

## CoCoA-5 - CoCoA-5.4.2 (???) 2022)

#	Priority	Subject	Assignee	Updated	Category	% Done	Estimated time
<b>bug (16)</b>							
1781	Urgent	GenReprCompute: SERIOUS ERROR	Anna Maria Bigatti	09 Feb 2024 08:16	bug	90	
1228	High	SLUG: filling an array	John Abbott	03 Feb 2022 19:42	bug	30	
1794	Normal	Do not use random inside tests!!		10 May 2024 11:22	bug	70	
1502	Normal	SystemCommand in Microsoft version	John Abbott	03 Feb 2022 19:46	bug	50	
1604	Normal	SqFreeFactor crashes over non-perfect field		28 Sep 2022 15:00	bug	10	
1229	Normal	append is slow		04 Nov 2021 20:28	bug	0	
1552	Normal	subst: not checking args properly		03 Feb 2022 19:07	bug	0	
1574	Normal	ApproxSolveTF		24 Sep 2021 22:29	bug	0	
1639	Normal	RealRoots: crashes after interrupting		07 Dec 2021 20:26	bug	0	
1734	Normal	Fix call to HilbertPoly in test/TutHokkaido5	Anna Maria Bigatti	12 Apr 2023 14:44	bug	100	1.0
1709	Normal	Test tut-CoCoLA2	Anna Maria Bigatti	19 Apr 2024 17:10	bug	100	1.01
1717	Urgent	CRASH: equality test to a FUNCTION	John Abbott	14 Dec 2022 16:23	bug	100	1.11
1640	Normal	MinSubsetOfGens does not find min subset	Anna Maria Bigatti	21 Jan 2022 10:10	bug	100	1.66
1745	Normal	Printing of Hilbert series via indent	John Abbott	22 Dec 2023 20:10	bug	100	1.67
1714	Normal	IsDivisible error (in QuotRing)	John Abbott	14 Dec 2022 16:44	bug	100	1.99
1171	Normal	RealRoots: first point is sometimes wrong?	John Abbott	14 Mar 2023 22:01	bug	100	6.25
<b>Cleaning (11)</b>							
474	Urgent	Eliminate package BinRepr	Anna Maria Bigatti	03 Feb 2022 19:47	Cleaning	50	
1746	Normal	ManExamples target: need to reset VerbosityLevel	Anna Maria Bigatti	10 May 2024 11:08	Cleaning	90	
465	Normal	Emacs UI; remove cruft		13 Nov 2020 11:17	Cleaning	0	
1192	Normal	RealRoots: rational roots (but not binary rational roots)		04 Nov 2021 20:29	Cleaning	0	
1648	Normal	ApproxSolve and RationalSolve take different input		03 Feb 2022 19:08	Cleaning	0	
1679	Normal	BuiltinFunctions-GFan includes normaliz?!?		20 Apr 2022 21:49	Cleaning	0	
476	Low	Review utility of package IO	Anna Maria Bigatti	03 Feb 2022 19:09	Cleaning	40	
1760	Normal	Quitting can be slow	John Abbott	05 May 2024 20:49	Cleaning	100	0.95
1696	Normal	Which BOOST libs are actually needed?	John Abbott	09 Mar 2023 22:41	Cleaning	100	2.49
929	Normal	Clean up CoCoALibSupplement	Anna Maria Bigatti	03 Feb 2022 19:48	Cleaning	20	3.0
1697	Normal	Specifying BOOST in configure	John Abbott	14 Dec 2022 22:33	Cleaning	100	4.49

