TOPICS FOR THE EXAM TMA4295 26/5-2009

- ➢ **Transformation of stochastic variables**
- ➢ **Chi square distribution**
- ➢ **Convergence in probability and in distribution**
- ➢ **Central limit theorem (CLT)**
- ➢ **Weak law of large numbers (WLLN)**
- ➢ **The Delta method**
- ➢ **The Jensen and Cauchy-Schwartz inequalities**

- ➢ **Method of moments estimator (MME)**
- ➢ **Maximum likelihood estimator (MLE)**
- ➢ **Consistent estimator**
- ➢ **Sufficient estimator, the factorization theorem**
- ➢ **Cramér-Rao lower bound**
- ➢ **Fisher information**
- ➢ **UMVUE**
- ➢ **Confidence interval**
- ➢ **(Asymptotic efficiency of MLE)**

The definitions, results and properties pertaining to the list above that you cannot remember, you should write down on the stamped yellow sheet.