## Preface of

CMA4CH 2016, Mediterraneum Meeting Straightforward approach in Cultural Heritage and Environment studies - Multivariate Analysis and Chemometry

6<sup>th</sup> ed., Rome, Italy, Europe, 18-20 December 2016



## **Preface and Acknowledgements**

The World crisis had a very bad negative impact in this edition of our Meeting. Anyway we decided to shorten the duration of the Meeting to have the pleasure to meet some of our faithful friends. Many others have written to me to express their displeasure at losing our biennial meeting. I thank both the participant and the not participant friends hoping to meet all of them in the next 2018 edition.

As in the previous editions, a "Multivariate Analysis Course, School for Novices" will be held in parallel with the Meeting and I have to warmly thank Dr Riccardo Leardi, Dr Barbara Giussani and Dr Marco Calderisi for the free teaching

As in the previous editions, I like to repeat the statement of Donald D. Hester: The world is multivariate! In order to be significant, data coming from diagnostic on Environment as well as on Cultural Heritage must be multivariate [1].

A magnificent summary of the purpose of our meeting!

## Multivariate analysis and Chemometry: An essential support for Environment and Cultural Heritage (CH) researches

Multivariate analyses and Chemometry are relatively young branchs of statistic; starting from the second half of the nineteenth century, articles on the topics exponentially increased going from a few hundreds/10years to the current more than twenty thousand/year. In the last decades, also their teaching in Universities or with dedicated courses has become increasingly common. Environment is instead the oldest topic while, in comparison, Cultural Heritage remains an almost niche topic in the scientific field.

Researchers dealing with the environment and cultural heritage generally must process and interpret an enormous and heterogeneous amount of data; they are often not able to extract a complete information using monovariate treatments and, in any case, the data analysis is very complex and time consuming.

Multivariate analyses and Chemometry allow to obtain cross correlation between lot of

parameters using lot of data for each one. Many software are today available at this aim that are not so simple to use without a suitable training; so, the main aim of our Biannual Meeting is to encourage a cooperation of researchers working on the three different topics. I wrote three and not researchers working on Environment or CH with chemometricians and it is not a mistake; as a fact, the conservation state of Cultural Heritage (CH) is strictly related to the Environment conditions, being an indicators of the quality of the environment where we live, and the best strategy would be a cooperation of researchers working on all the three topics. Medicine could be a further topic of our Conference because, in turn, the environmental conditions play, may be, the main role on the human health.



The Coordinator, Dr. Giovanni Visco, Appointed Professor at La Sapienza University of Rome

## References

1) Donald D. Hester, Book Reviews of: Irwin Friend, James R. Longstreet, Morris Mendelson, Ervin Miller, Arleigh P. Hess Jr; Investment Banking and the New Issues Market, *The American Economic Review*, 58(4) (1968), 1023-1024