprox: division by zero	CoCoALib-0.9952	Maths Bugs	29 Jun 2012 17:23	John Abbott	0.75
355	Colon of zero ideal fails (zero-divisors)	CoCoALib-0.99531	Maths Bugs	30 Oct 2013 10:52	Anna Maria Bigatti	
1300	CoprimeFactorBasis: mishandles negative args	CoCoALib-0.99650 November 2019	Maths Bugs	01 Oct 2019 13:34	John Abbott	1.11
1773	CyclotomicFactorIndexes: gave wrong answer	CoCoALib-0.99850	Maths Bugs	22 Dec 2023 21:30	John Abbott	0.99
956	determinant: fails for 0x0 matrix (SEGV)	CoCoALib-0.99550 spring 2017	Maths Bugs	28 Apr 2017 09:29	John Abbott	0.51
1082	factor in ZZ[x] gives errors	CoCoALib-0.99560	Maths Bugs	08 Nov 2017 14:12	John Abbott	0.9
1185	factor: multivariate, wrong RemainingFactor (sign wrong)	CoCoALib-0.99600	Maths Bugs	31 Jul 2018 13:15	John Abbott	4.51
1379	Fails to recognize zero-dim ideal	CoCoALib-0.99700	Maths Bugs	10 Jan 2020 12:17	Anna Maria Bigatti	5.55
776	FloatStr prints a NUL character	CoCoALib-0.99540 Feb 2016	Maths Bugs	01 Feb 2016 14:23	John Abbott	
1570	FloatStr sometimes produces NUL chars	CoCoALib-0.99800	Maths Bugs	16 Sep 2021 12:32	John Abbott	8.11
858	floor for TwinFloat can produce ERR::SERIOUS	CoCoALib-0.99550 spring 2017	Maths Bugs	25 Jun 2016 12:08	John Abbott	3.9
1199	GCD bug with high degree arg	CoCoALib-0.99600	Maths Bugs	03 Aug 2018 15:47	Anna Maria Bigatti	3.33
1758	Graeffe "sign bug"	CoCoALib-0.99850	Maths Bugs	22 Dec 2023 20:59	John Abbott	1.33
577	Hilbert crashes with > 100 indeterminates	CoCoALib-0.99534 Seoul14	Maths Bugs	31 Jul 2014 16:57	Anna Maria Bigatti	1.5
1211	HilbertSeries should check grading	CoCoALib-0.99650 November 2019	Maths Bugs	03 Oct 2019 10:37	Anna Maria Bigatti	2.0
1081	ideal() * RingElem gives error	CoCoALib-0.99560	Maths Bugs	08 Nov 2017 17:03	Anna Maria Bigatti	1.01
1416	IdealOfProjectivePoints and MinGens	CoCoALib-0.99700	Maths Bugs	04 Mar 2020 14:19	Anna Maria Bigatti	2.01
377	IsDivisible -- exact semantics?	CoCoALib-0.99533 Easter14	Maths Bugs	17 Apr 2014 09:21	John Abbott	3.0
1565	IsInRadical: gives "weird" error	CoCoALib-0.99800	Maths Bugs	16 Sep 2021 12:49	John Abbott	2.51
1411	IsPrimary sometimes wrong	CoCoALib-0.99700	Maths Bugs	03 Feb 2020 15:42	John Abbott	1.25
1710	IsSqFree, IsIrred bugs in ZZ[x] and QQ[x]	CoCoALib-0.99850	Maths Bugs	07 Mar 2023 20:55	John Abbott	3.9
1484	ker bug (quotientinghom for R/ideal())	CoCoALib-0.99800	Maths Bugs	16 Sep 2021 13:33	Anna Maria Bigatti	2.52
1248	MinPolyQuot: guaranteed and ideal without GBasis	CoCoALib-0.99650 November 2019	Maths Bugs	31 Oct 2019 15:55	Anna Maria Bigatti	
853	NearestInt can needlessly throw InsufficientPrecision	CoCoALib-0.99550 spring 2017	Maths Bugs	05 Oct 2016 16:33	John Abbott	7.7
1143	Polynomial multiplication wrong for non integral rings	CoCoALib-0.99560	Maths Bugs	20 Dec 2017 15:48	John Abbott	4.01
1121	PrevPrime and NextPrime anomalies	CoCoALib-0.99600	Maths Bugs	03 Aug 2018 15:48	John Abbott	0.22
648	QBGenerator crashes	CoCoALib-0.99536 June 2015	Maths Bugs	17 Nov 2014 11:38	John Abbott	4.0
85	QuotientRing problem	CoCoALib-0.9951	Maths Bugs	05 Jul 2012 10:11	Anna Maria Bigatti	3.0

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1646	radical: could be more clever	CoCoALib-0.99800	Maths Bugs	24 Jan 2022 09:07	John Abbott	1.33
666	RatReconstructByLattice fails in some simple cases	CoCoALib-0.99536 June 2015	Maths Bugs	25 Jun 2015 15:16	John Abbott	2.1
938	ReadExpr: misreads $2/3^4$	CoCoALib-0.99550 spring 2017	Maths Bugs	18 Nov 2016 22:23	John Abbott	2.6
1310	RealRoots: gives odd number of roots for deg 6 irred poly	CoCoALib-0.99650 November 2019	Maths Bugs	14 Oct 2019 15:01	John Abbott	2.22
1690	resultant gives wrong answer if an arg has deg 0	CoCoALib-0.99850	Maths Bugs	18 Jan 2023 18:33	John Abbott	0.55
1725	resultant: gives wrong answer when should be 0	CoCoALib-0.99850	Maths Bugs	09 Mar 2023 20:49	John Abbott	0.75
1790	saturate with zero ideals	CoCoALib-0.99850	Maths Bugs	21 Mar 2024 17:56	John Abbott	
36	Saturation	CoCoALib-0.9950	Maths Bugs	05 Dec 2011 18:27	Anna Maria Bigatti	2.0
1656	SEGV in resultant	CoCoALib-0.99800	Maths Bugs	04 Feb 2022 21:33	John Abbott	0.66
1206	syz, SyzOfGens: which shifts for zero?	CoCoALib-0.99850	Maths Bugs	28 Mar 2024 10:15	Anna Maria Bigatti	3.0
510	SyzOfGens (CoCoALib): fix shifts	CoCoALib-0.99533 Easter14	Maths Bugs	17 Apr 2014 16:36	Anna Maria Bigatti	2.0
457	Zero to the power zero, $0^0$	CoCoALib-0.99532	Maths Bugs	03 Apr 2014 11:50	John Abbott	1.5

### New Function (142)

899	IsMaximal, IsPrimary for IDEAL (in cocoalib)	CoCoALib-0.99550 spring 2017	New Function	25 Nov 2017 10:40	Anna Maria Bigatti	6.0
1126	New function: SubmoduleOfMinGens	CoCoALib-0.99600	New Function	02 Aug 2018 16:20	Anna Maria Bigatti	4.0
585	(Hilbert-) quasi-polynomials	CoCoALib-0.99534 Seoul14	New Function	29 Jul 2014 11:18	John Abbott	2.7
278	add CoeffVecWRT to cocoalib	CoCoALib-0.99531	New Function	29 Oct 2013 14:50	John Abbott	
373	add DeleteCol, DeleteRow	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 09:51	Anna Maria Bigatti	1.51
