

SPECIAL ISSUE

*Essays in Transdisciplinary Multispectral Modelling and Cooperation
for the Preservation of Cultural Heritage*

Editors:

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The following nine (9) papers are peer reviewed selected presentations to the 2nd TMM_CH Conference (Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage) which form a special issue of the SCIENTIFIC CULTURE (2022), Vol.8, No 2

Brief Editorial

Selected presentations to the 2nd TMM_CH Conference (Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage), 13-15 Dec., Eugenides Foundation, Athens, Greece

Innovative scientific methodologies and challenging projects marking future trends in the protection of cultural heritage, have initiated within a holistic approach, merging competence from the scientific fields of architecture, civil engineering, surveying engineering, materials science and engineering, information technology and archaeology, a universal conversation among scholars, heritage professionals on restoration and conservation, stakeholders, industry representatives and

policy makers. The combined utilization of digital documentation technologies with innovative analytical and non-destructive techniques, numerical, computational and 3D techniques, archaeometric and archaeogene methods, supports the creation of a transdisciplinary multispectral modeling towards the sustainable preservation of cultural heritage.

These innovative aspects were enhanced and revealed by the 2nd TMM_CH International Conference on “Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage: Recapturing the World in Crisis through Culture”, on 13-15 December 2021, in Athens, Greece.

The Conference was organized by the National Technical University of Athens in cooperation with the Technical Chamber of Greece, under the patronage of H.E. the President of the Hellenic Republic, Ms Katerina Sakellaropoulou, inaugurated by H.E. the Vice President of the Government of the Hellenic Republic, Mr Panagiotis Pikrammenos, with benedictions bestowed by His All Holiness, Ecumenical Patriarch, Bartholomew I of Constantinople, and His Beatitude Archbishop Hieronymus II of Athens and All Greece.

Distinguished scientists and representatives of the National Geographic Society, the Cultural Heritage Finance Alliance, the International Council of Monuments and Sites ICOMOS, the Organization of World Heritage Cities OWHC, the European Society for Engineering Education SEFI, the European Construction Technology Platform ECTP, the International Federation of Surveyors FIG, the International Committee CIPA Heritage Documentation, the World Monuments Fund, AHEPA Hellas, UNESCO Chairs on “Digital Cultural Heritage” and “Culture, Tourism, Development”, and other major International and European Organizations, Associations, Networks, Universities and Research Centers in the field of cultural heritage preservation, participated in the International Steering and Scientific Committees.

The 2nd TMM_CH Conference was highly expected and attracted researchers from all over the world. It was held with great success, despite the pandemic, with the physical presence of 150 delegates and online attendance of 500 delegates in real time.

310 contributions were submitted and 124 papers were accepted for oral presentation and publication by 377 authors from 33 countries and after peer review from 3 reviewers in average per paper and consequent revision, with a rate of acceptance equivalent to a 40%. Accepted papers were published in distinguished Scientific Journals and Proceeding Volumes, 8 of them in the Special Issue of the journal of *Scientific Culture*, which is an honor for the International Scientific Committee of TMM-CH. This effort was accomplished with the cooperation of the Chief Editor and editors of *Scientific Culture*, the contribution of whom we highly appreciate and acknowledge, Prof. Ioannis Liritzis, above all.

In both Conference, 1st and 2nd TMM-CH, the emblematic rehabilitation of the Holy Aedicule of the Holy Sepulchre in Jerusalem performed under the scientific responsibility of the National Technical University of Athens interdisciplinary team - Prof. A. Moropoulou, Chief Scientific Supervisor, Prof.

M. Korres, Prof. A. Georgopoulos, Prof. C. Spyarakos, Ass. Prof. C. Mouzakis in the field of monuments' protection - was presented as an exemplary application of interdisciplinary and multispectral collaboration, as an outcome of innovation and of ongoing post-implementation research, intersecting all the scientific fields of engineers and natural scientists in dialogue with humanities.

Guest editors

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