SEFI Fellowship awardee 2017



Prof. Antonia Moropoulou National Technical University of Athens President of the General Assembly of the Technical Chamber of Greece



- Vice-President of the Administrative Council of the European Society for Engineering Education SEFI (2013-2016)
- NTUA Vice Rector of Academic Affairs of the National Technical University of Athens (2010-2014) and was appointed as NTUA Deputy Rector (2013-2014)
- Director of the Laboratory of Materials Science and Engineering at the NTUA School of Chemical Engineering (2016 -)
- Studies Director of Direction "Materials and Conservation Interventions" of the NTUA Interdisciplinary interdepartmental Postgraduate Program "Protection of Monuments" (1997-)
- She has been elected as Contracted Professor (Professoressa a' Contratto) in the University IUAV of Venice (School of Architecture, 1993) and Visiting Professor at Princeton University (School of Civil Engineering and Operations Research, 1995-1996).
- She participates by invitation in the 'Professional Women's Advisory Board of New York' since 2008. In 2012 she was awarded the 'YPATIA' Award by the 'Association of Hellenic Women Scientists'

SEFI DEBATES

In the past few years, we have witnessed a vibrant discussion about the skills that engineering graduates should possess to face their future as engineers of the 21st century.

This discussion takes place all over Europe and varies from country to country depending on its tradition, educational system, industrial environment and a series of others factors.

Under the initiative of Prof. Antonia Moropoulou, as SEFI Vice-President, SEFI has started organizing "SEFI Debates"

1ST SEFI DEBATE 2014

To address this issue, SEFI has initiated a series of debates and discussions, notably in Brussels.

The <u>inaugural SEFI debate</u> on **7 April 2014** was on "**Engineering education facing the challenge of the crisis in Europe**", with a focus on the actual skills gap in engineering.

It was hosted by the Permanent Representation of Greece to the EU, under the auspices of the Hellenic Presidency of the Council of the European Union, with the introductory speech from Mrs Androulla Vassiliou, then EU Commissioner for Education, Culture, Multilingualism and Youth







 Prof. K. Hawwash, President SEFI
 Mrs. A. Vassiliou, EU Commissioner for Education, Culture, Multilingualism & Youth
 Prof. A. Moropoulou, Vice President SEFI

2ND SEFI DEBATE 2016

SEFI issued a position paper on "Developing Graduate Engineering Skills" in September 2015.

To address this issue, SEFI organized its <u>Second SEFI</u>
<u>Debate</u> on March 3rd 2016 with the title "<u>Labour Market</u>
<u>Needs and Engineering</u>"

The event was hosted by Mr. Nikos Androulakis, member of the European Parliament, and Mr Dimitrios Papadimoulis, Vice President of the European Parliament, on the premices of the European Parliament in Brussels.

PROPOSED SEFT DEBATE 2018

- Since 2015-2016 will be a year of implementation of the "New Skills Agenda for Europe",
- It is proposed to plan a 2018 SEFI Debate with a possible title of "New Skills for New Jobs: New skills strategy for Higher Engineering Education and a great coalition with Industry for new jobs".
- This proposed 2018 SEFI Debate could be co-organized in Brussels with the European Parliament, following 2016 SEFI Debate's paradigm, and the European Commission that is issuing the "New Skills Agenda for Europe".

PROPOSED SEFT DEBATE 2018

- Since the French Minister of Education will be hosting in 2018 the next European Bologna Policy Forum (BPF),
- It is proposed to organize a SEFI DEBATE as a pre-BPF debate, with a possible title of "New trends unifying Higher Engineering Education Area, complying with Labour market changes", as a sequence of both 2016 and proposed 2017 SEFI Debates, to imply amendments to the BPF.
- This proposed 2018 SEFI Debate could be held in paris, coorganised with the Organisation for Economic Cooperation and Development (OECD-LEED Program), Dassault Systemes and the French Government.

SEFI OECD WORKSHOP 2014

SEFI is debating on the issues of innovation, enterpreneurship and creativity:



SEFI Workshop with OECD, Municipality of Athens, NTUA-ECS, Technical Chamber of Greece. Athens, December 2014

BOLOGNA PROCESS REVISION

- The Bologna Declaration (1999) was decided and succeeded to promote mobility and employability through EHEA, adapting a system of equivalent and transferrable credit units (ECTS).
- Tonia Moropoulou has contributed in amendments of the Bologna Declaration at the Fourth Bologna Policy
 Forum in Yerevan in May 2015, on her own initiative and accepted unanimously, ensuring Higher Engineering Education quality and the skills for appropriate profession exercise, representating SEFI. (Representative of Greek Minister of Education Em. Prof. A. Baltas).