300	Add fault tolerant rational reconstruction to library	CoCoALib-0.9953	New Function	03 Jun 2013 17:31	John Abbott	
630	Add graeffe function?	CoCoALib-0.99560	New Function	20 Dec 2017 15:51	John Abbott	15.15
236	Add homog (homogenized) for ideal	CoCoALib-0.9953	New Function	23 May 2013 08:26	Anna Maria Bigatti	
795	Add new fn InvModNoCheck	CoCoALib-0.99540 Feb 2016	New Function	21 Mar 2016 16:57	John Abbott	0.6
811	Add new fn SimplestBinaryRatBetween	CoCoALib-0.99540 Feb 2016	New Function	23 Mar 2016 15:10	John Abbott	1.9
15	Adjoint of a non-invertible matrix	CoCoALib-0.99800	New Function	16 Sep 2021 13:48	John Abbott	3.55
241	AreMonomials	CoCoALib-0.9952	New Function	01 Oct 2012 18:26	Anna Maria Bigatti	
233	AsINT and AsRAT -- ConvertTo<BigInt> and ConvertTo<BigRat>	CoCoALib-0.99532	New Function	02 Apr 2014 09:19	John Abbott	2.0
223	Automatic mapping of RingElems	CoCoALib-0.99534 Seoul14	New Function	10 Jul 2014 13:38	Anna Maria Bigatti	
11	Bareiss algorithm	CoCoALib-0.99650 November 2019	New Function	10 Oct 2019 18:45	John Abbott	0.51
584	BaseRing for all rings	CoCoALib-0.99534 Seoul14	New Function	31 Jul 2014 16:55	John Abbott	6.5
156	Brand new symbol(s)	CoCoALib-0.9951	New Function	28 May 2012 16:13		25.0
144	Buchberger-Moeller: generic impl	CoCoALib-0.99531	New Function	29 Oct 2013 14:50	John Abbott	20.0
1488	BuiltIn Interreduce-Function	CoCoALib-0.99850	New Function	15 Mar 2023 08:40	John Abbott	

#	Subject	Target version	Category	Updated	Assignee	Estimated time
571	CmpAbs for RingElem	CoCoALib-0.99534 Seoul14	New Function	17 Jul 2014 14:26	John Abbott	4.0
796	CoCoALib function for radical (or SqFree) of a polynomial	CoCoALib-0.99560	New Function	06 Nov 2017 15:31	John Abbott	
554	CoCoALib-Normaliz interface: cannot print a cone	CoCoALib-0.99534 Seoul14	New Function	28 Jul 2014 21:43	Christof Soeger	3.0
5	Coefficient extraction	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 09:22	John Abbott	10.0
520	Compute inverse in quotient ring (i.e. division in algebraic extn)	CoCoALib-0.99536 June 2015	New Function	01 Jul 2015 18:40	Anna Maria Bigatti	10.0
357	Constructor for vectors? CoCoAVector	CoCoALib-0.99700	New Function	12 Feb 2020 14:43	Anna Maria Bigatti	4.01
735	Convert a PPMonoidElem to RingElem with coefficient one	CoCoALib-0.99540 Feb 2016	New Function	22 Mar 2016 17:59	Anna Maria Bigatti	2.0
533	Convert BigInt/BigRat to string	CoCoALib-0.99533 Easter14	New Function	20 May 2014 10:33	John Abbott	7.5
1155	Create a new "prime source" iterator	CoCoALib-0.99600	New Function	03 Aug 2018 16:11	John Abbott	22.2
335	Equality of (sub)modules	CoCoALib-0.9953	New Function	29 Oct 2013 13:33	Anna Maria Bigatti	
1770	Evaluate polynomial function/class	CoCoALib-0.99850	New Function	16 Mar 2024 21:52	John Abbott	3.11
1090	ExternalLib-MathSAT: first prototype	CoCoALib-0.99560	New Function	19 Dec 2017 07:50	Anna Maria Bigatti	30.0
762	ExternalLib-GFan: first prototype	CoCoALib-0.99540 Feb 2016	New Function	24 Mar 2016 08:04	Anna Maria Bigatti	24.0
1050	ExternalLibs: function for getting info	CoCoALib-0.99550 spring 2017	New Function	28 Apr 2017 23:17	John Abbott	4.44
1436	Flatten for a matrix	CoCoALib-0.99800	New Function	29 Oct 2020 21:36	John Abbott	1.41
526	Fn to test if an integer is a power of 2	CoCoALib-0.99533 Easter14	New Function	15 Apr 2014 12:43	John Abbott	0.5
1235	FreeModule: get canonical basis	CoCoALib-0.99800	New Function	14 Feb 2022 18:25	Anna Maria Bigatti	1.75
366	function (CoCoALib) for minimal generators (like old Minimalize)	CoCoALib-0.99532	New Function	03 Apr 2014 11:52	Anna Maria Bigatti	10.0
203	Function to get the Hilbert Polynomial ring from GlobalManager	CoCoALib-0.99532	New Function	03 Apr 2014 11:52	Anna Maria Bigatti	1.5
1277	Gaussian row reduction	CoCoALib-0.99700	New Function	12 Feb 2020 15:26	John Abbott	1.99
254	How to return a Hilbert Series in CoCoALib	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 15:19	John Abbott	6.0
496	ideal: minimalize or minimalized?	CoCoALib-0.99532	New Function	01 Apr 2014 18:52	Anna Maria Bigatti	7.0
349	IdealOfPoints: gens are actually a GBasis	CoCoALib-0.9953	New Function	29 Oct 2013 13:39	Anna Maria Bigatti	
17	implement "binomial" (coefficient) for RingElem	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 09:22	John Abbott	1.0
3	implement creation of a PPMonoidElement from vector<BigInt>	CoCoALib-0.9953	New Function	15 Mar 2013 17:35	John Abbott	
1763	implement ideal(R) for zero ideal, with no generators?	CoCoALib-0.99850	New Function	16 Feb 2024 18:01	Anna Maria Bigatti	1.01
361	implement IsPrime3, IsMaximal3	CoCoALib-0.99560	New Function	25 Nov 2017 10:42	John Abbott	
848	Implement MinPoly in CoCoALib	CoCoALib-0.99542 spring 2016	New Function	22 Mar 2016 18:02	Anna Maria Bigatti	5.01
1102	Implement RootBound	CoCoALib-0.99560	New Function	06 Nov 2017 15:50	John Abbott	21.0
