

Natural and anthropic systems have voices and languages. Nowadays it is not difficult to intercept voices thanks to the development of analytical methods and sensor technology; the decoding of language, the communication of these voices, is more difficult. In particular, the problem is attributable to the language decoding in order to define if it contains messages of physiological normality or if it contains signals, often of small intensity, which must lead to the passage to the subsequent phases of risk management, attention and alert. This is further complicated by the risk perception and analysis by stakeholders and decision-making centre and by political and/or administrative management. Daily examples are: components of endemic environmental matrices, but unknown as such; physiological noise in rock masses, in whom are hidden those due to the propagation or beginning of new cracks; underground Cultural Heritages open to the public without adequate hazard analysis.

Some of the most quoted international experts have accepted the invitation to participate and share their experiences and the latest news in the field of their research. The attempt is to facilitate the transfer of best knowledge and technology into a safer systems management.

#### Scientific committee :

*Prof David Amitrano*, ISTerre, Université Grenoble Alpes, Grenoble.

*Prof Nicola Casagli*, Università degli Studi di Firenze.

*Prof Giovanni B. Crosta*, Università di Milano Bicocca, IAEG GNI President.

*Prof Daniela Ducci*, Università degli Studi di Napoli, IAH It. Chap. President.

*Prof Mauro Fiorentino*, DICEM, Università degli Studi della Basilicata.

*Prof Antonella Guida*, DICEM, Università degli Studi della Basilicata.

*Dr Vincenzo Lapenna*, CNR IMAA.

*Prof Ignazio Marcello Mancini*, SI, Università degli Studi della Basilicata.

*Prof Mauro Maldonato*, Università degli Studi della Basilicata.

*Dr Luciano Masciocco*, DST, Università degli Studi di Torino - SIGEA

*Dr Guido Pasquariello*, CNR ISSIA.

*Prof Eugenio Scandale*, Accademia Pugliese delle Scienze.

*Prof Nicola Sciarra*, Università di Chieti e Pescara.

*Prof Francesco Sdao*, SI, Università degli Studi della Basilicata.

*Prof Vincenzo Simeone*, Politecnico di Bari.

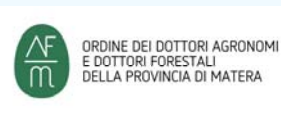
*Prof Aurelia Sole*, Università degli Studi della Basilicata Rector.

*Prof Giuseppe Spilotro*, DICEM, Università degli Studi della Basilicata.

In collaboration with:

Engineer Association of Matera & Geologist Association of Basilicata

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FOR MORE INFORMATION:

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## III International Workshop METHODS AND TECHNOLOGIES FOR ENVIRONMENTAL MONITORING AND MODELLING: EMERGING SIGNALS, RISK PERCEPTION AND MANAGEMENT



SEPTEMBER 14th, 15th and 16th, 2017

MATERA

*Chiesa del Cristo Flagellato*

organized by:



Dipartimento delle  
Culture Europee e  
del Mediterraneo



Università degli Studi  
della Basilicata



Scuola di Ingegneria

## SEPTEMBER 14th, 2017

8:30 - 9:00	<i>Registration</i>
9:00 - 10:30	<i>Inaugural session</i>
	<i>Prof Ferdinando Mirizzi</i> , Head of DICEM
	<i>Prof Ignazio Marcello Mancini</i> , Head of School of Engineering
	<i>Prof Giovanni B. Crosta</i> , IAEG GNI President
	<i>Prof Daniela Ducci</i> , IAH Italian Chapter President
	<i>Prof Francesco Guadagno</i> , AIGA President
	<i>Dr Antonello Fiore</i> , SIGEA President
	<i>Avv Raffaello De Ruggieri</i> , Mayor of Matera
	<i>Dr Nicola Benedetto</i> , Assessore, Basilicata region
	<i>Prof Aurelia Sole</i> , Università degli Studi della Basilicata Rector
	<i>Dr Geol. Gerardo Colangelo</i> , President of Geologist Ass. of Basilicata
	<i>Dr Eng. Gianluca Rospi</i> , President of Engineer Ass. of Matera Province
	<i>Prof Eugenio Scandale</i> , President of Accademia Pugliese delle Scienze
10:30 - 10:45	<i>Keynote speech</i>
	<i>Prof Giuseppe Spilotro</i> , DICEM
10:45 - 11:00	<i>Coffee break</i>
11:00 - 13:00	<i>Session 1 - SOIL, ENVIRONMENT AND GROUNDWATER INTERACTIONS: WHEN TROUBLES BEGIN</i>
	<i>CHAIRMAN: Prof Daniela Ducci</i>
11:00 - 11:20	<i>Prof B. De Vivo</i> L'atlante geochimico d'Italia: la Basilicata.
11:20 - 11:40	<i>Dr A. Parisi &amp; Prof M. D. Fidelibus</i> Droughts propagation and salinization into coastal aquifers. Potential non-linear cascading effects on groundwater dependent systems.
11:40 - 12:00	<i>Dr M. Polemio</i> Groundwater signals from climate and droughts. Do they call for human adaptation?
12:00 - 12:20	<i>Prof F. Fiorillo</i> La siccità delle acque sotterranee: dati storici e previsioni da dati di monitoraggio di sorgenti carsiche in appennino meridionale.
12:20 - 12:40	<i>Prof. P. Gattinoni &amp; Prof L. Scesi</i> Influence of groundwater on the stability conditions of the UNESCO site of Castelserpio (Northern Italy).
12:40 - 13:00	<i>Dr A. Palma et alii</i> Geochemica delle acque di circolazione profonda negli ammassi argillosi della Fossa Bradanica.
13:00 - 14:00	<i>Lunch break</i>