GRADATION OF TECHNICAL RESPONSIBILITIES LEGISLATION

Tonia Moropoulou has recently succeeded in the recognition of **integrated and uninterrupted 5 years Studies Program** leading to Diplomas in Greece as equivalent to Master degree. (Law 4485/2017 of Greek Minister of Education Em. Prof. K. Gabroglou).

In addition, she has recently contributed and succeeded in the acceptance process of a new **Presidential Decree** recognizing the general and specialized **professional rights of Engineers in Greece**, thus achieving an integrated framework concluding efforts of the Technical Chamber of Greece of more than five decades.

She is world class expert in building materials and the preservation of monuments that comprise the World's Cultural Heritage

Since 1994, under her initiative, she developed a joint research initiative through a Memorandum of Understanding for the Earthquake Protection of Historical Monuments in Istanbul between Princeton University (Structural Analysis), Bogazici University (Geophysical Studies, Earthquake Engineering) and the National Technical University of Athens (Construction Materials).

This initiative is still active today through co-operation projects, and within its framework the Greek contribution to the conservation of Hagia Sophia has been implemented

She is the **Chief Scientific Supervisor** of the project for the

"Conservation, reinforcement and repair interventions for the **rehabilitation of the Holy Aedicule** of the Holy Sepulchre in the All-Holy

Church of Resurrection in Jerusalem",

which was recently implemented in the framework of the common agreement of the Status Quo Christian Communities, following invitation by the Greek-Orthodox Patriarch of Jerusalem

Historic agreement between the three Christian Communities

The Common Agreement of the Status Quo provides him with the authority, in constant collaboration with the Leaders of the Christian Communities, the historic Guardians of the Holy Sepulchre, consisting of the Greek-Orthodox Patriarch of Jerusalem, Theophilos III, the Custos of the Holy Land of the Franciscan Order, Pierbattista Pizzaballa (until May 2016), today the Apostolic Administrator of the Latin Patriarchate of Jerusalem, and Francesco Patton (from June 2016), as well as the Armenian Patriarch in Jerusalem, Archbishop Nourhan Manougian, to **coordinate** all scientific, technical and administrative aspects of the project.

COMMON AGREEMENT

Today March 22rd, the three Commentium the Simone guardians and servants of the Boly Places, are fulfilling a historic majornability that has been excessed to us by the humn Quo, by invaliding the scaffolding to allow for the necessary conservation, neighbormous and repair inter-sections to the Boly Andicula.

Today we mark the formal beginning of the project for the renomines of the Smitch Additate in the Church of the Assamus. This project is being curried in by a time of precision from the National Technical University of Addition done the supervision of Profitmer Metopoidos, whose important report has recently been completed and published. This report was nativistice to the three Communities Inter in Jetusahum in February of this year, and the work can now begin

We wish a salmowledge for conscious test the first Corenesies here enabled as that his project could proceed. Indicating up the receipt of March 19°, at the Orest, Orbitoles Memericha of Jensaters in such its low-and the "incorration ortigeted diagnosis research and strategic planning for sempetific, performing and multisolds materials and concervation are characteristicate intervations of the 18th, Auditack of the 18th Seguidate in the All-16th Charth of the Reservation in Jensatem." combated by the bissonal Tochester of Admin.

The implementation of this project will import and will not change the rights and the altims of the flere Communities.

The consense arbieved implies the following:

- The Persica will be implemented within the engineering and scientific framework of specifications as set forward by the NTUA Study.
- The Project will be ramaged within the following framework:
 The meeting of the blacks of the three major Communities performing in "project coverant constitute" (PCD) will instrument be for proposability for all strained decision.
- 22 Earls Community should ever a separate accounts for constitutions in order to softest the occoming funds to cover the cost of completion of the works of the same various of the Holy Andreals.
- 2.5 s. The commencement of the works will begin within a foreight after the Europe French of the Europe Charden.
- 2.3 S. The works, which will be completed in approximately eight counts to one year, will not prevent the religious services in the Helly Sepulsher or, more specifically, in the Ardicule, nor prevent the scores of plantas into those places.
- 2.4 The CTB (Common Technical Bureau of the Chards of the Holy Sepulcher), staffed by these Architects by the these Communities, will be appeniedle for the

ourset extends of the project according to the adoptific tradition and directives readlend by the Nikissan Tachesian'd University of Adhesis. The representatives of the Common Technical Barens of the Clearch of the Holy Sepublics (Dr. Dacodosios Mitroposios), as Construction Sele Missages (CSM), and be empousible for the construction sink's approxima whithin the devalues set Deveral by the acceptant

