

## CoCoALib - Issues

| #    | Project  | Parent task  | Priority  | Subject   | Assignee    | Updated           | Category        | % Done |
|------|----------|--|-----------|---|-------------|-------------------|-----------------|--------|
| 6    | CoCoALib |  | High      | Sort out RingElem, RefRingElem, ConstRefRingElem mess                   | John Abbott | 01 Aug 2014 08:59 |                 | 0      |
| 1115 | CoCoALib |  | Normal    | New class: exterior algebra   | John Abbott | 31 Jan 2024 21:59 | Data Structures | 20     |
| 396  | CoCoALib |  | Normal    | PPMonoidElemAlias: redesign PPMonoidElem the same way as RingElem?      | John Abbott | 13 May 2015 09:57 | Data Structures | 0      |
| 353  | CoCoALib |  | Normal    | Missing documentation and tests for myRecvTwinFloat                     | John Abbott | 14 Jul 2014 14:40 | Documentation   | 0      |
| 1576 | CoCoALib |  | Normal    | cmp for machine integers  | John Abbott | 21 Jan 2024 20:23 | Improving       | 20     |
| 1756 | CoCoALib |  | Normal    | deg(f) is slow if f is long   | John Abbott | 21 Mar 2024 20:40 | Improving       | 50     |
| 1280 | CoCoALib |  | High      | Determinant & Inverse of matrix over non integral domain                | John Abbott | 21 Jan 2024 19:43 | Improving       | 40     |
| 874  | CoCoALib |  | Normal    | factor: too slow on largish multivariate poly                           | John Abbott | 26 Feb 2019 16:29 | Improving       | 20     |
| 1733 | CoCoALib |  | Low       | FactorINT: funny order  | John Abbott | 22 Apr 2024 19:51 | Improving       | 60     |
| 1750 | CoCoALib |  | Normal    | IdealOfPoints: allow duplicate points?                                  | John Abbott | 08 Mar 2024 18:23 | Improving       | 20     |
| 1642 | CoCoALib |  | Normal    | interreduce: make monic if over finite field?                           | John Abbott | 16 Feb 2024 20:44 | Improving       | 20     |
| 1683 | CoCoALib |  | Immediate | Islrred in ZZ[x,y]  | John Abbott | 16 Feb 2024 09:39 | Improving       | 0      |
| 846  | CoCoALib |  | Normal    | Islrred: correct design?  | John Abbott | 26 Feb 2019 16:32 | Improving       | 20     |
| 872  | CoCoALib |  | Urgent    | LinSolve for matrices over FFp  | John Abbott | 08 Mar 2024 17:36 | Improving       | 30     |
| 1705 | CoCoALib |  | Normal    | ProgressReporter: prepare for new loop?                                 | John Abbott | 25 Apr 2024 21:40 | Improving       | 80     |
| 797  | CoCoALib |  | Normal    | SmallFpImpl: make it faster   | John Abbott | 24 Apr 2024 23:04 | Improving       | 20     |
| 1572 | CoCoALib |  | Normal    | Use noexcept  | John Abbott | 23 Apr 2024 21:57 | Improving       | 70     |
| 799  | CoCoALib |  | Low       | vector of "indets" in each PPMonoid?                                    | John Abbott | 11 Nov 2015 13:47 | Improving       | 20     |
| 1233 | CoCoALib |  | High      | factor SEGV -- too large characteristic                                 | John Abbott | 14 Mar 2023 19:45 | Maths Bugs      | 60     |
| 143  | CoCoALib |  | Urgent    | Buchberger-Moeller (parent task)  | John Abbott | 10 Jul 2014 14:16 | New Function    | 38     |
| 644  | CoCoALib |  | Normal    | Buchberger-Moeller: add option to stop as soon as 1 poly has been found | John Abbott | 06 Nov 2017 13:58 | New Function    | 0      |
| 145  | CoCoALib | Feature #143:<br>Buchberger-Moeller<br>(parent task) | Urgent    | Buchberger-Moeller: fast modular impl                                   | John Abbott | 10 Jul 2014 14:17 | New Function    | 0      |
| 147  | CoCoALib | Feature #143:<br>Buchberger-Moeller<br>(parent task) | Urgent    | Buchberger-Moeller: impl via modular reduction                          | John Abbott | 10 Jul 2014 14:18 | New Function    | 20     |
| 127  | CoCoALib |  | Normal    | Convert DUPFF code to C++   | John Abbott | 28 Sep 2022 15:04 | New Function    | 50     |
| 802  | CoCoALib |  | Urgent    | DivMask: extend interface?  | John Abbott | 08 Mar 2024 17:36 | New Function    | 50     |
| 565  | CoCoALib |  | Normal    | FloatApprox for TwinFloat values?                                       | John Abbott | 19 Jul 2016 22:44 | New Function    | 20     |
| 664  | CoCoALib |  | Urgent    | Impl small non-prime finite fields (using logs)                         | John Abbott | 14 Mar 2023 19:49 | New Function    | 80     |
| 665  | CoCoALib |  | Normal    | Integrate Janet/Pommaret basis code                                     | John Abbott | 12 Jun 2018 18:36 | New Function    | 10     |

