



# SACEMA

DST-NRF Centre of Excellence in Epidemiological Modelling and Analysis

## Short Course: An Introduction to the Joint Modeling of Longitudinal and Survival Data, with Applications in R Stellenbosch University, 14 to 16 October 2019

SACEMA invites applications for the short course on the introduction to Joint Modeling of Longitudinal and Survival Data: with Applications in R. The course will be held at SACEMA and will take place over 3 days starting 14 to 16 October 2019. The course starts at 09h00 daily and ends at 17h00.

[Dr. Dimitris Rizopoulos](#) is a professor of biostatistics at the Erasmus Medical Center Rotterdam. His research focuses on joint models for longitudinal and time-to-event data with applications in biomarker identification, precision medicine, screening and active surveillance. He currently serve as a co-Editor for [Biostatistics](#) and will be presenting this intensive three-day course on Joint Modeling, at SACEMA. The course fee is **R6000 for early bird registration** by the 31<sup>st</sup> of August **and R7000 for late registration** by the 31<sup>st</sup> of September 2019. For international participants, the fee is **€500** for early bird registration, and **€600** for late registration. (Note: Full payment must be processed prior to start of the course.)

**Course overview:** In follow-up studies, different types of outcomes are typically collected for each subject. These include longitudinally measured responses (e.g., biomarkers), and the time until an event of interest occurs (e.g., death, dropout). Often these outcomes are separately analyzed, but on many occasions, it is of scientific interest to study their association. This type of research question has given rise in the class of joint models for longitudinal and time-to-event data. These models constitute an attractive paradigm for the analysis of follow-up data that is mainly applicable in two settings: First, when focus is on a survival outcome, and we wish to account for the effect of endogenous time-dependent covariates measured with error, and second, when focus is on the longitudinal outcome and we wish to correct for non-random dropout.

This course is aimed at applied researchers and graduate students and will provide a comprehensive introduction to this modeling framework. We will explain when these models should be used in practice, which are the key assumptions behind them, and how they can be utilized to extract relevant information from the data. Emphasis is given on applications, and after the end of the course, participants will be able to define appropriate joint models to answer their questions of interest.

This course assumes knowledge of basic statistical concepts, such as standard statistical inference using maximum likelihood, and regression models.

**For further details, instructions, and application forms, go to: <http://www.sacema.org/node/Joint-Modeling-2019>. Enquiries may be directed to: Mr Masimba Paradza at: [mwparadza@sun.ac.za](mailto:mwparadza@sun.ac.za).**



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