

Figure 1.1. Two nodes with a temporal inconsistency forming a cycle ($A \rightarrow B \rightarrow A$), violating the DAG acyclic property.

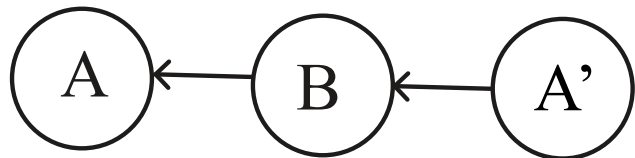


Figure 1.2. Resolution via preprint insertion. A new node A' represents the later preprint version, creating the acyclic path $A \rightarrow B \rightarrow A'$.

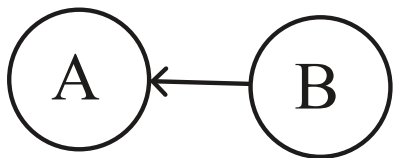


Figure 1.3. Resolution via edge removal. The forward-pointing edge is deleted to break the cycle.

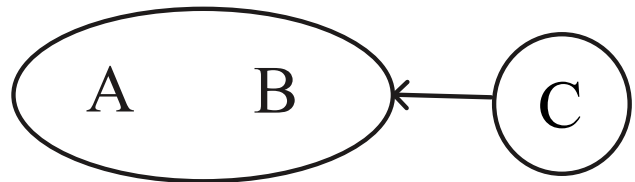


Figure 1.4. Resolution via node grouping. Nodes A and B merge into a single "family" node inheriting all external connections (e.g., from node C).

Past Time