658	Indets actually in a poly (or vector or matrix)	CoCoALib-0.99700	New Function	13 Feb 2020 15:09	John Abbott	4.66
714	Interrupt mechanism	CoCoALib-0.99536 June 2015	New Function	28 Jun 2015 20:46	John Abbott	4.51
623	Inverse of a matrix over ZZ	CoCoALib-0.99536 June 2015	New Function	11 May 2015 17:54	Anna Maria Bigatti	3.0



#	Subject	Target version	Category	Updated	Assignee	Estimated time
248	IsDivisible for RingElem with nice interface	CoCoALib-0.99532	New Function	01 Apr 2014 19:13	Anna Maria Bigatti	5.0
1483	IsPowerOf2 for rationals	CoCoALib-0.99800	New Function	26 Oct 2020 21:38	John Abbott	0.25
356	IsZeroDivisor	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 09:23	Anna Maria Bigatti	4.0
215	Janet Bases: check and include code in CoCoALib (first prototype)	CoCoALib-0.99540 Feb 2016	New Function	24 Mar 2016 11:50	Anna Maria Bigatti	
224	Leading form	CoCoALib-0.9952	New Function	27 Jan 2014 14:59	Anna Maria Bigatti	4.0
312	LongRange(a,b) returning vector of long a..b (included)	CoCoALib-0.99532	New Function	03 Apr 2014 11:38	Anna Maria Bigatti	2.0
1619	Make saturate available in CoCoALib	CoCoALib-0.99850	New Function	22 Mar 2024 10:14	Anna Maria Bigatti	
856	MantissaAndExponent2 for twin-float	CoCoALib-0.99550 spring 2017	New Function	28 Apr 2017 09:30	John Abbott	4.01
72	MatByRows, MatByCols	CoCoALib-0.99534 Seoul14	New Function	31 Jul 2014 14:54	John Abbott	5.0
304	Module ordering and grading (and shifts)	CoCoALib-0.99534 Seoul14	New Function	31 Jul 2014 15:01	Anna Maria Bigatti	15.0
219	myDeriv for RingDenseUPolyClean still missing	CoCoALib-0.99532	New Function	02 Apr 2014 08:49	Anna Maria Bigatti	2.0
211	NBM: add SparsePolyRing as argument for ordering	CoCoALib-0.9952	New Function	18 Feb 2013 16:48	John Abbott	
1167	New class VerificationLevel	CoCoALib-0.99600	New Function	02 Aug 2018 17:29	John Abbott	2.01
1694	New expv/exponents function?	CoCoALib-0.99850	New Function	09 Mar 2023 21:48	John Abbott	3.33
1299	New fn ConstantTerm?	CoCoALib-0.99710	New Function	30 Apr 2020 14:57	John Abbott	1.66
1723	New fn CoprimePart, OddPart: naming question	CoCoALib-0.99850	New Function	07 Mar 2023 20:27	John Abbott	1.8
1580	New fn prim for polys	CoCoALib-0.99800	New Function	16 Feb 2022 20:45	John Abbott	3.33
1297	New fn: FixedDivisor (formerly IntrinsicContent)	CoCoALib-0.99650 November 2019	New Function	17 Oct 2019 23:23	John Abbott	9.7
1405	New fn: interreduction	CoCoALib-0.99800	New Function	07 Mar 2022 10:07	John Abbott	1.01
1108	New fn: IsCoprime (whenever gcd makes sense)	CoCoALib-0.99560	New Function	06 Nov 2017 15:27	John Abbott	
1210	New Fn: make public "coefficients" (of poly wrt a given PP basis)	CoCoALib-0.99850	New Function	08 Aug 2022 20:41	John Abbott	3.99
416	New fn: NumPartitions	CoCoALib-0.99532	New Function	03 Apr 2014 11:53	John Abbott	2.5
354	New function BinRepr (was BinExp, also known as Macaulay representation)	CoCoALib-0.9953	New Function	29 May 2013 16:41	John Abbott	
1301	New function primorial	CoCoALib-0.99650 November 2019	New Function	14 Oct 2019 15:10	John Abbott	0.66
902	New function: FrobeniusMat	CoCoALib-0.99550 spring 2017	New Function	28 Apr 2017 09:31	Elisa Palezzato	8.01
1212	New function: GBasisByHomog	CoCoALib-0.99850	New Function	22 Mar 2024 14:32	Anna Maria Bigatti	8.0
957	New function: HasGBasis	CoCoALib-0.99550 spring 2017	New Function	29 Apr 2017 08:32	Anna Maria Bigatti	2.01
1209	New function: HasPositiveGrading	CoCoALib-0.99650 November 2019	New Function	03 Oct 2019 10:43	Anna Maria Bigatti	5.0
1053	New function: IdealOfGBasis, IdealOfMinGens in CoCoALib	CoCoALib-0.99560	New Function	20 Nov 2017 16:07	Anna Maria Bigatti	1.01
951	New function: IsSqFree	CoCoALib-0.99550 spring 2017	New Function	18 Nov 2016 23:09	John Abbott	11.1
1427	New function: LawrenceMat	CoCoALib-0.99700	New Function	06 Mar 2020 16:35	Anna Maria Bigatti	1.23
900	New function: MinPoly of RingElem in quotient ring	CoCoALib-0.99600	New Function	03 Aug 2018 17:31	Anna Maria Bigatti	1.5

#	Subject	Target version	Category	Updated	Assignee	Estimated time
1158	New function: MinPolyQuotHeuristic --> MinPolyQuot with VerificationLevel	CoCoALib-0.99600	New Function	02 Aug 2018 16:42	Anna Maria Bigatti	4.0
1490	New function: MinusOneToPower	CoCoALib-0.99800	New Function	06 Oct 2020 09:53	John Abbott	0.99
1178	New function: myPrimaryDecomposition_0dim	CoCoALib-0.99600	New Function	03 Aug 2018 17:41	Anna Maria Bigatti	3.51
901	New function: PrimaryDecomposition0 in CoCoALib	CoCoALib-0.99600	New Function	03 Aug 2018 17:40	Anna Maria Bigatti	11.1
1251	New function: radical for monomial ideal	CoCoALib-0.99650 November 2019	New Function	15 Oct 2019 15:29	Anna Maria Bigatti	6.0
1169	New function: RandomLinearForm (CoCoALib)	CoCoALib-0.99600	New Function	02 Aug 2018 16:59	Anna Maria Bigatti	2.21
961	New function: ReducedGBasis	CoCoALib-0.99550 spring 2017	New Function	21 Apr 2017 17:08	Anna Maria Bigatti	6.0
1332	New function: vector of RingElem from string -- in CoCoALib	CoCoALib-0.99650 November 2019	New Function	29 Oct 2019 16:21	Anna Maria Bigatti	3.51
