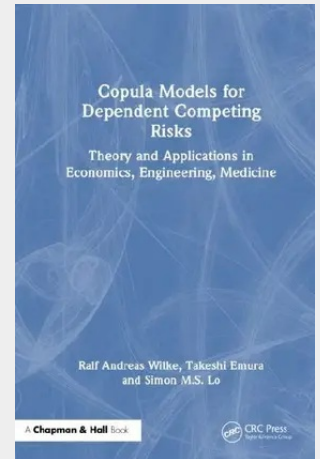


Copula Models for Dependent Competing Risks

Theory and applications in economics, engineering and medicine

This book contains a comprehensive introduction and overview of copula approaches to competing risks models for dependent latent failure times. It establishes the fundamentals of dependent competing risks models, as well as presents a range of recently developed approaches to identifiability and estimation using copulas. Readers benefit from a blend of statistical theory with applications in different subject areas such as economics, engineering, and medicine. This is the first book that provides a comprehensive overview and in-depth treatment of existing copula-based models for dependent competing risks. Copula Models for Dependent Competing Risks covers basic statistical ideas, such as "parametric latent failure time models"; theoretical issues, such as "identifiability of the competing risks model"; and model comparisons, such as comparative studies for "different copulas and different models for hazard functions". Aside from the introductory materials, the authors cover new and recently developed methodologies. The new solutions address the identifiability problems in competing risks models that rely on copula modelling. Copula models and other competing risks models are presented in a unified theoretical framework and illustrated with data from various disciplines (such as economics, engineering, and medicine). The book also includes applications with real data, and the code (written in R and/or Stata) is available online for easy practice purposes. A selection of exercises and their solutions is also available online. This book serves as a good reading for senior undergraduates and postgraduate students studying in courses such as "Multivariate Survival Analysis", "Survival Data Analysis" or "Advanced Econometrics". It can also serve as a useful reference for empirical researchers in a wide range of disciplines.

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