"Statistics is the servant to all sciences"
Jerzy Neyman

Schedule - 2ⁿᵈ Lecture Series
Applied Probability, Statistics and Machine Learning

Opening Lecture **Tuesday 26/01/21** **05:00-05:20 pm**	**Title: Agricultural Sciences and Statistics.** **Speaker: Giorgos Papadopoulos** Assoc. Professor, Department of Crop Science, Agricultural University of Athens gpapadop@aua.gr *We will explore the relation between Agricultural Sciences and Statistics, while emphasizing on advances made to statistical theory and methodology through agricultural research.* *Sir Ronald Fisher (1890-1962)*
1ˢᵗ Lecture **Tuesday 26/01/21** **05:30-07:30 pm**	**Title: Common discrete Probability Distributions in Agricultural Sciences.** **Speaker: Dr. Spiros Dafnis** Department of Crop Science, Agricultural University of Athens Hellenic Open University dafnisspyros@gmail.com *A review of results related to some well-known discrete distributions will be presented. Then, the potential use of such distributions in Agriculture will be discussed.*
2ⁿᵈ Lecture **Thursday 28/01/21** **05:00-07:00 pm**	**Title: Generalized Discrete Distributions and Applications in Agricultural sciences.** **Speaker: Dr. Spiros Dafnis** Department of Crop Science, Agricultural University of Athens Hellenic Open University dafnisspyros@gmail.com *Having presented the necessary theoretical background during Lecture 1, we shall now proceed to highlight the use of generalized discrete distribution in Agricultural Sciences.*

3rd Lecture **Thursday 04/02/21** **05:00-07:00 pm**	**Title: Analysis of aromatic profiles, using statistical methods.** **Speaker: Fotios Milienos** Assistant Professor, Department of Sociology, Panteion University of Social and Political Sciences milienos@panteio.gr *In these lectures we deal with the problem where a number of panelists/judges are used to determine the aromatic profile of a set of products. Each panelist, after testing the product, is asked to choose which aromas he finds in it, through a specific list of aromas (frequency of attribute citation method). Specifically, we assume that N products are evaluated by K panelists, using a list of a total of M available aromas - each panelist evaluates each product S times. Before determining the product profile, some crucial aspects of the performance of the panel must be considered. For example, their ability to distinguish different products (discrimination)), and to identify aromas they have already chosen in previous tests (repeatability). These characteristics are very important as they determine the reliability of the available data, on which the product profile will be based. Hence, we discuss how to use descriptive statistics and statistical methods, such as, the Chi-square test, Friedman's test, Cochran's Q test, Cluster analysis and Correspondence analysis, both for the evaluation of the panel and for the derivation of the aromatic profile of the products.*
4th Lecture **Saturday 06/02/21** **05:00-07:00 pm**	**Title: Introduction to Machine Learning and Data Mining.** **Speaker: Dr. Ioannis Livieris** livieris@upatras.gr *The goal of this lecture is the introduction to Machine Learning and Data Mining focusing on their basic concepts as well as their primary role for addressing real-world problems.*
5th Lecture **Thursday 11/02/21** **05:00-07:00 pm**	**Title: Analysis of aromatic profiles, using statistical methods.** **Speaker: Fotios Milienos** Assistant Professor, Department of Sociology, Panteion University of Social and Political Sciences milienos@panteio.gr *This will be a follow up to the 3rd lecture, extending on the same topic.*
6th Lecture **Saturday 13/02/21** **05:00-07:00 pm**	**Title: Machine Learning and Data Mining Applications on Agricultural Sciences.** **Speaker: Dr. Ioannis Livieris** livieris@upatras.gr *A brief presentation of the application of Machine Learning and Data Mining to Agronomics. Case studies, utilizing WEKA software on real-world agronomic problems.*