

*Con il patrocinio di:
Università degli Studi di Messina
Accademia Peloritana dei Pericolanti*

**International Workshop
on
ADVANCES AND APPLICATIONS IN
GEOFORENSICS:
UNRAVELING CRIMES WITH GEOLOGY
(Messina, Italy, 26th September 2022)**

**Aula Magna Gustavo Ricevuto
Campus scientifico di Papardo
Viale F. Stagno d'Alcontres 31
Sant'Agata (Messina)**

PROGRAM

08:00-09:00 Registration

09:00-09:30 Opening Ceremony

Delegate of the Messina University / President of the AAP

Prof. Paolo V. Giaquinta (Director of the APP Division of Physical, Mathematical and Natural Sciences)

Delegate of the MIFT Department

Prof. Giancarlo Neri (President of the Earth Sciences Section of the MIFT Department)

Prof. Roberta Somma (Organizer of the workshop - Scientific officer of the agreement between the Messina University and the Messina Prosecutor's Office on Forensic Geology and Environmental Crimes)

KEYNOTE LECTURE

Chair: Valentina Venuti

09:30-10:00 Somma Roberta - Unraveling Crimes with Geology (Messina University)

INVITED LECTURES (First session)

Chairs: Marina Morabito, Roberta Somma

10:00-10:30 Dawson Lorna - The role of soil in intelligence and evidence in murder investigations in the UK (James Hutton Institutes, Aberdeen, United Kingdom)

10:30-11:00 Canter David - Following in Criminals' Footsteps: Developments in Geographical Offender Profiling (University of Liverpool, United Kingdom)

Coffee break

11:30-12:00 Marie-Louise Siggaard-Andersen - With the feet on the ground – how we started soil-forensics in Denmark (University of Copenhagen, Denmark)

INVITED SPEAKER

Chairs: Daniela Sapienza, Filippo Cucinotta

12:00-12:15 Paladini Giuseppe - XRF and Raman techniques for the characterization of colored gemstones: some case study (Messina University, Italy)

12:15-12:30 Maniscalco Rosanna - Micropaleontology applied to crime solving (Catania University, Italy)

Lunch time

INVITED LECTURES (Second session)

Chairs: Roberta Somma

13:30-14:00 Fonseca João – The importance of soil analysis in forensic science and criminal investigation (Scientific Police Laboratory, Judiciary Police, Lisbon, Portugal)

14:00-14:30 Jason Byrd - Forensic Entomology: Insects from Clandestine Gravesites. (University of Florida, USA)