## CoCoA-4 function to be added (5)

#	Priority	Subject	Assignee	Updated	Category	% Done	Estimated time
977	Normal	"universal denominator" (related with GroebnerFanIdeals)		03 Feb 2022 19:11	CoCoA-4 function to be added	20	
368	Normal	port SmithNormalForm (CoCoA-4)package to CoCoA-5	Anna Maria Bigatti	22 Jan 2024 10:37	CoCoA-4 function to be added	10	
1564	Normal	Geometrical theorem proving package		19 Jan 2021 09:20	CoCoA-4 function to be added	0	
1415	Normal	thmproving package	Anna Maria Bigatti	13 Jun 2022 15:31	CoCoA-4 function to be added	60	5.0
78	High	Elim ordering and matrix ordering in CoCoA-5	Anna Maria Bigatti	28 Mar 2024 07:25	CoCoA-4 function to be added	50	6.0
<b>CoCoA-4 function: obsolete (2)</b>							
1568	High	RMap and image: obsolescent?	Anna Maria Bigatti	17 Oct 2022 14:04	CoCoA-4 function: obsolete	40	
1626	Normal	NewMat: should be obsolescent?	John Abbott	19 Jan 2024 18:11	CoCoA-4 function: obsolete	90	0.77
<b>CoCoA-5 function: new (14)</b>							
1724	Normal	New function: AdjacentMinors	Anna Maria Bigatti	14 Mar 2023 11:53	CoCoA-5 function: new	100	
216	Normal	Janet Bases: port function into CoCoA-5		05 Nov 2021 16:12	CoCoA-5 function: new	20	
242	Normal	CoCoA-5 Projects for students (e.g. crediti F and tesi)		21 Oct 2022 15:53	CoCoA-5 function: new	10	
579	Normal	Prototype package for Linear Commutative Algebra	Elisa Palezzato	15 May 2020 10:27	CoCoA-5 function: new	10	
1372	Normal	New function: find ?	Anna Maria Bigatti	04 Nov 2021 23:01	CoCoA-5 function: new	10	
1535	Normal	New functions: argmin, argmax		26 Nov 2020 15:52	CoCoA-5 function: new	10	
1644	Normal	Allow user to choose whether to print finite field elems as symm residues or non-neg residue		03 Feb 2022 19:15	CoCoA-5 function: new	10	
1469	Normal	Get indexed indets from a polyring		19 Jan 2021 12:39	CoCoA-5 function: new	0	
1476	Normal	Lin alg with polys		06 Aug 2020 15:03	CoCoA-5 function: new	0	
1541	Normal	foreach with ref to list entry?		15 Jan 2024 19:39	CoCoA-5 function: new	0	
1659	Normal	Jordan Normal Form?		07 Feb 2022 17:57	CoCoA-5 function: new	0	
1112	Normal	New function: IsEmpty	Anna Maria Bigatti	22 Dec 2023 19:21	CoCoA-5 function: new	100	2.0
1549	Normal	Add sagbi package	Anna Maria Bigatti	18 Feb 2022 16:18	CoCoA-5 function: new	10	2.0
578	Normal	Gaussian Elimination		15 May 2020 10:26	CoCoA-5 function: new	10	6.0
<b>EmacsUI (7)</b>							
1432	Normal	Emacs UI: cocoa5-shell-check-process vs. process-status		05 Nov 2021 16:32	EmacsUI	0	
1766	Low	Emacs 29: Removal of obsolete entries	John Abbott	22 Dec 2023 11:35	EmacsUI	100	
1623	Low	EmacsUI: annoying colours	Anna Maria Bigatti	19 Jan 2024 16:50	EmacsUI	90	
1486	Low	Emacs UI: indentation in a package		12 Nov 2021 11:19	EmacsUI	10	
448	Low	EmacsUI Source/SourceRegion produce warning on Microsoft Windows 7 Ultimate		03 Feb 2022 19:51	EmacsUI	0	
1551	Low	Emacs: avoid making buffer visible in 2 "windows"?		19 Apr 2021 14:11	EmacsUI	0	

