Title: GRAPHICAL MODELS IN STATISTICS

1. INTRODUCTION.
Simpson paradox. Graphical coding of conditional independence.
2. CONDITIONAL INDEPENDENCE.
Conditional Independence of random variables. Factorization Property.
Conditional Independence in a Gaussian vector: zeros in the precision matrix
3. GAUSSIAN GRAPHICAL MODELS
4. AXIOMS AND MARKOV PROPERTIES of GRAPHICAL MODELS.
5. MAXIMUM LIKELIHOOD ESTIMATION in a Gaussian graphical model.
6. DECOMPOSABLE GRAPHS.
   MLE for DECOMPOSABLE GRAPHS.
7. GRAPHICAL LASSO.
8. BAYESIAN MODEL SELECTION for GRAPHICAL MODELS