1788	New MatrixView/function "FirstRows/FirstCols"?	CoCoALib-0.99850	New Function	20 Mar 2024 15:53	Anna Maria Bigatti	4.0
431	NewPolyRing_DMPI has no constructor with a predefined PPM	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 18:39	John Abbott	2.0
210	Normaliz: "double" cone for speed and safety	CoCoALib-0.9952	New Function	18 Feb 2013 16:25	John Abbott	
625	NumTheory: sieve of Eratosthenes	CoCoALib-0.99536 June 2015	New Function	11 May 2015 16:05	John Abbott	2.0
116	ordering matrices with rational coefficients	CoCoALib-0.9950	New Function	02 Apr 2012 15:22	Anna Maria Bigatti	5.0
602	OrdMat: should it be a reference to a MatrixView in all PPOOrderings?	CoCoALib-0.99540 Feb 2016	New Function	23 Mar 2016 15:24	John Abbott	5.5
69	p-th root	CoCoALib-0.9952	New Function	04 Jul 2012 10:48	John Abbott	
62	polynomial coefficient extraction w.r.t. single variable -- dense output	CoCoALib-0.99534 Seoul14	New Function	01 Aug 2014 16:25	John Abbott	
51	polynomial coefficient extraction w.r.t. variable	CoCoALib-0.9953	New Function	27 May 2013 18:19	John Abbott	
50	Polynomial content	CoCoALib-0.9953	New Function	27 May 2013 18:16	John Abbott	
587	port to CoCoALib: Homomorphism pkg (ker, IsInjective, IsSurjective..)	CoCoALib-0.99600	New Function	03 Aug 2018 18:11	John Abbott	18.8
121	Porting "IdealOfPoints"	CoCoALib-0.9953	New Function	29 May 2013 16:58	John Abbott	
374	Porting "IdealOfProjectivePoints"	CoCoALib-0.99600	New Function	08 Feb 2019 20:56	John Abbott	1.99
122	Porting "LinKer"	CoCoALib-0.99800	New Function	15 Jan 2021 21:10	John Abbott	0.44
320	PPMonoid pseudo-ctors without symbol names	CoCoALib-0.9953	New Function	05 Mar 2013 18:16	John Abbott	
800	PPMonoidSparse: impl of sparse PPs	CoCoALib-0.99850	New Function	09 Mar 2023 22:15	John Abbott	8.99
540	Progress reporter	CoCoALib-0.99533 Easter14	New Function	20 May 2014 10:34	John Abbott	5.0
1780	radical for ideals in SparsePolyRing: code in C++	CoCoALib-0.99850	New Function	22 Mar 2024 09:13	Anna Maria Bigatti	
1684	RandomNBitPrime - new fn	CoCoALib-0.99850	New Function	08 Aug 2022 20:08	John Abbott	0.8
715	RandomSubsetIndices, RandomTupleIndices?	CoCoALib-0.99538 summer 2015	New Function	30 Jul 2015 17:39	John Abbott	2.0
955	RandomUnimodularMat - random unimodular matrix (of integers)	CoCoALib-0.99550 spring 2017	New Function	18 Nov 2016 22:39	John Abbott	
283	Rational approximation	CoCoALib-0.9953	New Function	18 Feb 2013 20:19	John Abbott	
209	ReadExpr: input polynomials in CoCoALib	CoCoALib-0.99532	New Function	27 Aug 2014 18:38	Anna Maria Bigatti	30.0
107	Recognizing finite fields	CoCoALib-0.99533 Easter14	New Function	27 Jun 2016 08:48	John Abbott	5.0

#	Subject	Target version	Category	Updated	Assignee	Estimated time
342	Remove denominators: QQ[x] -> ZZ[x] (and PushBack(coeff, PP))	CoCoALib-0.99533 Easter14	New Function	17 Apr 2014 09:23	John Abbott	3.0
91	Return type & name for "indets" of a PP	CoCoALib-0.99700	New Function	14 Feb 2020 13:26	John Abbott	2.44
407	RingElem ctor from mpz_t (from Bruns)	CoCoALib-0.99532	New Function	03 Apr 2014 11:53	John Abbott	3.0
303	Rows and Columns of a matrix	CoCoALib-0.99700	New Function	09 Jan 2020 22:17	John Abbott	1.66
979	SmallestNonDivisor -- new fn	CoCoALib-0.99560	New Function	06 Nov 2017 15:12	John Abbott	
836	SmallFpImpl: export fns for a fixed convention	CoCoALib-0.99540 Feb 2016	New Function	23 Mar 2016 15:10	John Abbott	0.33
1154	SmallFpImpl: new ctor arg to say do-not-check-that-arg-is-prime	CoCoALib-0.99600	New Function	03 Aug 2018 16:14	John Abbott	1.99
1033	Split poly into homog parts	CoCoALib-0.99560	New Function	09 Nov 2017 13:59	John Abbott	0.55
1008	square function	CoCoALib-0.99550 spring 2017	New Function	28 Apr 2017 09:31	John Abbott	1.01
39	Squarefree factorization	CoCoALib-0.99532	New Function	02 Apr 2014 18:58	John Abbott	
44	Squarefree factorization - univariate polynomials	CoCoALib-0.99531	New Function	29 Oct 2013 12:34	John Abbott	
45	Squarefree factorization - univariate polynomials, char 0	CoCoALib-0.99531	New Function	29 Oct 2013 12:34	John Abbott	
46	Squarefree factorization - univariate polynomials, char p > 0	CoCoALib-0.99531	New Function	29 Oct 2013 12:35	John Abbott	
40	Squarefree factorization - Alessio d'Alì	CoCoALib-0.99531	New Function	29 Oct 2013 12:32	John Abbott	100.0
43	Squarefree factorization - for polynomials	CoCoALib-0.99531	New Function	29 Oct 2013 12:33	John Abbott	
42	Squarefree factorization - generic case	CoCoALib-0.99531	New Function	29 Oct 2013 12:32	John Abbott	
47	Squarefree factorization - multivariate polynomials	CoCoALib-0.99532	New Function	02 Apr 2014 18:57	John Abbott	
48	Squarefree factorization - multivariate polynomials, char 0	CoCoALib-0.99531	New Function	05 Nov 2015 16:16	John Abbott	
49	Squarefree factorization - multivariate polynomials, char p > 0	CoCoALib-0.99531	New Function	29 Oct 2013 12:35	John Abbott	
