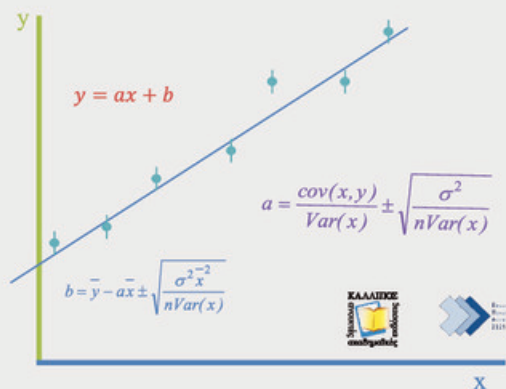


ΜΑΤΘΑΙΟΣ Κ. ΚΑΜΑΡΑΤΟΣ
Αναπληρωτής καθηγητής
Τεχνολογία
Ιωαννίνων

ΕΙΣΑΓΩΓΗ ΣΤΙΣ ΠΙΘΑΝΟΤΗΤΕΣ ΚΑΙ ΤΗ ΣΤΑΤΙΣΤΙΚΗ

ΟΔΗΓΟΣ ΓΙΑ ΤΗ ΧΡΗΣΗ ΤΩΝ ΜΕΘΟΔΩΝ
ΤΗΣ ΣΤΑΤΙΣΤΙΚΗΣ ΣΤΙΣ ΦΥΣΙΚΕΣ ΕΠΙΣΤΗΜΕΣ



METADATA

Title: Introduction to Probability and Statistics

Other Titles: A guide to the use of Statistical methods in the Natural Sciences

Language: Greek

Authors: Kamaratos, M., Associate Professor, UOI

ISBN: 978-618-5667-14-6

Subject: MATHEMATICS AND COMPUTER SCIENCE, NATURAL SCIENCES AND AGRICULTURAL SCIENCES, MEDICINE AND HEALTH SCIENCES, LIFE SCIENCES, BIOLOGICAL SCIENCES

Keywords: Probability distributions / Natural Sciences / Experimental errors / Least square fitting / Confidence Intervals

Bibliographic Reference: Kamaratos, M. (2022). Introduction to Probability and Statistics [Undergraduate textbook]. Kallipos, Open Academic Editions. <http://dx.doi.org/10.57713/kallipos-48>

Abstract

This text is about the use of statistical methods in Physical Sciences. We present the necessity of statistics for the analysis of experimental measurements, the theory of probabilities, the distribution of probabilities and their general properties. Also, we present some special probability distributions, which are very useful on the analysis of experimental measurements

for physical sciences. We continue, with the sample distributions, which correlates the samples with the population and develop some areas of the inductive statistics. We present the ways to construct the confidence intervals, the hypothesis testing. We grow the theory of errors and the least square fitting. We also present some non-parametric and ranking methods.

