SEMINARIO

"The Bernstein-von Mises theorem in semiparametric competing risks models"

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Abstract:

A Bernstein-von Mises theorem is investigated for semiparametric
Bayesian analysis of competing risks data.
The cause-specific hazard is taken as the product of the
conditional probability of a failure type and the overall
hazard rate.
We model the conditional probability as a smooth function of
time and leave the cumulative overall hazard unspecified.
A prior distribution is defined on the joint parameter space,
which includes a beta process prior for the cumulative overall
hazard.
We show that the posterior distribution for any differentiable
functional of interest is asymptotically equivalent to that
derived from maximum likelihood estimation.
A simulation study is provided to illustrate the coverage
properties of credible intervals on cumulative incidence functions.