GAIL IVANOFF, University of Ottawa, Ottawa, Ontario K1N 6N5 Random clouds and censoring in survival analysis

The theory of optional stopping is extended to general adapted random sets called "clouds". In particular, a stopping theorem is proven for martingales indexed by a class of sets. The theory may be applied to survival analysis of spatial data censored by clouds. An analogue to the classical Nelson-Aalen estimator of the integrated hazard is defined, and its asymptotic behaviour is studied.