

CURRICULUM VITAE

Dr. ELEFThERIA TSAKANIKa

Ass. Professor School of Architecture, National Technical University of Athens
Dept. IV – Architectural Technology, Laboratory of Building Materials

1. EDUCATION

Civil Engineer N.T.U.A. (1988)

Ph.D., School of Architecture, National Technical University of Athens, (2006) Dissertation title: "**THE STRUCTURAL ROLE OF TIMBER IN MASONRY OF PALATIAL TYPE BUILDINGS OF MINOAN CRETE**".

YEARS OF EXPERIENCE : 31

LANGUAGES : Greek, English, Italian.

SCIENTIFIC SUBJECT:

«Natural Building materials in the Design of Modern and Historic Structures»

EXPERTISE:

Structural analysis and design of modern and historic timber structures in earthquake zones. Survey, structural and constructional analysis, assessment and restoration of heritage buildings with emphasis in timber structures (prehistoric and historic ones).

2. AFFILIATIONS

Member of 28 scientific National and International Committees and Organizations :

(1993-1997) Member of **PACT 19 European Action for the Protection of Architectural Heritage.**

(1995-1997) Member of the **RILEM COMMITTEE for the Protection of the Historical Timber Structures.**

(2008-2017). Elected member of **ICOMOS's International Wood Boarding (Scientific) Committee.**

2016 -2017. Vice-president of the **ICOMOS WOOD committee.**

(2012) **Expert of Unesco/Icomos: Field Evaluator** of Nomination of Cultural property to the World Heritage List (on site mission/report for THE WOODEN TSERKVAS OF THE CARPATHIAN REGION IN POLAND AND UKRAINE).

(2007-today) Elected member of the **Hellenic ICOMOS Boarding Committee.**

(2012-2013). External desk reviewer of the **International Organization World Monuments Fund.**

(2013-today). Member of the Managing Group of the **International Network "HISTORIC TIMBER FRAMES IN SEISMIC ZONES".**

(2014) **Greek delegate at the European Committee for Standardization CEN/TC 346/WG 10** (Historic timber structures. Assessment of load bearing timber structures in heritage buildings).

(2014). **Member of the Hellenic Central Council of Modern Monuments.**

(2008-today) **Greek delegate at the European Committee for Standardization (CEN) for Eurocode 5** (Design of Timber structures).

Member of the subcommittee **for earthquake design of the European Committee for Eurocode 5.**

Member of the subcommittee of EC8 **for earthquake design for Part 3: Existing buildings. Timber structures.**

Member of the **Committee TE 92, "Timber structures" of the Greek Standardization Organization (ELOT).**

Greek National Committee for the Application of Eurocode 5 (Timber structures)

Coordinator- Group Leader of the Greek Mirror committee for CEN/TC 250- Eurocode 5.

Member of the **Management Committee of the COST ACTION** (Intergovernmental framework for European Cooperation in Science and Technology) : **FP 1101 "Assessment, Reinforcement and Monitoring of Timber Structures". Leader of Task Group 1.**

Member of the **Sub - Management Committee of the COST ACTION : FP1004 "Enhance mechanical properties of timber, engineered wood products and timber structures".**

Member of the **Management Committee** of the **COST ACTION : IE0601 "Wood Science for Conservation of Cultural Heritage".**

Member of the **Management Committee** of the **COST ACTION: FP1402 "Basis of Structural Timber Design from Research to Standards".**

3. RESEARCH WORK

Participation in 6 European research groups/actions

RAPHAEL EUROPEAN COMMUNITY ACTION PROGRAM: “*MANAGEMENT OF THE EUROPEAN WOODEN BUILDING HERITAGE*”, Coordination by Oulu University in Finland (1997-2000).

CULTURE 2000 PROGRAM : “*WOODEN HANDWORK / WOODEN CARPENTRY : EUROPEAN RESTORATION SITES*”, Coordination by Politecnico di Torino in Italy.

COST ACTION IE0601 : “*Wood Science for Conservation of Cultural Heritage*” (2007-2011).

COST ACTION FP 1004 : “*Enhance mechanical properties of timber, engineered wood products and timber structures*”, (2012-2016).

COST ACTION FP 1101: “*Assessment, Reinforcement and Monitoring of Timber Structures*”, (2012-2016). (Task group leader of TG1 “Synthetic methods for the assessment of historical / existing timber structures).

COST ACTION: FP1402 “*Basis of Structural Timber Design from Research to Standards*”.

