



El Departamento de Estadística del ITAM

anuncia la siguiente sesión de

EL SEMINARIO ALEATORIO

que con el título

Random Iterations: A Probabilistic issue with some applications

Impartirá

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RESUMEN

In this modern era, interdisciplinary works are gaining more and more importance. Particularly, the Physicists, the Biologists and the Economists are more and more interested to apply Statistical tools and Statistical models in their works. Since Probability is an important branch of Statistics, the Probabilists also can't keep idle. There are quite a few interesting issues in Probability which have wide applications in these disciplines. For example, consider the problem of Dynamical Systems in which one tries to predict whether the exchange rates would fluctuate heavily in the next few months or how the share market would behave in near future or whether a particular population would explode or get extinct after some time. We have Discrete as well as Continuous Dynamical Systems. Random Iterations is a kind of generalization of the Discrete Dynamical Systems. In stead of iterating the same function again and again to generate a process, we select different functions at different stages according to some probability law from a given set of maps. That's why the term "Random" comes into picture. For example, consider S to be a Polish space and G be a collection of maps with some probability P assigned to it. We start from a point x in S , choose a function g_1 in G according to P and move to $g_1(x)$. Next time we choose g_2 from G once again according to P and move to $g_2(g_1(x))$ and so on. This way, we generate a Markov process. One is interested to know whether an invariant measure exists or not, and if so, how is its nature etc. – for example whether it is discrete or continuous or absolutely continuous. In this talk, we shall briefly explain some basic concepts of Dynamical Systems and Random Iterations, mention some interesting problems and would, very briefly, explain some applications in Economics which is probably the most important discipline for the advancement of a country.

Fecha: Viernes 1 de Abril

Hora: 16:15 hrs.

Salón: Sala de Videos II - 2º. Piso Biblioteca

Lista de seminarios próximos. Visite:

http://estadistica.itam.mx/seminarios_prox.html

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

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