#	Priority	Subject	Assignee	Updated	Category	% Done	Estimated time
985	Normal	Microsoft (Windows 10, maybe other versions): more help for installation	Anna Maria Bigatti	16 Feb 2022 20:26	EmacsUI	10	8.0
<b>enhancing/improving (43)</b>							
635	High	Automatic mapping of RingElem (in operation with a compound value)	John Abbott	14 Mar 2023 14:59	enhancing/improving	100	
1795	Normal	Makefile problem: needlessly relinks CoCoAInterpreter	John Abbott	18 Mar 2024 20:51	enhancing/improving	90	
1508	Normal	Initial ring		10 May 2024 10:50	enhancing/improving	50	
1262	Normal	Split BuiltinFunctions-CoCoALib.C into smaller files		03 Feb 2022 19:53	enhancing/improving	30	
1681	Normal	Should Starting be case-insensitive?	Anna Maria Bigatti	22 Dec 2023 11:27	enhancing/improving	20	
1556	Normal	DivAlg slower than NR	Anna Maria Bigatti	08 Jan 2021 11:20	enhancing/improving	10	
1041	Normal	Separators for elements of a list		04 Jan 2024 10:14	enhancing/improving	10	
1071	Normal	LinKerBasis is user-unfriendly		03 Feb 2022 19:54	enhancing/improving	10	
1104	Normal	Eigenvectors: inconsistent return type	John Abbott	03 Feb 2022 19:20	enhancing/improving	10	
1244	Normal	MSatLinSolve: req minor improvements		03 Feb 2022 20:14	enhancing/improving	10	
723	Normal	Referring to indets with multiple indices from a polyring		12 Feb 2021 12:16	enhancing/improving	0	
865	Normal	Implicit: make easier to use with rational functions	Anna Maria Bigatti	03 Feb 2022 19:20	enhancing/improving	0	
1204	Normal	MinPoly for matrix: fix in cocoa5 and export to cocoa5		03 Feb 2022 19:21	enhancing/improving	0	
1237	Normal	ker: for PolyAlgHom from QQ[x,y,z] to QQ(t)		10 Jun 2021 18:06	enhancing/improving	0	
1313	Normal	Automatic conversion from RINGELEM to INT		03 Feb 2022 19:21	enhancing/improving	0	
1425	Normal	MakeTerm: implement in C++		03 Feb 2022 19:22	enhancing/improving	0	
1429	Normal	Stack overflow reading long list (SEGV)		19 Apr 2021 14:14	enhancing/improving	0	
1475	Normal	HilbertSeries: make into proper rational function		03 Feb 2022 19:54	enhancing/improving	0	
1503	Normal	More flexible ring creation syntax (after use or ::=)		08 Oct 2020 14:16	enhancing/improving	0	
1519	Normal	Interpreter fn Value::from can use std::move?		03 Feb 2022 19:54	enhancing/improving	0	
1560	Normal	elim for modules		03 Feb 2022 19:55	enhancing/improving	0	
1581	Normal	Slow sqfr: rad(f)		12 Oct 2021 09:22	enhancing/improving	0	
1583	Normal	New fn ElapsedTimeFrom?		18 Mar 2024 21:27	enhancing/improving	0	
1631	Normal	Use filesystem::path instead of string (packageDir, CoCoAManFileName)		14 Jan 2022 10:27	enhancing/improving	0	
1638	Normal	MinSubsetOfGens sometimes very slow		06 Dec 2021 20:37	enhancing/improving	0	
1671	Normal	Refactor C++ impl in OnlineHelp		11 Mar 2024 07:56	enhancing/improving	0	
1747	Normal	NewPolyRing with indices -- better interface?		29 Jun 2023 18:09	enhancing/improving	0	
1772	Normal	Continued fraction: arg type RAT or RAT/INT?		28 Nov 2023 22:17	enhancing/improving	0	
1545	Low	CoeffOfTerm: in CoCoALibSupplement		11 Dec 2020 12:30	enhancing/improving	20	
716	Low	NotBuiltin.cpkg5: indent for MODULE		06 Oct 2022 20:00	enhancing/improving	10	