41	Squarefree factorization - overhead	CoCoALib-0.99531	New Function	29 Oct 2013 12:32	John Abbott	
4	Squarefree GCD-free basis	CoCoALib-0.99700	New Function	27 Jan 2020 17:58	John Abbott	0.88
259	Squarefree(?) GCD-free basis	CoCoALib-0.99700	New Function	09 Jan 2020 22:22	John Abbott	10.7
390	Store unique copy of QQ[t_1..t_n] (RingQQt) in GlobalManager	CoCoALib-0.9953	New Function	29 Oct 2013 14:30	John Abbott	
1131	Sturm sequence	CoCoALib-0.99600	New Function	03 Aug 2018 16:05	John Abbott	4.44
30	SwapRows, Cols	CoCoALib-0.9951	New Function	05 Jul 2012 10:40	Anna Maria Bigatti	2.0
638	Time limit: let user specify time limit for a computation	CoCoALib-0.99560	New Function	08 Nov 2017 16:33	John Abbott	26.26
311	XelMat, StdDegRevLexMat, ... should be MatrixView	CoCoALib-0.99550 spring 2017	New Function	20 Jan 2017 15:16	John Abbott	5.5
<b>Portability (41)</b>						
631	Ambiguous: rank for matrix (in ex-matrix1.C)	CoCoALib-0.99536 June 2015	Portability	30 Jun 2015 15:07	John Abbott	3.4
794	ar gives warnings on fedora 23	CoCoALib-0.99800	Portability	17 Feb 2021 09:59	John Abbott	0.2
319	BOOST -- how it could help in CoCoALib	CoCoALib-0.99560	Portability	15 Dec 2017 17:30	John Abbott	
327	C++ integer shift operators		Portability	04 Mar 2013 11:27	John Abbott	

#	Subject	Target version	Category	Updated	Assignee	Estimated time
82	C++11 compatibility questions	CoCoALib-0.99850	Portability	26 Sep 2022 20:34	John Abbott	1.99
1166	C++11: allows large integer literals (in NumTheory-prime.C)	CoCoALib-0.99850	Portability	07 Mar 2024 20:49	John Abbott	0.77
581	C++14: MachineInt	CoCoALib-0.99800	Portability	18 Feb 2022 15:26	John Abbott	4.7
932	CoCoALib configuration: BOOST dependency	CoCoALib-0.99700	Portability	27 Jan 2020 15:25	John Abbott	1.66
1601	Compilation ambiguity	CoCoALib-0.99800	Portability	04 Feb 2022 21:44	John Abbott	2.22
1361	Compilation fails when compiling with libgsl	CoCoALib-0.99850	Portability	03 Feb 2024 19:56	Florian Walsh	0.55
538	Compilation problem in TmpMorsePaths.C	CoCoALib-0.99533 Easter14	Portability	20 May 2014 09:52	John Abbott	2.0
1749	Configuration hiccups on Mac M1	CoCoALib-0.99850	Portability	21 Mar 2024 20:31	John Abbott	3.33
999	configuration: include -std=c++03 by default?	CoCoALib-0.99560	Portability	08 Nov 2017 17:08	John Abbott	2.22
975	configure: possibly ignore GMP compilation flags	CoCoALib-0.99560	Portability	15 Dec 2017 15:08	John Abbott	
792	configure: search for libgmp too slow	CoCoALib-0.99700	Portability	09 Jan 2020 22:02	John Abbott	0.88
855	Copyright and authorship?	CoCoALib-0.99850	Portability	15 Mar 2023 08:06	John Abbott	6.66
1019	CPP flags in installed library	CoCoALib-0.99550 spring 2017	Portability	24 Apr 2017 17:55	John Abbott	7.7
1726	Dangling references to temporaries	CoCoALib-0.99850	Portability	25 Mar 2024 18:05	John Abbott	3.75
339	DenseUPolyClean uses size_t	CoCoALib-0.9953	Portability	28 May 2013 18:57	John Abbott	
756	frobby (v0.9.0) does not compile with g++-4.8	CoCoALib-0.99560	Portability	06 Nov 2017 16:48	John Abbott	
1402	gfan: installation problem: configure reports cdd.h present but cannot be compiled	CoCoALib-0.99700	Portability	11 Feb 2020 18:33	John Abbott	0.88
1004	In scripts: use portable test for absolute paths	CoCoALib-0.99550 spring 2017	Portability	28 Apr 2017 09:31	John Abbott	2.01
618	Instructions for compiling libnormaliz	CoCoALib-0.99800	Portability	14 Feb 2022 18:22	Anna Maria Bigatti	2.55
1473	isystem not working as expected	CoCoALib-0.99800	Portability	14 Sep 2021 11:56	John Abbott	2.51
861	Janet basis code: TmpJB files give some problems with C++11 (using CLANG/LLVM)	CoCoALib-0.99800	Portability	20 Sep 2021 16:17	John Abbott	3.33
228	libcocoa sometimes built without its index	CoCoALib-0.99550 spring 2017	Portability	28 Apr 2017 16:14	John Abbott	0.25
1005	Makefile: install target for CoCoALib	CoCoALib-0.99600	Portability	03 Aug 2018 17:08	John Abbott	4.44
517	MaxSquarableInteger gives wrong ans for unsigned long	CoCoALib-0.99533 Easter14	Portability	17 Apr 2014 09:26	John Abbott	4.0
1661	Microsoft: cannot compile with signal handling	CoCoALib-0.99850	Portability	11 Apr 2024 10:10	Nico Mexis	
642	Move code in test file into namespace CoCoA	CoCoALib-0.99536 June 2015	Portability	25 Jun 2015 17:15	John Abbott	10.0
887	My first compilations with clang	CoCoALib-0.99560	Portability	16 Jan 2018 11:37	Anna Maria Bigatti	
1295	Never use "using namespace .." in header files	CoCoALib-0.99650 November 2019	Portability	29 Oct 2019 12:00	John Abbott	1.11
1221	Reconsider design for accessing headers and libs of external libraries	CoCoALib-0.99800	Portability	09 Oct 2020 13:54	John Abbott	0.22
891	Replace auto_ptr in preparation for C++11?	CoCoALib-0.99650 November 2019	Portability	25 Mar 2019 15:45	John Abbott	3.33
1256	RingID: different values in test-output on different platforms	CoCoALib-0.99650 November 2019	Portability	27 Mar 2019 17:21	John Abbott	2.01

