

4th International Confluence Competition

Takahito Aoto Nao Hirokawa **Julian Nagele**
Naoki Nishida Harald Zankl

University of Innsbruck

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Overview

- CoCo 2015
- Tools
- Cops
- Scoring
- StarExec
- Results

CoCo 2015

Facts

- 4th International Confluence Competition
- live
- four regular and two demonstration categories
 - TRS : first-order rewrite systems
 - CTRS : first-order conditional rewrite systems
 - CPF : certified confluence proofs
 - HRS : higher-order pattern rewrite systems
 - GCR : ground confluence of many-sorted TRSs
 - NRS : nominal rewrite systems
- powered by StarExec
- part of CADE-25 Competitions



CoCo 2015

TRS

benchmarks:
solvers:

100
**ACP ver 0.51 CoLL-Salgawa
CSI**

ACP ver 0.51 (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CoLL-Salgawa (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CSI (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

HRS

benchmarks:
solvers:

58
ACPH CSI^ho

ACPH (0 of 58): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CSI^ho (0 of 58): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CTRS

benchmarks:
solvers:

100
CO3 ConCon CoScart

CO3 (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

ConCon (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CoScart (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

GCR

benchmarks:
solvers:

120
AGCP

AGCP (0 of 120): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CPF

benchmarks:
solvers:

100
**ACP ver 0.51 and CeTA
ConCon+CeTA CSI+CeTA**

ACP ver 0.51 and CeTA (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

ConCon+CeTA (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

CSI+CeTA (0 of 100): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

NRS

benchmarks:
solvers:

19
NoCo

NoCo (0 of 19): score: **0.00%**
YES:0 NO:0 MAYBE:0 UNSUPPORTED:0

Tools & Categories

	TRS	CTRS	CPF	HRS
ACP	✓		✓	
ACPH				✓
CeTA			✓	
CO3		✓		
CoLL-Saigawa	✓			
CoScart		✓		
ConCon		✓	✓	
CSI	✓		✓	
CSI ^{ho}				✓
	GCR	NRS		
AGCP	✓			
NoCo		✓		
	new			

Cops

Cops

- Confluence problems
- Search & Query Interface
- Submission & Download Interface
- Problem Selection
- Support for CTRs
- Support for HRS

2012: 125

2013: 261

2014: 425

2015: 492

Problem Selection for CoCo 2015

- 100 random Cops for regular categories
- provided by tool authors for demonstration categories

Scoring

TRS/HRS category

valid answers: YES/NO

CTRS/CPF category

- CTRSs are classified by
 - condition type (oriented, join, semi-equational)
 - extra variables (1,2,3,4)
- problems in CPF category: TRSs and CTRSs
- 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
- tool pipelining
- queue management (CoCo queue has 10 nodes)
- (some) statistics

Results

And the winner is ...

... celebrated on Friday, August 7 2015, 11:00-11:30