14:00 - 16:30	<i>Session 2 - PERCEPTION, ANALYSIS AND MANAGEMENT OF MULTIPLE SIGNALS TO AVOID DISASTERS</i>
	<i>CHAIRMAN: Prof Nicola Casagli</i>
14:00 - 14:20	<i>Prof D. Alexander &amp; Dr G. Pescaroli</i> New theory to help understand, monitor and manage cascading disasters.
14:20 - 14:40	<i>Prof N. Sciarra</i> La gestione dell'emergenza frane in Abruzzo dopo la recente crisi sismica e idrologica del gennaio 2017.
14:40 - 15:00	<i>Dr R. Pellicani et alii</i> Hazard and emerging signals in hybrid system. Study cases in underground settlements of Apulia Region (Southern Italy).
15:00 - 15:20	<i>Prof M. Papini et alii</i> Identification of shallow land instability precursory signals with a semi-distributed optical fiber strain sensor: an experimental method.
15:20 - 15:40	<i>Coffee break</i>
15:40 - 16:00	<i>Dr D. Giordan et alii</i> A decision support system for critical landslides and rockfalls and its application to some cases in the Western Italian Alps.
16:00 - 16:20	<i>Dr P. Allasia et alii</i> Landslide monitoring results obtained by Robotized Inclinometer System. The cases of Guglia landslide (Switzerland) and El Portalet (Spain).
16:30 - 18:30	<i>Guided tour: RUPESTRIAN CHURCHES OF MATERA</i>
<b>SEPTEMBER 15th, 2017</b>	
09:00 - 11:00	<i>Session 3 - In memory of Prof MARCO MUCCIARELLI CATCHING SMALL SIGNALS: INTEGRATED MONITORING AND MODELS FOR HAZARD AND RISK EVALUATION</i>
	<i>CHAIRMAN: Prof Giuseppe Spilotro</i>
09:00 - 09:20	<i>Marco's memory and teaching</i>
09:20 - 09:40	<i>Prof G. B. Crosta</i> Issue on monitoring, modelling and early warning.
09:40 - 10:00	<i>Prof M. Tropeano et alii</i> The 2002 Mucciarelli et alii report "Studi preliminari per una mappatura dei rischi naturali nei Sassi di Matera" (Preliminary studies about natural hazards mapping in the Sassi of Matera): still a cogent document.
10:00 - 10:20	<i>Dr F. Bovenga et alii</i> Analysis of interferometric SAR data for landslides monitoring: potentials and issues.
10:20 - 10:40	<i>Dr A. Perrone et alii</i> Integrazione di tecniche geofisiche per lo studio di aree in frana: casi studio in Basilicata.

10:40 - 11:00	<i>Coffee break</i>
11:00 - 13:00	<i>Session 4 - MULTIPLE RISK IN CULTURAL HERITAGES</i>
	<i>CHAIRMAN: Prof Francesco Sdao</i>
11:00 - 11:20	<i>Prof N. Casagli</i> Beni culturali e frane: casi di studio nel Mondo
11:20 - 11:40	<i>Dr C. Margottini &amp; Dr D. Spizzichino</i> Civiltà rupestri e rischi naturali
11:40 - 12:00	<i>Prof P. Frattini</i> Multicriteria approach for risk analysis on Cultural Heritage UNESCO sites in Europe
12:00 - 12:20	<i>Prof V. Simeone</i> Condizionamenti geologico ambientali nello sviluppo e salvaguardia del centro storico di Matera
12:20 - 12:40	<i>Dr G. Pappalardo &amp; Dr S. Mineo</i> Rockfall modeling in the cultural heritage site of Taormina Castle cliff (NE Sicily)
12:40 - 13:00	<i>Dr R. Pagliarulo</i> Coastal hazard on the evolution of the archaeological site of Egnathia (Southern Italy)
13:00 - 15:00	<i>Lunch break and visit to PALOMBARO LUNGO</i>
15:00 - 17:00	<i>Session 5 - LANGUAGES OF THE NATURAL SYSTEMS AND THEIR PERCEPTION</i>
	<i>CHAIRMAN: Prof Giovanni Battista Crosta</i>
15:00 - 15:20	<i>Prof D. Amitrano</i> The language of rock masses
15:20 - 15:40	<i>Prof M. Maldonato</i> Uncertainty, Risk perception and Communication
15:40 - 16:00	<i>Dr G. Motta Zanin</i> Adaptive management in coastal systems: the role of social memory in adaptive planning processes
16:00 - 16:20	<i>Dr V. Sangiorgio et alii</i> A user report based Decision Support System for building monitoring.
16:30 - 17:30	<i>Round-table discussion - COMMUNICATION BETWEEN THE KNOWLEDGES IN THE MANAGEMENT OF LAND HAZARD</i> <i>Invited: Presidents of Professional Associations, Regional and River Basin Authorities, Civil protection Authorities</i>
<b>SEPTEMBER 16th, 2017</b>	
08:30 - 15:00	<i>Field trip: MONTESCAGLIOSO AND STIGLIANO LANDSLIDES, CRIPTA DEL PECCATO ORIGINALE</i>
<b>INFORMATION</b>	
<i>Registration can occur at the opening of the workshop, registration for guided tours and field trip is required.</i>	
<i>Assignment of professional credits only for 14th and 15th of September. For more information please visit the official website of your professional order.</i>	
<i>Social dinner scheduled on the 14th September at 20:45. More information at the opening of the workshop.</i>	