Departamento Académico de Estadística
Río Hondo # 1, Col. Progreso Tizapán,
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INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

Seminario Aleatorio

Sesión 347
(Impartida en 2 sesiones)

Bootstrap methods for nonstationary time series. Functional data analysis and time series

Jacek Leskow
Cracow Technical. University. Cracow, Poland.

Abstact

In the talk, the bootstrap and other resampling methods will be presented in the context of nonstationary time series with cyclic first and second order characteristics. One of the goals of such approach is to provide a frequency signature corresponding to such nonstationary time series.

The theoretical results will be illustrated by practical examples coming from the mechanical engineering, medicine and finance. In the era of Big Data one has to be aware of the magnitude of corresponding data sets. Therefore, the second part of the presentation will be devoted to functional data analysis approach to nonstationary time series. The fundamental issues of such approach will be addressed with relevant theorems presented. The implications of the functional approach will be illustrated on examples.

Viernes 22 de mayo de 2020, 10:45 hrs.
https://itam.zoom.us/j/95601250238?pwd=dThsTjRSSkxaTGtqcmxIcGJ4NzBWZz09

ID de reunión: 956 0125 0238

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El Seminario Aleatorio está destinado tanto a profesores como a estudiantes, por lo que el Departamento de Estadística a los profesores que colaboren invitando a sus alumnos a estas sesiones.

Seminario Aleatorio

Sesión 347
(Impartida en 2 sesiones)

Bayesian analysis of the p-order integer valued AR process with zero-inflated Poisson innovations

Aldo M. Garay
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https://sites.google.com/de.ufpe.br/agaray

Abstact

In recent years, there has been considerable interest to study count time series with a dependence structure and appearance of excess of zeros values. Such series are commonly encountered in diverse disciplines, such as economics, financial research, environmental science, public health, among others. In this paper, we propose a stationary p-order integer-valued autoregressive process with zero inflated Poisson innovations, called the ZINAR(p) times series model. We study some of its theoretical properties and develop a MCMC algorithm for inferring parameters from Bayesian perspectives. Finally, we demonstrate the utility of proposed ZINAR(p) model through simulated and real data examples.

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