

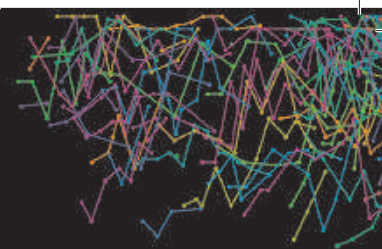
$$MSE = \frac{\sum_{i=1}^k \sum_{j=1}^{n_i} (x_{ij} - \bar{x}_i)^2}{n - k}$$

$$P_t = \frac{\exp(\beta_0 + \sum_{k=1}^m \beta_k x_{t,k})}{1 + \exp(\beta_0 + \sum_{k=1}^m \beta_k x_{t,k})}$$

$$y_t = \phi_1 y_{t-1} + \phi_2 y_{t-2} + \sum_{i=1}^p \beta_i x_{t-i} + \epsilon_t$$

$$C(h, u | \theta) = \frac{\sigma^2}{(a^2 u^2 + 1)^{3/2}} \exp\left(-\frac{b^2 \|h\|^2}{a^2 u^2 + 1}\right)$$





MONOGRAPH

# THE DIGITS OF SCIENCE

STATISTICS AS SCIENTIFIC TOOL

Monograph coordinated by David Conesa and Francisco Montes

**D**o you want to take a bet? Let's leave it on an invitation to read your usual newspaper. We are sure you will find graphs, tables, percentages, some histogram and perhaps allusions to means, modal values, medians or percentiles. It does not seem fair to bet on their appearance since it is quite common to find this repertoire in them either partially or in full. The statement is as well valid for any other kind of media.

«Statistics» are part of our daily lives. These «statistics» are what specialists call descriptive statistics to differentiate it from Statistics, with a capital S, of which the former would be just the tip of the iceberg. Statistics is the main focus of this monograph. «Statistics has a powerful and far-reaching effect on everyone», was the claim of the International Year of Statistics, 2013.

The following pages will verify how true this statement is. You will find a sample of the assistance Statistics provides to other research fields (medicine, particle physics ...). Although assistance may not be the right word to the extent that it involves unidirectionality. Symbiosis would be a better choice. You will also find the little story of a great formula, the Bayes formula, which has resulted in a new way to approach Statistics. The following pages will also address the new buzzword: massive or Big Data.

If this leaves you wanting more, enter World of Statistics (WoS, <http://www.worldofstatistics.org/>) and you may quench your thirst.

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In this special issue, MÈTODE has the collaboration of Ana Donat, an artist who brings art closer to science from a multidisciplinary perspective. Through a series of digital collages, we go deep into these pages where statistics is the protagonist following her particular creativity.

On the left, Ana Donat. *Sarcocornia fruticosa*, 2014. Digital collage, variable size.