

CoCoALib - Feature #300

Add fault tolerant rational reconstruction to library

08 Feb 2013 18:04 - John Abbott

Status:	Closed	Start date:	08 Feb 2013
Priority:	Normal	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	New Function	Estimated time:	0.00 hour
Target version:	CoCoALib-0.9953	Spent time:	27.50 hours
Description Implement the various fault tolerant rational reconstruction algms, and incorporate them into CoCoALib. Experimental versions already exist.			
Related issues:			
Related to CoCoALib - Feature #689: Fault tolerant rational reconstruction: m...		Closed	23 Apr 2015
Related to CoCoALib - Feature #690: Fault tolerant rational reconstruction: i...		New	23 Apr 2015

History

#1 - 11 Feb 2013 15:24 - John Abbott

The hardest parts will be fixing the UI and choosing the name(s) of the fn(s).

I should also put in my impl of the Singular group's method.

#2 - 15 Feb 2013 18:58 - John Abbott

- Status changed from New to In Progress
- Target version set to CoCoALib-0.9953
- % Done changed from 0 to 50

Added impls of **RatReconstructByContFrac** and **RatReconstructByLattice**; also added doc, and an example (ex-NumTheory2).

Still to do:

- correct handling of SafetyFactor ctor parameter
- allow user to choose either convincingness criterion in RatReconstructByContFrac?
- interface to CoCoA-5 (plus doc, of course)
- add impl of FTRR (insist that moduli are prime?)

#3 - 22 Feb 2013 20:03 - John Abbott

- % Done changed from 50 to 70

Added new fns to CoCoA-5 **RatReconstructByContFrac** and **RatReconstructByLattice**; added doc.
Modified ctors: they now accept a user specified threshold (0 means to use default).
Currently **do not allow** user to choose the convincingness criterion -- unlikely to be very useful, and could be simply confusing.

20130225 FTRR now implemented as **RatReconstructWithBounds** in CoCoALib and CoCoA-5, with documentation!

#4 - 26 Feb 2013 17:27 - John Abbott

- *Status changed from In Progress to Feedback*
- *% Done changed from 70 to 90*

Should I really add a test for RatReconstructWithBounds?

#5 - 03 Jun 2013 17:31 - John Abbott

- *Status changed from Feedback to Closed*
- *% Done changed from 90 to 100*

The code was effectively tested while updating the article. So I'm regarding it as OK. Closing!