#	Subject	Target version	Category	Updated	Assignee	Estimated time
1308	test-GFan1 fails	CoCoALib-0.99700	Portability	11 Feb 2020 18:28	John Abbott	5.2
430	Use -fopenmp flag when compiling CoCoALib with libnormaliz	CoCoALib-0.99533 Easter14	Portability	17 Apr 2014 09:54	John Abbott	1.51
255	Use BOOST lib default location if possible	CoCoALib-0.99560	Portability	06 Nov 2017 15:49	John Abbott	0.24
573	Use symbolic links for external libraries	CoCoALib-0.99550 spring 2017	Portability	28 Apr 2017 13:37	John Abbott	9.9
613	Which ubuntu / debian packages are needed to compile CoCoA	CoCoALib-0.99850	Portability	30 Nov 2022 22:02	John Abbott	2.77
1712	Windows: New configuration script	CoCoALib-0.99850	Portability	13 Mar 2023 21:50	John Abbott	
<b>Renaming (28)</b>						
404	deg(F,X) instead of MaxExponent(F,X) ?	CoCoALib-0.99533 Easter14	Renaming	20 May 2014 09:47	John Abbott	2.0
1144	File names, coding conventions: Fns, Ops, Operations? part 1	CoCoALib-0.99560	Renaming	19 Dec 2017 07:44		3.01
1145	File names, coding conventions: Fns, Ops, Operations? part 2	CoCoALib-0.99600	Renaming	03 Aug 2018 16:17	John Abbott	3.33
824	Fn names: LexMat or MatLex; StdDegRevLexMat or MatStdDegRevLex etc	CoCoALib-0.99540 Feb 2016	Renaming	24 Mar 2016 18:01	John Abbott	
854	Function MakeTermOrd should be renamed MakeTermOrdMat?	CoCoALib-0.99800	Renaming	28 Mar 2024 16:25	Anna Maria Bigatti	1.77
1771	Hadamard bound: field names	CoCoALib-0.99850	Renaming	22 Dec 2023 21:31	John Abbott	0.95
810	ILogBase: change name?	CoCoALib-0.99540 Feb 2016	Renaming	22 Mar 2016 17:31	John Abbott	
1	MachineInteger --> MachineInt	CoCoALib-0.9950	Renaming	09 Nov 2011 17:40	Anna Maria Bigatti	9.0
619	Modulus (for CRTMill) ambiguous	CoCoALib-0.99536 June 2015	Renaming	25 Jun 2015 18:12	John Abbott	
1460	Name of TensorMat; change to KroneckerProd?	CoCoALib-0.99800	Renaming	29 Oct 2020 15:01	John Abbott	1.33
84	Names for random streams	CoCoALib-0.9953	Renaming	23 May 2013 18:44	John Abbott	
953	new file for old functions: obsolescent.C	CoCoALib-0.99550 spring 2017	Renaming	29 Mar 2017 18:13	John Abbott	7.0
410	New file: BigRatOps	CoCoALib-0.99600	Renaming	03 Aug 2018 16:15	John Abbott	0.22
310	ordering and grading (weights) matrix	CoCoALib-0.99534 Seoul14	Renaming	31 Jul 2014 17:50	Anna Maria Bigatti	5.3
1097	Rename ERR::SERIOUS to ERR::ShouldNeverGetHere	CoCoALib-0.99560	Renaming	08 Nov 2017 17:00	John Abbott	0.22
774	Rename file PPMonoidEvZZ	CoCoALib-0.99550 spring 2017	Renaming	02 Aug 2016 15:03	John Abbott	0.6
511	Rename file TmpFactor to factor	CoCoALib-0.99533 Easter14	Renaming	17 Apr 2014 09:49	John Abbott	1.4
1039	Rename iroot?	CoCoALib-0.99650 November 2019	Renaming	14 Oct 2019 15:17	John Abbott	2.34
816	Rename isqrt to FloorSqrt (following ilog renaming to FloorLog)	CoCoALib-0.99540 Feb 2016	Renaming	02 Feb 2016 14:13	John Abbott	1.1
408	Rename MatrixArith to MatrixOperations	CoCoALib-0.99533 Easter14	Renaming	17 Apr 2014 09:48	John Abbott	1.1
67	Rename MatrixViews	CoCoALib-0.99533 Easter14	Renaming	17 Apr 2014 18:38	John Abbott	1.0
21	Rename NumTheory and NumTheoryQQ	CoCoALib-0.9950	Renaming	13 Jul 2012 15:28	Anna Maria Bigatti	
22	Rename PPMonoidEvZZ?	CoCoALib-0.9953	Renaming	23 May 2013 16:58	John Abbott	10.0
28	rename RingQ, RingZ --> RingQQ, RingZZ	CoCoALib-0.9950	Renaming	10 Feb 2012 18:41	Anna Maria Bigatti	8.0

#	Subject	Target version	Category	Updated	Assignee	Estimated time
1336	Rename SparsePolyOps-MonomialIdeal into SparsePolyOps-IdealMonomial?	CoCoALib-0.99650 November 2019	Renaming	15 Oct 2019 17:33	Anna Maria Bigatti	1.0
508	Renaming: SqfreeFactor to SqFreeFactor	CoCoALib-0.99533 Easter14	Renaming	15 Apr 2014 13:26	John Abbott	1.0
153	Shorter simpler names for some bool3 values and functions	CoCoALib-0.9951	Renaming	07 Apr 2014 14:28		
1163	Split SparsePolyRing.C in smaller files	CoCoALib-0.99600	Renaming	02 Aug 2018 17:04	Anna Maria Bigatti	3.0
<b>Safety (51)</b>						
806	AssignZero for matrix	CoCoALib-0.99540 Feb 2016	Safety	23 Mar 2016 15:31	John Abbott	1.1
138	Automatic conversion from bool3 to bool?	CoCoALib-0.99533 Easter14	Safety	15 Apr 2014 12:54	John Abbott	2.0
645	Automatic mapping of RingElem: user selectable at run-time (GlobalManager?)	CoCoALib-0.99850	Safety	16 Feb 2024 17:41	John Abbott	1.11
586	BigInt ctor from a machine integer	CoCoALib-0.99540 Feb 2016	Safety	09 Oct 2015 20:18	John Abbott	4.4
1180	BigRat(0) unexpectedly compiles! (calls ctor with mpq_t arg)	CoCoALib-0.99600	Safety	15 Jan 2021 17:13	John Abbott	7.7
1563	BigRat: ctor from machine int	CoCoALib-0.99800	Safety	29 Jan 2021 11:26	John Abbott	1.55
124	change long args in matrices into MachineInt (?)	CoCoALib-0.9953	Safety	30 May 2013 15:55	John Abbott	
391	Check consistency of template class factorization	CoCoALib-0.99532	Safety	03 Apr 2014 11:54		2.0
860	Check impl of RingTwinFloatImpl::myIsRational	CoCoALib-0.99550 spring 2017	Safety	28 Apr 2017 09:33	John Abbott	3.01
1585	CRASH/ABORT: GMP overflow	CoCoALib-0.99800	Safety	22 Sep 2021 17:45	John Abbott	6.66
