



Meiji University Global COE Program 32th Mathematical Sciences based on



Modeling, Analysis and Simulation seminar

Date: November 15, 2010, 17:30~18:30

Location: Meiji Univ. Ikuta Campus, Build 2 Annex A, Room A310

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Title : Statistics of collective human behaviors observed
in blog entries

Abstract : As a reflection of social human interaction, we focus on statistical properties of the number of Japanese blog entries. From the data that contains more than 1,200 million blog entries, we present the results from two different aspects.

First, we focus on the time series fluctuation of the number of blog entries that contain a target word. In case that we choose a commonly used word as a target, we show that the standard deviation of the time series can be described by its average. Especially for frequently appearing words, we confirm that the standard deviation increases linearly according to its average, following Taylor's power law. Additionally, we also discuss in the case that the sudden increase in the number of a word is strongly depending on external factors such as news.

Secondly, we show the statistical results of individual blogger's behaviors. We found that there are two different types of distributions in posting intervals. Further, Zipf's law on word frequency is confirmed to be universally independent of individual activity types. Finally, we also present a few new issues from our works.

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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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.