Coffee break

POSTER SESSION

Chair: Daniela Sapienza

15:00-17:00 Oral presentation of the posters

17:00 Closure Ceremony and award for the best poster

LIST OF THE ABSTRACTS

- 1) **Baldino, G.**, Pennisi, C., Altadonna, A., Fodale, V., Cucinotta, F., Somma, R., Ventura Spagnolo, E., Mondello, C., Gualniera, P., Asmundo, A., and Sapienza, D. (2022). "The judicial inspection: from traditional techniques to the application of virtual radioimaging models". POSTER.
- 2) Barone, S. (2022). " Education and Training in Forensic Geology and Criminalistics summer school: the experience of an undergraduate". POSTER.
- 3) Byrd, J. H. (2022). "Forensic Entomology: Insects from Clandestine Gravesites". INVITED LECTURE.
- 4) Canter, D. (2022). "Following in Criminals' Footsteps: Introduction to Geographical Offender Profiling". INVITED LECTURE.
- 5) **Dawson, L.**, Ainscough, L., Vannan, A., Monaghan, D., Johnston, L., Roberts, J., Spencer, M., and Brewer, M. (2022). "Trace evidence comparison between soil on footwear and reference site locations: application to a murder investigation". INVITED LECTURE.
- 6) **Epasto, G.**, and Somma, R. (2022). "On the application of Computed Tomography in Forensic Engineering: a case study". POSTER.
- 7) **Fodale, V.**, Baldino G., Pennisi, C., Ventura Spagnolo, E., Mondello, C., Gualniera, P., Asmundo, A., Somma, R., and Sapienza, D. (2022). "Use of hiper-realistic mannequins in forensic practice: from teaching to the simulations in judicial purposes". POSTER
- 8) Fonseca F. J. (2022). "The importance of soil analy.is in forensic science and criminal investigation". INVITED SPEAKER.
- 9) **Maniscalco, R.**, and Somma, R. (2022). "Micropaleontology applied to crime solving". INVITED SPEAKER.
- 10) Marra, A. C. (2022). "A taphonomical approach to the study of clandestine graves". POSTER.
- 11) **Marra, A. C.**, and Somma, R. (2022). "Geology and Palaeontology applied to criminal cases". POSTER.
- 12) **Morabito, M.**, and Somma, R. (2022). "The critical role of Forensic Botany in the solution of judicial cases". POSTER.
- 13) **Morabito, M.**, Mondello, F., and Somma, R. (2022). "Macrobotanic data implementing Forensic Geology investigations". POSTER.
- 14) **Siggaard-Andersen, M.-L.**, Frøslev, T. G., Nielsen, I. B., Kjær, K. H., Hansen, A. J., Laursen, K. H., Strobel, B. W., Lyngsie, G., Rieckmann, M. M., Mikkelsen, F. N., Frimodt-Møller, M., Nielsen, H. S., and Jensen, H. H. (2022). "With the feet on the ground – How we started soil-forensics in Denmark". INVITED SPEAKER.
- 15) Somma, R. (2022a). "Unraveling crimes with Geology". KEYNOTE LECTURE
- 16) Somma, R. (2022b). "Forensic Geology applied to the search for homicide graves". POSTER.
- 17) Somma, R. (2022c). "Proposal for a new method for sieving geological physical evidence in micro traces". POSTER.
- 18) Somma, R. (2022d). "Geographical Profiling of lust murderers". POSTER.
- 19) **Somma, R.**, and Costa, N. (2022). "GIS-based RAG priority search scenarios: Geomatics applied to the lust murders committed by the Florence Monster". POSTER.
- 20) **Somma, R.**, and Fonseca, J. F. (2022). "Measuring color through low-cost commercial flatbed scanners: a proposal for a cost-effective and accurate method for comparative forensic analyses of forensic geological physical evidence". POSTER.
- 21) Somma, R., Altadonna, A., **Cucinotta, F.**, Raffaele, M., and Salmeri, F. (2022a). "The application of 3D scan technologies in Criminalistics and Forensic Geology" POSTER
- 22) **Somma, R.**, Cascio, M., Cucinotta, F., Mondello, F., Morabito, M., and Sabatino, G. (2022b). "As physical evidence analyzed by forensic geologists and botanists may provide valuable elements for the reconstruction of event dynamics". POSTER.
- 23) **Spoto, S. E.**, Paladini, G., Caridi, F., Crupi, V., Majolino, D., Venuti, V. (2022a). "A μ -Raman spectroscopic approach to detecting diamond simulants". POSTER.

- 24) **Spoto, S. E.**, Paladini, G., Caridi, F., Crupi, V., Majolino, D., Venuti, V. (2022b). “Mineral pigments: Challenges in Raman Spectroscopy”. POSTER.
- 25) Spoto, S. E., Somma, R., **Paladini, G.**, Caridi, F., Interdonato, M., Crupi, V., Majolino, D., Venuti, V. (2022c). “XRF and μ -Raman techniques for the characterization of colored gemstones: some case study”. INVITED SPEAKER.
- 26) **Tagliabue, G.**, Masseroli, A., Mattia, M., Sala, C., Belgiovine, E., Capuzzo, D., Galimberti, P.M., Slavazzi, F., Cattaneo, C., and Trombino, L. (2022). “Thanatogenic soil: a geoforensic approach to the exploration of the Sepolcreto (i.e., burial ground) of the Ca’ Granda (Milan)”. POSTER.