1590	CRASH: LinKerZZ	CoCoALib-0.99800	Safety	16 Sep 2021 12:27	John Abbott	1.49
807	DiagMat: mySetEntry checks the entry is writable only if debugging active	CoCoALib-0.99550 spring 2017	Safety	28 Apr 2017 09:33	John Abbott	1.01
935	ElimMat, ElimHomogMat: complain about zero or negative weights	CoCoALib-0.99700	Safety	13 Feb 2020 10:30	Anna Maria Bigatti	0.99
268	Exponent range (in power products)	CoCoALib-0.9953	Safety	08 Oct 2015 12:10	John Abbott	
950	factor and SmoothFactor for integers --> FactorINT, FactorINT_TrialDiv, FactorINT_PollardRho	CoCoALib-0.99850	Safety	13 Mar 2023 22:02	John Abbott	
429	factorization: public data fields, or mem fns allowing the fields to be updated.	CoCoALib-0.99533 Easter14	Safety	17 Apr 2014 09:50	John Abbott	4.01
1260	Fix file permissions after using CVS	CoCoALib-0.99700	Safety	12 Feb 2020 16:16	John Abbott	2.5
1085	Fns with "OUT" args: should they give ERR::MixedRings?	CoCoALib-0.99850	Safety	21 Mar 2024 20:29	John Abbott	1.11
1113	gcd crashes (Floating point exception)	CoCoALib-0.99650 November 2019	Safety	30 Oct 2019 22:16	John Abbott	
180	GlobalManager: registration of global variables	CoCoALib-0.99560	Safety	08 Nov 2017 17:16	John Abbott	15.0
1523	Input fns: action when when istream is in bad state?	CoCoALib-0.99800	Safety	17 Feb 2021 11:01	John Abbott	2.22
1529	INPUT questions	CoCoALib-0.99800	Safety	17 Feb 2021 11:02	John Abbott	3.11
1500	IsDivisible in a field?	CoCoALib-0.99800	Safety	23 Oct 2020 10:57	John Abbott	3.99
178	IsHomog: should it throw an error when there is no grading?	CoCoALib-0.9953	Safety	29 Oct 2013 14:25	Anna Maria Bigatti	

#	Subject	Target version	Category	Updated	Assignee	Estimated time
649	Make SmallFpImpl safer to use	CoCoALib-0.99540 Feb 2016	Safety	02 Feb 2016 12:36	John Abbott	19.9
1078	makefile: ungraceful when interrupted	CoCoALib-0.99560	Safety	08 Nov 2017 18:08	John Abbott	6.6
1083	MinPolyQuot: check input (was: MinPolyQuot gives "bad characteristic" error)	CoCoALib-0.99560	Safety	15 Dec 2017 16:39	Anna Maria Bigatti	
739	Move code in examples into namespace CoCoA	CoCoALib-0.99536 June 2015	Safety	01 Jul 2015 18:38	John Abbott	5.0
1409	myTestIsPrimary & Co. : fix design	CoCoALib-0.99710	Safety	30 Apr 2020 14:20	Anna Maria Bigatti	6.66
1223	NewPolyRing default indet names	CoCoALib-0.99650 November 2019	Safety	10 Oct 2019 19:13	John Abbott	4.01
789	NumTheory: behaviour of InvMod when inverse does not exist	CoCoALib-0.99560	Safety	08 Nov 2017 17:44	John Abbott	5.55
413	OrdvArith: use of a single buffer is NOT THREADSAFE	CoCoALib-0.99532	Safety	03 Apr 2014 11:53	John Abbott	5.0
679	power for PPs is too slow	CoCoALib-0.99536 June 2015	Safety	29 Jun 2015 13:03	John Abbott	2.56
428	PPMonoidOv is not threadsafe	CoCoALib-0.99533 Easter14	Safety	17 Apr 2014 09:49	John Abbott	1.51
269	PPMonoids: check for exponent overflow in power function	CoCoALib-0.9953	Safety	28 May 2013 18:16	John Abbott	
814	PPOrdering: matrix ordering, what rings are allowed.	CoCoALib-0.99550 spring 2017	Safety	28 Apr 2017 09:33	John Abbott	2.01
350	problem with "matrix" argument in functions	CoCoALib-0.99535 Sep14	Safety	11 Sep 2014 16:41	John Abbott	
1345	Problem with linking the library	CoCoALib-0.99650 November 2019	Safety	19 Oct 2019 20:28	Anna Maria Bigatti	1.11
351	Problems with DenseMatImpl::myResize	CoCoALib-0.99533 Easter14	Safety	17 Apr 2014 08:24	Anna Maria Bigatti	3.0
1655	Remove ability to compile CoCoALib against UNINSTALLED gmp?	CoCoALib-0.99800	Safety	14 Feb 2022 10:00	John Abbott	3.51
73	Repeated rows/cols in submat	CoCoALib-0.99534 Seoul14	Safety	17 Jul 2014 14:39		
1547	Require decimal mode for ostream?	CoCoALib-0.99800	Safety	04 Feb 2022 21:50	John Abbott	0.7
261	Review the utility of RefRingElem	CoCoALib-0.9952	Safety	18 Feb 2013 12:50	John Abbott	
1522	SEGV: avoid long linked lists of loaves in MemPools	CoCoALib-0.99850	Safety	09 Mar 2023 21:50	John Abbott	3.99
1048	Several tests fail when threadsafe-hack is active	CoCoALib-0.99550 spring 2017	Safety	22 Apr 2017 22:43	John Abbott	0.33
1395	SHA checksum for released code	CoCoALib-0.99800	Safety	09 Oct 2020 14:12	John Abbott	5.01
190	Subtle ref count bug for poly rings (via CoeffEmbeddingHom)	CoCoALib-0.99535 Sep14	Safety	11 Sep 2014 17:20	John Abbott	7.7
696	test-OrderedRing: activate or eliminate?	CoCoALib-0.99550 spring 2017	Safety	28 Apr 2017 09:33	John Abbott	3.01
1625	Use new C++ keyword override	CoCoALib-0.99800	Safety	04 Feb 2022 21:48	John Abbott	12.5
298	Valgrind: keep CoCoALib at 0 memory leaks	CoCoALib-0.99533 Easter14	Safety	01 Aug 2014 08:21	Anna Maria Bigatti	10.0
804	ZeroMat and IdentityMat should produce a matrix not a ConstMatrixView	CoCoALib-0.99540 Feb 2016	Safety	23 Mar 2016 15:20	John Abbott	4.3
<b>Tidying (70)</b>						
1182	"mod" for BigInt	CoCoALib-0.99600	Tidying	03 Aug 2018 16:27	John Abbott	2.0
1218	32-bit or 64-bit preprocessor macro?	CoCoALib-0.99880	Tidying	22 Apr 2024 20:21	John Abbott	1.95