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1533	Low	RingElem and IndetSymbols not compatible		06 Nov 2020 13:56	enhancing/improving	10	
1141	Low	IsInRadical: for monomial ideals		15 May 2020 10:53	enhancing/improving	0	
1616	Normal	UnivariateIndetIndex: remove cocoa-5 implementation and use CoCoALib's	Anna Maria Bigatti	19 Nov 2021 15:32	enhancing/improving	100	0.77
610	Low	Variable It: assign before or after printing	John Abbott	10 May 2024 11:16	enhancing/improving	100	0.88
1072	Normal	syz: apply to ModuleElem?	Anna Maria Bigatti	26 Mar 2024 17:12	enhancing/improving	100	1.01
1496	Low	Use "special" names for variables inside tests	John Abbott	10 May 2024 11:07	enhancing/improving	100	1.11
823	Normal	NewPolyRing with weights -- better interface?	Anna Maria Bigatti	18 Mar 2024 21:39	enhancing/improving	100	2.01
1477	Normal	Packages: questions from Andraschko	John Abbott	14 Mar 2023 21:57	enhancing/improving	100	2.33
1698	Normal	indent: return a string?	Anna Maria Bigatti	15 Mar 2023 07:30	enhancing/improving	100	2.66
1075	Low	LaTeX package: power-product printing	Anna Maria Bigatti	22 Dec 2023 19:30	enhancing/improving	100	3.65
1573	Low	ApproxSolve: very imprecise	John Abbott	24 Sep 2021 22:26	enhancing/improving	100	3.99
1629	Normal	RingElem slow with many indets	Anna Maria Bigatti	22 Dec 2023 20:06	enhancing/improving	100	6.33
948	Normal	radical is slow (compared to singular) on these examples	Anna Maria Bigatti	22 Dec 2023 20:12	enhancing/improving	100	16.0
<b>External Libs (1)</b>							
709	High	Speed of some Normaliz calls (NmzComputation)		03 Feb 2022 19:23	External Libs	10	
<b>GUI (3)</b>							
1393	Normal	GUI with Qt5	Ulrich von der Ohe	30 Nov 2022 22:07	GUI	90	
1293	Low	Vim Plugin for CoCoA		24 Sep 2021 21:47	GUI	70	
750	Normal	C5 GUI: very slow when printing many short lines	John Abbott	07 Oct 2022 11:06	GUI	100	1.23
<b>Manual/documentation (24)</b>							
1534	Immediate	Install CoCoA-5 on MacOS-10.15+		07 Oct 2022 14:35	Manual/documentation	50	
912	Urgent	Add TUTORIALS to online manual		17 Oct 2022 14:02	Manual/documentation	80	
1539	High	Website: installation instructions for Microsoft	Anna Maria Bigatti	14 Mar 2023 11:56	Manual/documentation	100	
1741	High	Documentation/Manual for HilbertFn		10 May 2023 20:49	Manual/documentation	20	
1566	Normal	What does rad do?	Anna Maria Bigatti	08 May 2024 16:49	Manual/documentation	100	
1079	Normal	CoCoAManual: AffHilbertFn accepts also ideal (correct?)		08 May 2023 20:44	Manual/documentation	20	
1636	Normal	Missing/Incomplete manual entries		30 Nov 2023 17:21	Manual/documentation	10	
557	Normal	CoCoAManual: improve part on input/output	Anna Maria Bigatti	03 Feb 2022 20:15	Manual/documentation	0	
1241	Normal	GDPR: website, mailing list		05 Feb 2022 20:34	Manual/documentation	0	
1245	Normal	Online manual entry for RingElem needs to be improved		03 Feb 2022 20:15	Manual/documentation	0	
1252	Normal	ShapeLemma: no manual entry		03 Feb 2022 20:16	Manual/documentation	0	

