



RockIt

- RockIt is an inference engine for MAP queries in Markov logic networks
- RockIt exploits both **parallelism** and **model symmetry**
- Combines **cutting plane inference** with **cutting plane aggregation**

Probabilistic Inference as a Web Service

Data & Web Science
computational services

systems

processes

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Online Markov Logic Network (MLN) Solver

Welcome to the online interface of the Markov logic network solver rockIt. RockIt solves maximum a-posteriori queries formulated in Markov logic networks. In rockIt you can define both, deterministic knowledge (hard formulas) and probabilistic knowledge (soft formulas). We refer to <https://code.google.com/p/rockit/> for further information.

Run RockIt

input:	<input checked="" type="radio"/> file <input type="radio"/> url	<input type="button" value="Choose File"/> No file chosen
data:	<input checked="" type="radio"/> file <input type="radio"/> url	<input type="button" value="Choose File"/> No file chosen
gap:	default <input type="button" value="v"/>	
version:	0.1 (current version) <input type="button" value="v"/>	
<input type="button" value="add process"/>		



Example

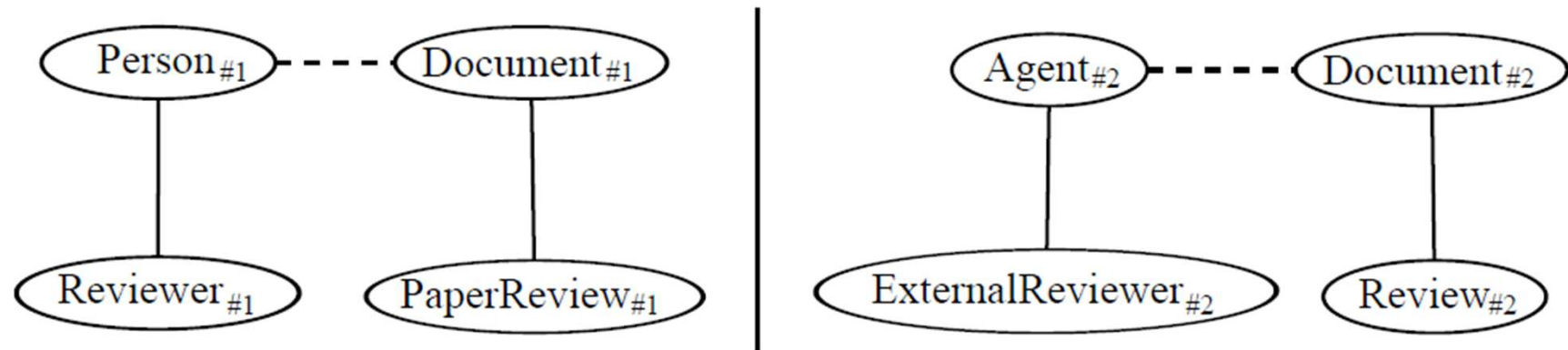


Figure 1.2: Example of a simple matching problem.

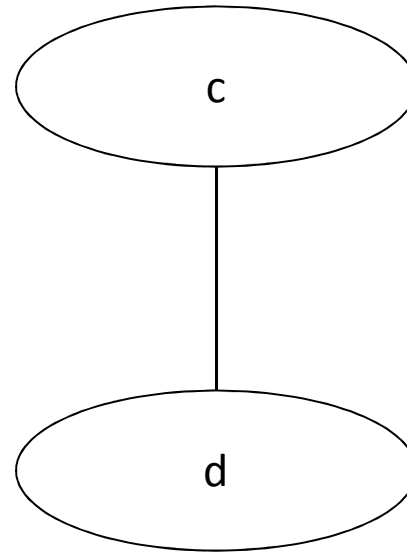
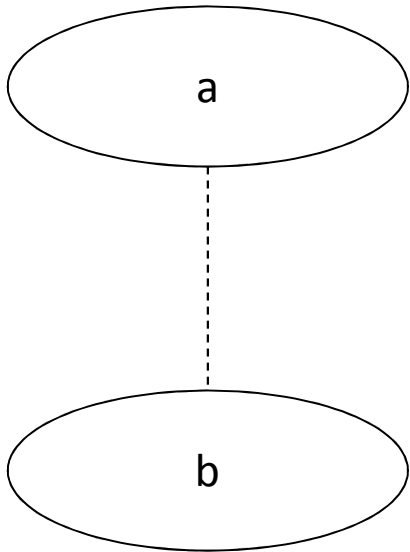
Source: Christian Meilicke Dissertation

