

3rd International Confluence Competition

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Overview

- CoCo 2014
- Tools
- Cops
- Scoring
- StarExec
- Results

CoCo 2014

Facts

- 3rd International Confluence Competition
- live
- three categories
 - TRS : first-order rewrite systems
 - CTRS : first-order conditional rewrite systems
 - CPF : certification of confluence proofs
- powered by StarExec
- part of FLoC Olympic Games 2014



CoCo 2014

TRS

benchmarks:

148

solvers:

ACP CoLL CSI Saigawa**ACP** (0 of 148):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CoLL (0 of 148):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CSI (0 of 148):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

Saigawa (0 of 148):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CTRS

benchmarks:

132

solvers:

CO3 ConCon**CO3** (0 of 132):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

ConCon (0 of 132):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CPF

benchmarks:

229

solvers:

CeTA**CeTA** (0 of 229):score: **0.00%**

YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

Tools

	TRS	CTRS	CPF
ACP	✓		✓
CeTA			✓
CO3		✓	
CoLL	✓		
ConCon		✓	
CSI	✓		✓
Saigawa	✓		

new

Cops

Cops

- Confluence problems
- Search & Query Interface
- Submission & Download Interface
- Problem Selection

2012: 125

2013: 261

2014: 425

[46.trs](#)

```

1 (VAR x)
2 (RULES
3   F(x,x) -> A
4   F(x,G(x)) -> B
5   C -> G(C)
6 )
7 (COMMENT from p.813 of \cite{Hue80})
8
```

tags: [non confluent](#) [non left linear](#) [non linear](#) [locally confluent](#)
[non orthogonal](#) [non terminating](#) [non ground](#)

Scoring

TRS/CPF category

valid answers: YES/NO

CTRS category

	1_ctr	2_ctr	3_ctr	4_ctr
oriented	✓	✓	✗	✗
join	✓	✓	✓	✓
semi-equational	✓	✗	✗	✗

valid answers: YES/NO/UNSUPPORTED

Score

score is (YES+NO)/SUPPORTED

StarExec

Hardware

- nodes 1–32 (2 quad-core, 2.40 GHz, 128 GB)
- nodes 33–192 (2 quad-core, 2.40 GHz, 256 GB)



Software

- tool/benchmark submission/management
- tool execution
- queue management (CoCo queue has 10 nodes)
- (some) statistics

Results

And the winner is ...

... celebrated in Joint Award Ceremony: Thursday, July 17 2014, 16:30-19:00

Conclusion

Acknowledgements

Aaron Stump, Aart Middeldorp, Andreas Parschalk, Naoki Nishida, StarExec Team, Thomas Krennwalder, Thomas Sternagel, ...

StarExec CTRS category Live View FLoC Olympic Games

CoCo 2015

- higher-order track (preparation already started)
- see you @ IWC 2015 @  @ Berlin