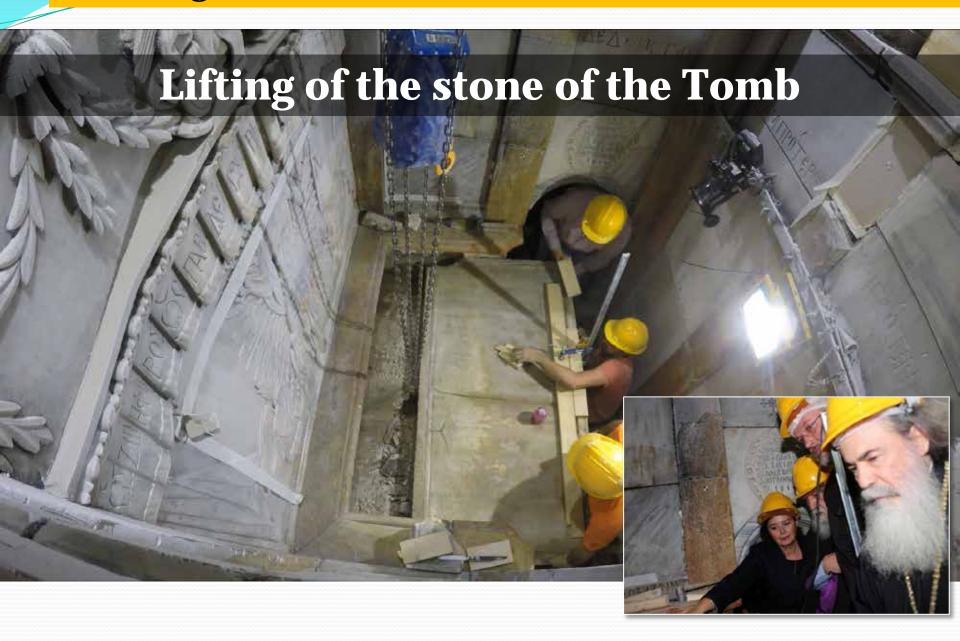
- 2.5 The SoluntSc Supervision will be performed by the interdisciplinary NYUA Scale Tears, leaded by Proteour A Mongradian (CSS). Size has the owner impromishing for the scientific mentioning the work and in the tractor of the interdisciplinary electrific mentioning infection, which will be not up in the construction with the number of the proteous Monager (PM) and the CSM does will mention and control for work.
- L4 The project transgement will implement the project chance, report or the work, program according to the schedule and budget, and considered the operation and the accentific approximent teams in order to complete the work assessyshilly and on since and to assume close on results built.
- 2.1 the (PICE) project exerce? Connection adherism the Secretag Connection (SC) in cope with the current problems of integrated project governance with the participation of the CSS (Chief Scientific Superviore), the CSM (Connection Size Managar) and the PM (Project Managar). The Partiants of Jenoudres or IBs Digners to classing the SC with the robleption to a factors the project of worst committee.

For the first time in over two contains, the Shared Androide will receive again inter-entions. This actuation will secure this bridy Prace for generations set to come for all these polysies and people of good will who come to the cheese to well spitions reasond. During the entire project, the Holy Terrik will remain accountly to pilgrims without Shouption, and for this careful planning and execution we meath project unimalange after of gardated. The Holy Terrik sear always the open to all.

May God bless this work and those whose respondibility it in to carry out, and may the resonation of the Holy Torob of our Lord Jeons Christ by a bisson of hope for a bording

The production of Security of Security Security

Revealing the burial monument





NATIONAL TECHNICAL UNIVERSITY OF ATHENS

Interdisciplinary Research Group for the Monuments Protection

PRESENTATION UPON COMPLETION OF THE HOLY AEDICULE REHABILITATION

Jerusalem, 22 March 2017

National Technical University of Athens Chief Scientific Supervisor Prof. Antonia Moropoulou

NTUA Interdisciplinary Team

Prof. E. Korres, Prof. A. Georgopoulos, Prof. A. Moropoulou, Prof. C. Spyrakos, Assist. Prof. Ch. Mouzakis, *Deputy Construction Site Manager*

