
North Texas Chapter American Statistical Association

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February 2019

Next Meeting: Thursday, February 21, 2019

Refreshments: 6:30 p.m. Meeting: 7:00 p.m.
Southern Methodist University Heroy Hall Room 153

Speaker: Professor George P. Yanev, School of Mathematical and Statistical Sciences, The University of Texas Rio Grande Valley.

Presentation: Necessary and sufficient conditions for (characterizations of) exponential probability distribution

Abstract: In probability theory and statistics, exponential distribution describes the time between events in a Poisson point process, i.e., a process in which events occur continuously and independently at a constant average rate. The situations in which exponential distribution appears to be the most natural have as an essential feature the random recurrence (often in time) of an event. These include, for example, experiments on radioactive decay, telephone call arrivals, and insurance mathematics.

Characterizations are particularly of interest when they shed light on the consequences of certain distributional assumptions and can be used in goodness-of-fit tests which, in turn, can lead to an acceptable model. We will present certain generalizations of Arnold and Villasenor's [1] exponential characterizations. Part of the results in this talk appeared in Yanev and Chakraborty [2]. We will also discuss some open problems.

Reference:

[1] Arnold, B.C. and Villasenor, J.A. Exponential characterizations motivated by the structure of order statistics in sample of size two. *Statistics and Probability Letters*, 83(2013), 596-601.

[2] Yanev, G.P. and Chakraborty, S. Characterization of exponential distribution and Sakhatme-Renyi decomposition of exponential maxima. *Statistics and Probability Letters*, 110(2016), 94-102.

Announcements:

- The Conference of Texas Statisticians (COTS) will be held at **Lamar University (Beaumont, Texas) on April 5-6, 2019.**
- The North Texas Chapter is one of the chapters that may nominate recipients of the **ASA Award for Outstanding Chapter Service** in 2019. Please send your nomination to Julia Kozlitina (Julia.Kozlitina@UTSouthwestern.edu)
- We still really need your help judging the 2019 Dallas Regional Science and Engineering Fair! This year's fair will be held Saturday, February 23, 2019 at Centennial Hall, Fair Park in Dallas.

For those who are interested in judging please register as a Special Award Judges:

<https://docs.google.com/forms/d/e/1FAIpQLSfl-d9sg0wSLZkfjKypW4hZavRgdZhbnbLHvcPXqEyvTUxkqQ/viewform>

The Organization whose Special Award you will judge: **American Statistical Association - North Texas Chapter**

Or contact Yahya Daoud (YDaoud@outlook.com)

This is a **great** way to engage with young students about statistics and we'd *really appreciate* your help in this.

Chapter Officers

President – Hon Keung (Tony) Ng

Vice-President/Program officer – Sy Han (Steven) Chiou

Secretary and Treasurer – Yahya A.H. Daoud

Chapter Representative – Julia Kozlitina

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