

Towards Computing Pointwise Repairs in a Fragment of DatalogMTL

Atefe Khodadaditaghanaki

Paderborn University

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■ Datalog + Metric Temporal Logic

list of courses a student has passed with the semester number

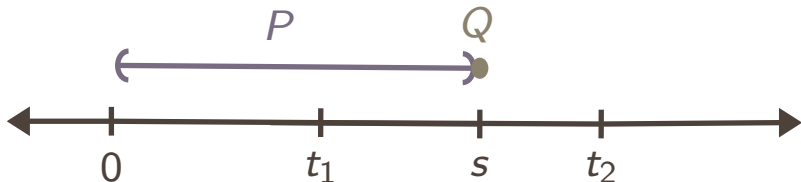
■ Datalog + Metric Temporal Logic

list of courses a student has passed with the semester number

■ Errors in the *data*

course C must be passed before taking course D
Student S has passed course D but not C

- P holds **everywhere** from 0 to s
- Q holds **somewhere** from t_1 to t_2
- P holds **everywhere** from 0 to "somewhere from t_1 to t_2 that Q holds"



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- **Temporal setting offers new possibilities for repairs!**
Key idea: instead of deleting whole KB statements, **shorten** the duration of (derived) facts

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[Bienvenu Bourgaux Khodadaditaghanaki - IJCAI25]: Pointwise repairs need **not** exist in full datalogMTL!

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- Pointwise repairs **always exist** in this case.
- Algorithm $\text{PRepair}^\diamond(\Pi, \mathcal{D})$:
 - **computes** a pointwise repair

Do pointwise repairs exist in $\text{datalogMTL}^\diamond$ when data is **bounded**?

What I will show you at my poster:

- Pointwise repairs **always exist** in this case.
- Algorithm $\text{PRepair}^\diamond(\Pi, \mathcal{D})$:
 - **computes** a pointwise repair
 - is **sound** but incomplete

Thanks!