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8<sup>th</sup> International Symposium

# measurements, diagnostics, statistics in Environment and Cultural Heritage fields

### 12-13-14 July 2020, Rome, Italy, Europe

### Organised by: CMA4CH staff with patronise of UNESCO, Rome University, Italian Chem. Soc., ....

To obtain a really positive effect, in terms of increasing and improving information, metrology and statistic must be used on all the steps of the "analyticae itineri", as well as on any action regarding the remediation or restoration (both in case of the Environment and Cultural Heritage) and the planning of best conservation conditions that can be obtained.

### Where, When

For this edition we selected an ancient town in the centre

of Italy. A nice landscape with pleasant climatic conditions ensure a good extra-conference time; that's why we have chosen Rome, a small ancient village on the sides of Tiber river, near some old ancient volcanoes.

The legend deals with one of the first Greek colony in Italy. This small village held numerous historical places from the Bronze Age to Renaissance and Modern Art. In July very nice weather is foreseen with a "good confidence interval".

## Why

The main Meeting purpose is to promote the cooperation between researchers working on different multidisciplinary topics but having the same final aim that can be summarised in "Environment and Cultural Heritage Protection".

Researchers not enough familiar with statistic can obtain "more information" from their, generally big, amount of data, while experts on advanced statistic methods may gain new kind of data to process.

A first list of researchers with the related



Ancient Akhenaten, decorated

research topics will be drawn, updated and continuously

available by the Meeting's Organising Committee through the Internet and/or mailing list.

cally the axes of the correlation

independent or uncorrelated variation. Hence the line of best fit is a direction of uncorrelated variation.

Do you recognise this graph? Author? Date?

type-ellipse are the directions of

Who



- absolute or relative dating of cultural finds,
- cultural finds authorship,
  - provenance of origin of constituting materials,
    - spotting of restoration, aids in conservation,
    - effect of age, artificial ageing,
    - archeometry and statistical applications,
    - □ is it true or not? multiparametric measure approach,
    - forensic applications end expertise,
    - sampling techniques in measure and diagnostic.
    - 2. in Environmental field:
    - measurements, diagnostics, statistics in this field;
    - □ analytical methods,
    - monitoring stations and passive samplers,
    - chemical, physical and aesthetic pollution (air, water, soil, indoor),
    - □ health resorts,
- climate and pollution,
- □ pollution impact on human health (direct and indirect),
- long term effects of pollution,
- **u** studies the ancient climate change,
  - prediction of future climate using statistic,
  - forensic applications and legal stuff.
  - experimental design in environmental studies.
  - 3. Between:
  - how to aids study on vulnerability of Cultural Heritage to climate change?
  - protection of Environment protect also the ancient artefacts living in;
  - □ porting of new instrument to Cultural Heritage field,
  - new calculation methods,
  - migration from theoretical statistical study to Environment,
  - □ didactic applications,
- □ Solve forensic problems.

A selection of papers from this edition will be published on an international Journal after an accurate review, in previous we published in Microchemical Journal, Current Anal. Chem, Chem. Central Journal, ESPR

glass vessel in the shape of a fish excavated from Tel el Amana, Egypt, dated 14th century bC. British Museum (EA55193), from Spectrosc. Europe

Our idea of meeting involving researchers, experts, scientist and competent on Measurements, Diagnostics, Sampling,

Characterisation, Monitoring, Sensors application, Sensory panel, Probing, Experimental, On-site studies, Evaluation and Audits, Screening, Quantification and of course Statistic applied to Environment and to Cultural Heritage fields.

## **Topics**

#### 1. in Cultural Heritage studies:

- measurements, diagnostics, statistics in this field;
- a diagnostic methods on objects, site, building, places,
- environmental and anthropic impact on finds,
- museum/archive conditions,



**The Course**: from 13 to 15 July, if we will reach almost 9 students an "Multivariate Analysis Course, School for Novices" will be held in Rome, near the Meeting

## Scientific committee, organisation

O. Arias de Fuentes, P. Avino, M. Calderisi, L. Campanella, R.G. Brereton, J.B. Ghasemi, A. Genga, G.E. Gigante, B. Giussani, P. Ielpo, A. Kachbi, W. Kosmus, R. Leardi, F. Marini, A. Montenero, M.I. Prudêncio, A.M. Salvi, M.P. Sammatino, M. Tomassetti, B.M. Wise and G. Visco