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1320	Normal	CoCoA-5 manual: incorrect empty line in syntax box (in PDF file)		04 Nov 2021 23:16	Manual/documentation	0	
1350	Normal	CoCoA manual: entry for operators, shortcuts		05 Feb 2022 20:35	Manual/documentation	0	
1365	Normal	Package EdgeIdeal not documented		03 Feb 2022 20:16	Manual/documentation	0	
1418	Normal	Manual entry for NewPolyRing		03 Feb 2022 20:16	Manual/documentation	0	
1430	Normal	HTML manual: search using keywords?		04 Nov 2021 23:17	Manual/documentation	0	
1454	Normal	Filenames in release CoCoAManual/html containing [obsolete]	Anna Maria Bigatti	03 Feb 2022 20:17	Manual/documentation	0	
1480	Normal	Documentation for making ring with parameters		03 Feb 2022 20:18	Manual/documentation	0	
1548	Normal	Man page for UniversalGBasis	Anna Maria Bigatti	03 Feb 2022 20:18	Manual/documentation	0	
1621	Normal	Doc for the various BuiltIn files		18 Oct 2021 11:26	Manual/documentation	0	
1663	Normal	GCDList not documented		31 May 2022 09:55	Manual/documentation	0	
1686	Normal	Manual entry for random (see also)		09 Jun 2022 20:49	Manual/documentation	0	
181	Low	Functions throwing error even though (trivially) defined		04 Nov 2021 23:09	Manual/documentation	10	
322	High	Installation instructions (on website)	Anna Maria Bigatti	13 Jun 2022 15:32	Manual/documentation	60	5.0

### Parser/Interpreter (11)

7	High	Automatic mapping between (some) rings	Anna Maria Bigatti	10 Mar 2023 17:08	Parser/Interpreter	80	
461	Normal	New keyword " ->"? (same as "return")	John Abbott	26 Sep 2022 16:23	Parser/Interpreter	100	
1650	Normal	Potentially confusing prompt: waiting for semicolon		10 May 2024 10:33	Parser/Interpreter	70	
1544	Normal	CoCoA coding conventions for parser/interpreter?		11 Dec 2020 12:01	Parser/Interpreter	10	
97	Normal	OpenOFile		05 May 2024 20:44	Parser/Interpreter	0	
1292	Normal	Interpreter: fns which accept INT or RAT		03 Feb 2022 19:33	Parser/Interpreter	0	
1603	Low	Unhelpful behaviour in "compatibility mode": double error mesg		08 May 2024 16:56	Parser/Interpreter	100	
1440	Low	Surprising parser error: INT+DOT+IDENTIFIER		04 Nov 2021 23:10	Parser/Interpreter	0	
1587	Normal	Multiline string literals (again)	John Abbott	14 Mar 2023 21:52	Parser/Interpreter	100	1.49
946	Urgent	Function "ideal" evaluates the argument twice	Anna Maria Bigatti	23 Feb 2022 12:14	Parser/Interpreter	80	6.0
31	Normal	theValue makes copy	Anna Maria Bigatti	18 Feb 2022 16:42	Parser/Interpreter	60	10.0

### Portability (5)

1675	Urgent	Version 5.4.0 requires Visual C++ Runtime 2013 on Windows		31 Mar 2024 20:40	Portability	100	
83	Normal	C++11 compatibility questions		03 Feb 2022 19:59	Portability	40	
1373	Normal	GFan also for Microsoft?	Anna Maria Bigatti	17 Oct 2022 13:59	Portability	10	
1146	Low	Use Flatpak and/or Snap on Linux?		06 Oct 2020 15:55	Portability	0	
1695	Normal	boost-find-lib.sh	John Abbott	09 Mar 2023 22:42	Portability	100	0.88

### Release (6)

11 May 2024

#	Priority	Subject	Assignee	Updated	Category	% Done	Estimated time
1474	High	Website: link to JSAG?		16 Feb 2022 20:27	Release	0	
1701	Normal	Preliminary packages		18 Mar 2024 21:05	Release	10	
1445	Normal	Automatic way to produce statically linked CoCoAInterpreter		03 Feb 2022 19:38	Release	0	
1453	Normal	Use symbolic links for release files		03 Feb 2022 19:39	Release	0	
1708	Normal	Linux: just 1 executable, should be 2 (with & without readline)		05 May 2024 19:15	Release	0	
1688	Normal	Release CoCoA 5.4.2		14 Feb 2023 21:29	Release	0	
<b>Renaming (2)</b>							
1456	Normal	IntersectList or IntersectionList		15 Mar 2024 18:24	Renaming	0	
1718	Normal	FactorINT with time-out	John Abbott	22 Dec 2023 19:46	Renaming	100	4.1