3 dic. 2021

Congruence Closure

Check goodnotes CC

Z3 knows how to combine different decision producers

Einstein mixture of IDL and CC

Many decision produced rules, mixed up together

Combine decision procedure with CDCL

Adding more and more decision procure it will become more powerful

**Need three more rules**

A decision procedure is improperly called a Theory

One is fundamental

T-conflict EUL (Equality with an interpretation function symbol)

Congruence Closure CC: is the procedure used to EUL

T-conflict ! Most important !

T-explain

T-propagate

**T-conflict:**

( L1,…Lr | C | \*) search state

If L1 ^…^ Lr is not considered according to decision procedure then

Go to conflict

( L1,…Lr | C L1- v … v Lr- | L1- v … v Lr- )

You learn a clause and got to conflict

x > 0 ^ x < 3 is a wrong assignment

¬ (x > 0) v ¬ ( x < 3) is learned because the one before is wrong

Example E1 on goodNotes

**Exam**

4 hour

* exercises with computer → LAB
* Hand-made exercise → google drive Hand-Made
* Questions: theory ground or not, open or close formulas…

Can’t bring anything to the exam

Z3 short file with syntax

15-17 December last lectures

* FNC transformations
* Penext normal form
* Resolution
* CDCL
* \* Instatiantion via herbrand
* \* Fourier-motzkin
* \* IDL
* \* CC
* \* CDCL(T), CDCL(T1, T2)

\* already exercise on drive