<https://ub-madoc.bib.uni-mannheim.de/29351/1/meilicke-dissertation.pdf>

(Motivating Example)

Coherence Constraint

$\text{disjoint1}(a,b) \wedge \text{subsumes2}(c,d) \Rightarrow \neg (\text{map}(a,c) \wedge \text{map}(b,d)).$



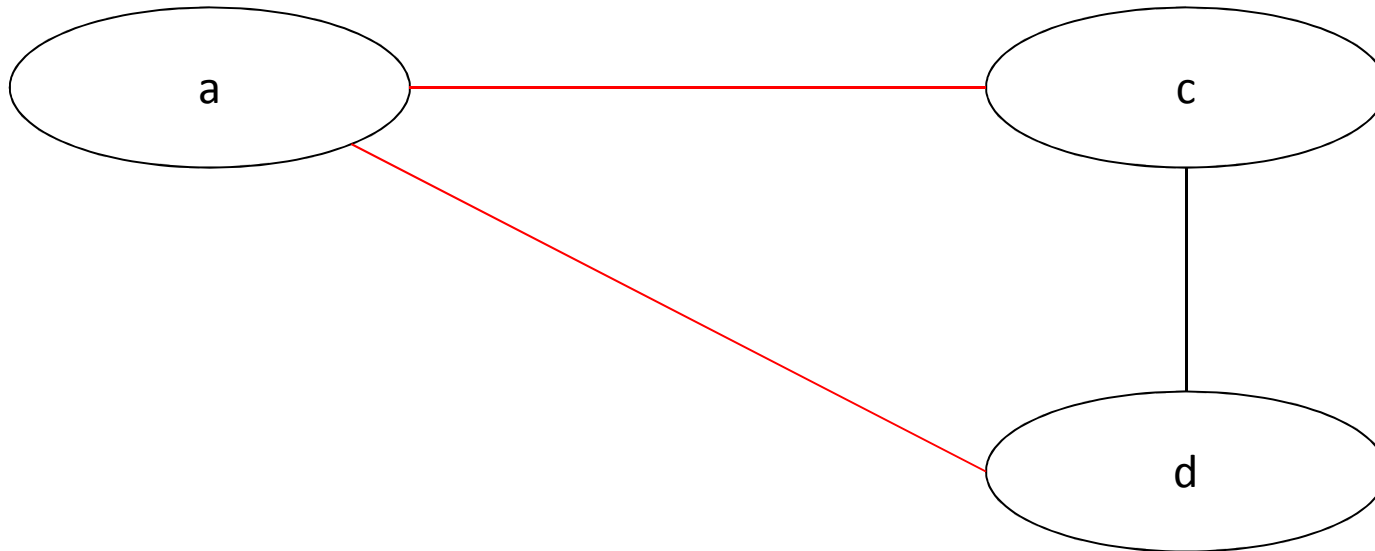
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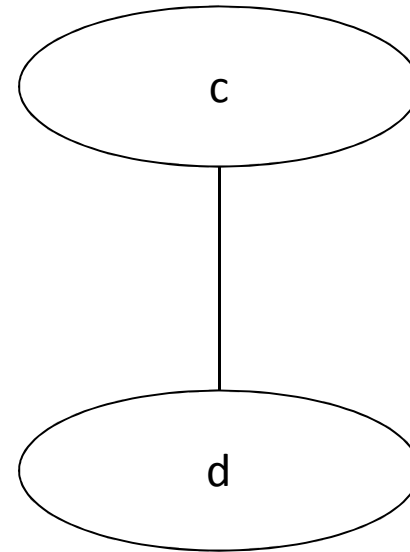
