

- In probability, given a set of conditional independencies involving n random variables, we are interested in determining whether it implies another set of conditional independencies.
- This problem is extremely difficult despite the very simple problem statement.
- The problem for $n = 4$ was solved for $n = 4$ by Matúš (1999) by means of a non-Shannon-type inequality.
- The problem remains open for $n \geq 5$.