

## ALTERNATIVE MARKOV AND CAUSAL PROPERTIES FOR ACYCLIC DIRECTED MIXED GRAPHS - ERRATA

Unfortunately, the original paper contains some typos in the definitions of ordered local and pairwise Markov properties for ADMGs. The correct definitions are given below (the corrected typos are in bold).

We say that a probability distribution  $p$  satisfies the ordered local Markov property with respect to  $G$  and  $<$  if for any  $A \in V$  and  $S \subseteq Pre_G(A, <)$  such that  $A \in S$

$$B \perp_p \mathbf{V(G[S])} \setminus (B \cup Mb_{G[S]}(B)) | Mb_{G[S]}(B)$$

for all  $B \in \mathbf{V(G[S])}$ , and where  $V(G[S])$  denotes the nodes in  $G[S]$ .

Similarly, we say that a probability distribution  $p$  satisfies the ordered pairwise Markov property with respect to  $G$  and  $<$  if for any  $A \in V$  and  $S \subseteq Pre_G(A, <)$  such that  $A \in S$

$$B \perp_p C | \mathbf{V(G[S])} \setminus (B \cup C)$$

for all nodes  $B, C \in \mathbf{V(G[S])}$  that are not adjacent in  $G[S]^a$ .