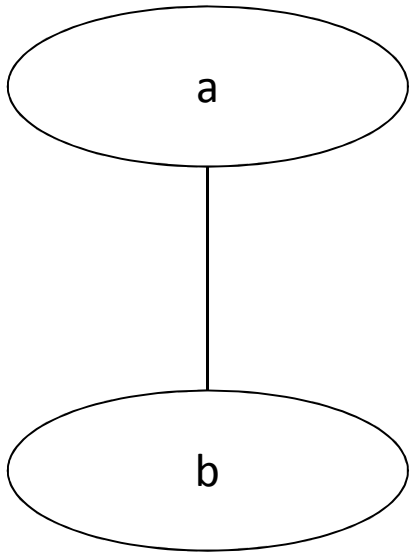
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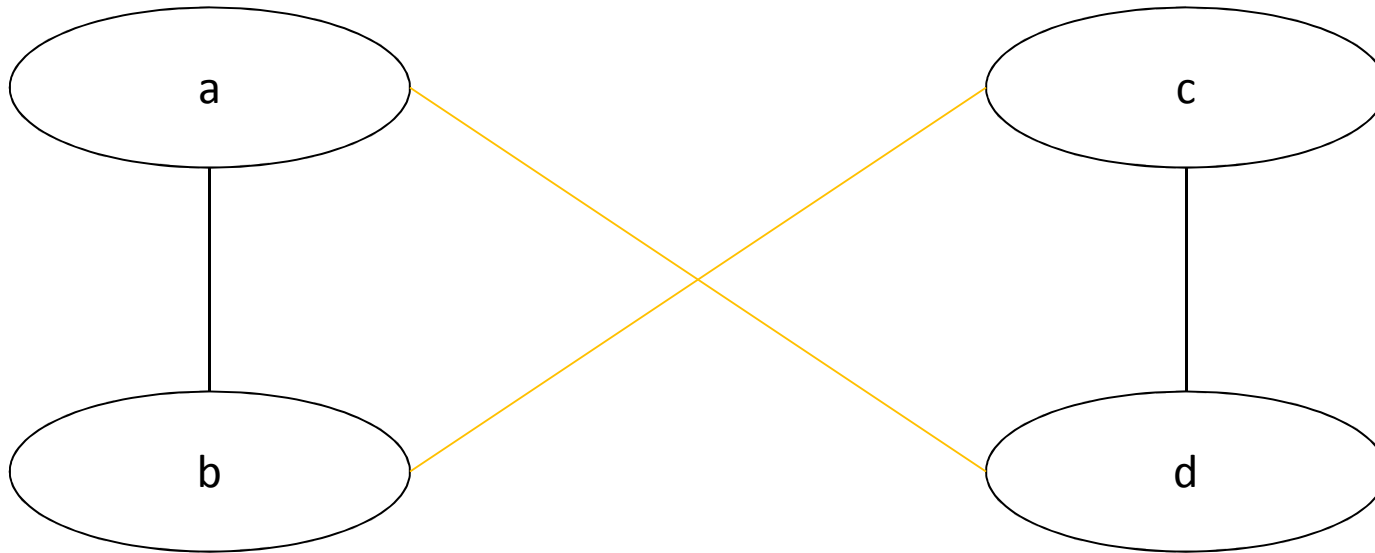
Stability Constraint

0.25 $\text{subsumes1}(a,b) \wedge \neg \text{subsumes2}(c,d) \Rightarrow \neg (\text{map}(a,c) \wedge \text{map}(b,d))$



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We want to avoid this!