



Meiji University Global COE Program

38th Mathematical Sciences based on



Modeling, Analysis and Simulation seminar

Date: February 24, 2011, 16:30~18:00

Location: Meiji Univ. Ikuta Campus, Build 2 Annex A, Room A207

Shogo Kato (The Institute of Statistical Mathematics)

Title : A Markov process for circular data

Abstract : We propose a discrete time Markov process which takes values on the unit circle. Some properties of the process, including the limiting behaviour and ergodicity, are investigated. Many computations associated with this process are shown to be greatly simplified if the variables and parameters of the model are represented in terms of complex numbers. A simulation study is made to illustrate the mathematical properties of the model. Statistical inference for the process is briefly considered. Finally, an application of the model to wind direction data is provided.

Everyone is welcome to attend the MAS seminar.

Meiji institute for Advanced Study of Mathematical Science (<http://www.mims.meiji.ac.jp>)

(Organizers: M. Mimura, D. Ueyama, Y. Wakano, K. Ikeda and S.Kinoshita)

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(<http://goe.mims.meiji.ac.jp/>), the Grant-in-Aid for Scientific Research (S), “Mathematical Theory of Nonlinear-Non-equilibrium Reaction-Diffusion Systems” by M. Mimura

(<http://nnrds.math.meiji.ac.jp/>).



Access: 10 minutes on foot from Ikuta St. Odakyu line,
Or 10 minutes by bus No. 13「明治大学正門前」, get off at the last stop.
See http://www.meiji.ac.jp/koho/campus_guide/ for details.