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|------|----------|-------------|----------|---|-------------|-------------------|--------------|--------|
| 1176 | CoCoALib |             | Normal   | interval arithmetic   | John Abbott | 10 Mar 2023 17:46 | New Function | 50     |
| 113  | CoCoALib |             | Normal   | Introduce PartialHom  | John Abbott | 09 Jul 2014 18:04 | New Function | 10     |
| 1197 | CoCoALib |             | Normal   | IsZeroDet: new fn   | John Abbott | 08 Mar 2024 17:58 | New Function | 40     |
| 828  | CoCoALib |             | Normal   | MachineInt: function for checking that value is greater than some lower limit (and below MAXLONG) | John Abbott | 15 Apr 2024 10:08 | New Function | 20     |
| 125  | CoCoALib |             | Normal   | Matrix equation solving; linear system solving  | John Abbott | 18 Mar 2024 10:00 | New Function | 50     |
| 440  | CoCoALib |             | High     | Port RealRoots to C++   | John Abbott | 19 Oct 2016 10:26 | New Function | 0      |
| 620  | CoCoALib |             | Normal   | Redesign CRTMill  | John Abbott | 21 Mar 2016 14:30 | New Function | 20     |
| 383  | CoCoALib |             | Normal   | Resolution/morse: integrate Mario Albert's code into CoCoALib                                     | John Abbott | 31 Jul 2014 14:57 | New Function | 60     |
| 752  | CoCoALib |             | Normal   | Investigate using Boost.build instead of make   | John Abbott | 28 Apr 2017 11:23 | Portability  | 0      |
| 575  | CoCoALib |             | Normal   | Investigate using cmake for configuration   | John Abbott | 13 Mar 2024 21:19 | Portability  | 10     |
| 933  | CoCoALib |             | Normal   | Separate configure scripts for CoCoALib and CoCoA-5   | John Abbott | 23 Jan 2024 21:52 | Portability  | 10     |
| 1804 | CoCoALib |             | Normal   | Use long long (at least sometimes)?   | John Abbott | 26 Apr 2024 21:09 | Portability  | 80     |
| 894  | CoCoALib |             | Normal   | strict enum types: C++11 extension  | John Abbott | 25 Apr 2024 21:49 | Safety       | 30     |
| 1703 | CoCoALib |             | Normal   | Threadsafty, multithreading: optional fn arg (or separate fn)                                     | John Abbott | 07 Mar 2024 20:04 | Safety       | 80     |
| 1811 | CoCoALib |             | Normal   | Check include guards  | John Abbott | 22 Apr 2024 20:15 | Tidying      | 90     |
| 1160 | CoCoALib |             | Normal   | Clean up revised RatReconstructByContFrac code  | John Abbott | 26 Feb 2019 16:33 | Tidying      | 0      |
| 385  | CoCoALib |             | Urgent   | Design new errors using inheritance   | John Abbott | 09 Feb 2024 10:25 | Tidying      | 40     |
| 680  | CoCoALib |             | Normal   | DistrMPolyClean does not use MemPool for summands?  | John Abbott | 07 Mar 2023 20:49 | Tidying      | 70     |
| 818  | CoCoALib |             | Normal   | F5 with 3 args?   | John Abbott | 24 Nov 2015 10:11 | Tidying      | 10     |
| 1787 | CoCoALib |             | Normal   | Iterator design: compatible with C++STL? Advancing beyond end?                                    | John Abbott | 23 Apr 2024 22:26 | Tidying      | 30     |
| 1125 | CoCoALib |             | Normal   | Separate install script for CoCoALib?   | John Abbott | 23 Jan 2024 21:54 | Tidying      | 0      |
| 1263 | CoCoALib |             | Normal   | Tidy CoCoALib test directory  | John Abbott | 07 Mar 2023 20:49 | Tidying      | 80     |
| 1089 | CoCoALib |             | Normal   | invalid pointer in "free"   | John Abbott | 20 Jul 2017 13:06 | Various      | 10     |
| 1748 | CoCoALib |             | Normal   | July 2023   | John Abbott | 08 Mar 2024 08:29 | Various      | 0      |