

**Title.** Bivariate and multivariate data in reliability and survival analysis

**Abstract.** I will talk on modeling of bivariate data in survival and reliability analysis. The bivariate and multivariate data appearing in models and processes dealing with death in biological organisms and failure in mechanical systems are usually statistically dependent. In this context, the dependency properties and stochastic ordering properties of bivariate and multivariate data and distributions will be discussed. I will talk also on copula models having important applications in reliability engineering. Some new results concerning problems of stochastic mathematics also will be presented.