1649	Add file SparsePolyOps-vector.C	CoCoALib-0.99850	Tidying	25 Mar 2024 17:49	Anna Maria Bigatti	5.01

#	Subject	Target version	Category	Updated	Assignee	Estimated time
864	Assignment of rings (esp. derived rings such as PolyRing)	CoCoALib-0.99550 spring 2017	Tidying	28 Apr 2017 09:34	John Abbott	1.51
1689	Automatic mapping of RHS in += etc	CoCoALib-0.99850	Tidying	16 Feb 2024 17:35	John Abbott	0.88
1605	binomial: domain of defn?	CoCoALib-0.99800	Tidying	14 Sep 2021 12:01	John Abbott	1.51
982	Catching interrupts in example progs?	CoCoALib-0.99700	Tidying	09 Jan 2020 22:29	John Abbott	1.99
641	Clean test-FreeModule1	CoCoALib-0.99536 June 2015	Tidying	26 Jun 2015 16:58	Anna Maria Bigatti	1.0
1753	Clean up EulerTotient, InvTotient jungle in NumTheory-misc	CoCoALib-0.99850	Tidying	29 Mar 2024 08:25	John Abbott	0.95
119	CoCoA4io	CoCoALib-0.9953	Tidying	29 May 2013 11:36	John Abbott	5.0
560	CoCoALib/io.H	CoCoALib-0.99533 Easter14	Tidying	15 May 2014 14:26	John Abbott	1.0
1135	Compiler with --debug configuration option gives errors	CoCoALib-0.99560	Tidying	15 Dec 2017 15:16	John Abbott	
759	Configuration: where to keep source for test compilations?	CoCoALib-0.99560	Tidying	08 Nov 2017 18:13	John Abbott	1.11
426	ConvertTo with optional arg to give more helpful error message	CoCoALib-0.99532	Tidying	03 Apr 2014 11:54	John Abbott	2.5
411	design of factorization template class	CoCoALib-0.99532	Tidying	03 Apr 2014 11:54	John Abbott	8.0
1608	Domain of definition of NextPrime (and PrevPrime)	CoCoALib-0.99800	Tidying	20 Oct 2021 22:09	John Abbott	1.01
834	Fix test failures (after revising MatrixForOrdering)	CoCoALib-0.99540 Feb 2016	Tidying	24 Mar 2016 11:42	Anna Maria Bigatti	
1680	FloorLog2 or SizeInBase?	CoCoALib-0.99850	Tidying	08 Aug 2022 20:16	John Abbott	1.66
165	FractionField -- only of TrueGCDDomain?	CoCoALib-0.99534 Seoul14	Tidying	11 Jul 2014 12:05	John Abbott	4.4
1362	GBasis verbose mode: some output is on cerr/clog	CoCoALib-0.99700	Tidying	12 Feb 2020 18:14	John Abbott	
815	GlobalManager: Imminent disaster should be a proper error	CoCoALib-0.99550 spring 2017	Tidying	28 Apr 2017 09:32	John Abbott	2.01
819	GradingMat: does anyone need it?	CoCoALib-0.99540 Feb 2016	Tidying	24 Mar 2016 11:58	Anna Maria Bigatti	
694	In test files: when is assert.H needed?	CoCoALib-0.99550 spring 2017	Tidying	28 Apr 2017 09:32	John Abbott	3.51
1515	Indets in coeffering are ringelems in coeffering?	CoCoALib-0.99800	Tidying	27 Oct 2020 18:01	John Abbott	0.99
167	Integer operations	CoCoALib-0.9951	Tidying	31 May 2012 17:39	John Abbott	4.0
535	IO: move GlobalInput etc to CoCoA server!	CoCoALib-0.99533 Easter14	Tidying	15 May 2014 14:58	John Abbott	2.0
498	IsIntegralDomain, lamIntegralDomain3	CoCoALib-0.99533 Easter14	Tidying	17 Apr 2014 09:50	John Abbott	3.01
825	IsPositiveGrading -- really need 2 signatures?	CoCoALib-0.99600	Tidying	03 Aug 2018 17:01	John Abbott	0.88
821	IsTermOrdering	CoCoALib-0.99540 Feb 2016	Tidying	24 Mar 2016 12:02	John Abbott	
89	MachineInt or long as fn arg type for indices	CoCoALib-0.9953	Tidying	31 May 2013 16:53	John Abbott	8.0
1528	MacOS compilation with clang	CoCoALib-0.99800	Tidying	23 Feb 2022 11:38	John Abbott	2.88
536	Make RingBase::myCharacteristic a fn rather than a proc	CoCoALib-0.99850	Tidying	09 Mar 2023 21:58	John Abbott	1.0
693	Makefile_dependencies in src/tests/	CoCoALib-0.99560	Tidying	15 Dec 2017 17:21	John Abbott	0.44
1326	Modify function myElim so that it returns ideal? (not quite)	CoCoALib-0.99850	Tidying	18 Mar 2024 16:03	Anna Maria Bigatti	
820	NewMatMinimize, NewMatCompleteOrd - a godforsaken mess!	CoCoALib-0.99540 Feb 2016	Tidying	24 Mar 2016 18:09	John Abbott	



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827	NewPositiveMat also for matrices over QQ? Also NewIntegerOrdMat. (now called MakeTermOrd)	CoCoALib-0.99550 spring 2017	Tidying	20 Jan 2017 14:26		0.99
291	NewZZmod and NewRingFp: improve manual, clarify implementation	CoCoALib-0.99532	Tidying	03 Apr 2014 11:54	John Abbott	1.0
829	PPOrderingCtor: name of mem fn which actually constructs?	CoCoALib-0.99560	Tidying	10 Nov 2017 15:09	John Abbott	2.34
831	primary.cocoa5	CoCoALib-0.99540 Feb 2016	Tidying	22 Mar 2016 17:42	Anna Maria Bigatti	
528	Release: CoCoALib-0.99533	CoCoALib-0.99533 Easter14	Tidying	30 Jul 2014 10:56	Anna Maria Bigatti	2.5
599	Release: CoCoALib-0.99534	CoCoALib-0.99534 Seoul14	Tidying	11 Sep 2014 16:37	Anna Maria Bigatti	2.5
604	Release: CoCoALib-0.99535	CoCoALib-0.99535 Sep14	Tidying	11 May 2015 14:07	Anna Maria Bigatti	2.5
621	Release: CoCoALib-0.99536	CoCoALib-0.99536 June 2015	Tidying	08 Oct 2015 14:48	Anna Maria Bigatti	3.0
754	Release: CoCoALib-0.99538 (together with CoCoA-5.1.2)	CoCoALib-0.99538 summer 2015	Tidying	08 Oct 2015 14:47	Anna Maria Bigatti	4.0
944	Release: CoCoALib-0.99550 (together with CoCoA-5.2.0)	CoCoALib-0.99550 spring 2017	Tidying	08 May 2017 11:54	Anna Maria Bigatti	5.11

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