Technical editing:

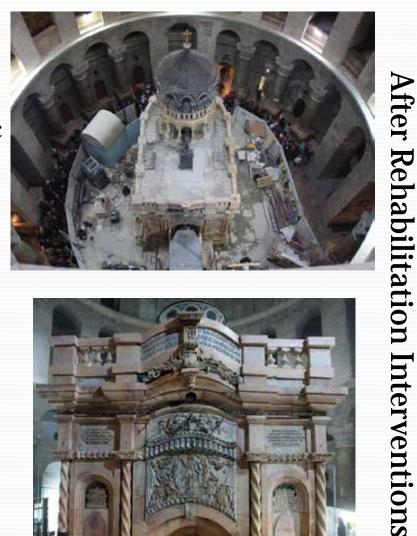
Assistant to CSS: for IDML, EDIP Dr. K. Lampropoulos, for ML, PhD Cand. M. Apostolopoulou, for CL, EDIP Dr. E.T. Delegou, PhD Cand. Em. Alexakis

Program Agreement between Jerusalem Patriarchate and NTUA, 623455/2016

The Holy Aedicule Before & After Rehabilitation Interventions



Panoramic View





East Side



Before Rehabilitation Interventions

The Holy Aedicule Before & After Rehabilitation Interventions



South Side View

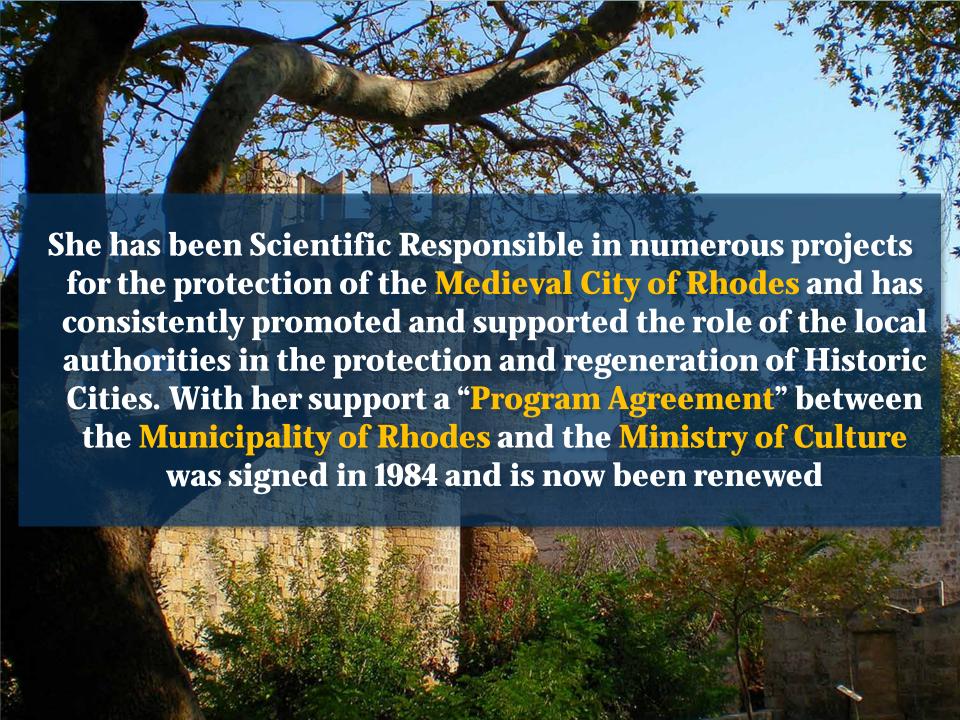


After Rehabilitation



North Side View





She has also worked on restoration projects for the rehabilitation of historic cities, i.e. the **Venetian** Fortresses and Historic Cities of Rethymnon, Herakleion and Corfu, the Demeter Temple of Eleusis, Fortresses, architectural monuments of Venice and Magna Grecia, the Temple of Luxor in Egypt, Byzantine and Post-Byzantine Monasteries in Mount Athos and Creta, Byzantine Monasteries in Serbia and Kosovo, Temples and Monuments in the Mediterranean (France, Italy, Spain, Portugal, Malta, Turkey, Israel, Lebanon, Syria, Palestine, Tynisia, Egypt) and recently in the European project "INCEPTION - Inclusive Cultural Heritage in Europe through 3D semantic modelling"