Participation in 17 Greek research programs (selected programs)

- P. Touliatos, E. Tsakanika, (N.T.U.A. - Municipality of Archanes in Crete), a research restoration / rehabilitation program. “**Methodology for the study of the traditional buildings of Archanes Village in Crete. Materials and building techniques. Principles / guidelines and intervention proposals for the restoration of the historical and traditional buildings**” (1991-1992). This project was a part of a bigger research program of the NTUA in collaboration with the local authorities, aiming to enhance the quality of the urban environment and architectural fabric of the Archanes village.
- P. Touliatos et al., (N.T.U.A.) - research program “**Constructional analysis, pathology, and proposals for safety measures for 54 Industrial Buildings of the 19th and 20th century in Lavrion, Attica, Greece**” (1994-1996). Extensive architectural, engineering survey and structural assessment of 40 different industrial buildings, built with stone, bricks, timber and steel load bearing systems. Proposals for immediate safety measures.
- G. Kizis, V. Koumouisis, P. Touliatos, E. Tsakanika (N.T.U.A.), “**Restoration and rehabilitation of the Venetian Great Arsenal in Chania – New use : Centre of Mediterranean Architecture**”, (1996).
- P. Touliatos et. al. (N.T.U.A. - Hellenic Ministry of Culture), “**Timber and steel shelters for archeological sites. Case study : Paleochristian Basilica of Doumetios A’, Archaeological Site of Nikopolis, Preveza Greece**”, (1998-1999).
- P. Touliatos, E. Vintzileou, E. Tsakanika, (N.T.U.A. - EARTHQUAKE PLANNING AND PROTECTION ORGANIZATION), “**Horizontal timber reinforcing systems of masonry. Constructional analysis, pathology, experiments, restoration proposals**”, (2001-2005).
- N.T.U.A. - Greek Ministry of Culture -Polytecnico of Torino, research program. «**The Timber Roof of Hagia Paraskevi Basilica in Chalkida, Greece: Multi-Disciplinary Methodological Approaches for the Understanding of the Structural Behaviour**», (2005-2008).
- S. Charalabidou, et al., E. Tsakanika (N.T.U.A. – Municipality of Trikala, Greece), research program. “**The 19th century Matsopoulos watermill complex, in Trikala**”, (2007-2009).
- M. Skarvelis, E. Tsakanika et. al. (Department of Wood & Furniture Design and Technology, of the Technological & Educational Institute (TEI) Karditsa - General Secretary of Youth), «**Scientific support for New Farmers. Timber Building for Agricultural Uses**”, (2011).
- Multidisciplinary collaboration of 7 Schools of NTUA for the research project: «**Historic bridge of Plaka in Epirus. Analysis, Restoration**». (2015 -today)
- C. Palyvou et. al. **Akrotiri Restoration Project. Consolidation maintenance and protection of the monuments**. Kaspersky Lab, Thera excavations, Archeological Society (2016-today).

Other research activity

Participation in archeological research activity relevant to her dissertation:

2001-2003: Participation in a team of experimental archeology for the reconstruction of a Mycenaean ship shed (building for ships), 2006: G. Rethemiotakis, C. Palyvou, E. Tsakanika (Hellenic Ministry of

Culture, INSTAP). "Architectural study of the Minoan palace at Galatas, Crete", 2007: J. Shaw, M. Shaw, E. Tsakanika. "Archaeological Site of Kommos, Crete. Anastilosis study of the timber and stone piers of the neopalatial Minoan building T".

Participation in research activity concerning the seismic performance of modern and historic timber structures.

1989-1991: E. Tsakanika, H. Mouzakis, P. Carydis. On site measurements of the dynamic behavior of large span, 3–hinged timber arched frames during 3 different phases of their construction.

1999: Collaboration with the Hellenic Ministry of Culture (Dr. N. Miltiadou) for the application in practice of timber diaphragms (plywood and timber planks) at the level of the floors and the roofs, in order to improve the seismic behavior of masonry buildings.

4. SCIENTIFIC WORK

Scientific published work

- **1 book and 3 manuals** for wood as a structural material and for the design and calculation of timber structures using Eurocode 5 :
- **7 chapters in collective volumes** (invited participation).
- **3 papers in peer-reviewed journals.**
- **26 papers in peer- reviewed proceedings** of International and National conferences.
- **9 papers in non peer- reviewed proceedings** of International and National conferences.
- **3 publications in Greek journals** of structural engineering organizations.
- **4 publications of architectural projects** in Greek architectural journals (structural engineer of the presented work).
- **2 publications in newspaper** articles and 1 interview on the scientific results of her dissertation.
- **Responsible for the translation of the 3 parts of Eurocode 5 (EN 1995-1-1, 1-2, 2) and the relevant Amendments and Corrigenda.**
- **Responsible for the translation of 12 European Normes (ENs 844.1 - 844.12 : Terminology of solid timber).**
- **Responsible for the National Application Documents of Greece for Eurocode 5.**
- **Member of the European Working Group for the writing of the European Standards:**
 - GUIDELINES FOR THE ON-SITE ASSESSMENT OF HISTORIC TIMBER STRUCTURES. Technical European Committee FOR STANDARDIZATION (CEN) / TC 346 "Conservation of Cultural Heritage" WG10 – Historic timber structures
 - WG of Eurocode 5 for the revision of the timber chapter of "Eurocode 8: Design of structures for earthquake resistance" CEN/TC 250/SC 8.
 - WG of Eurocode 8 for the revision of the part 3 for timber existing structures of "Eurocode 8: Design of structures for earthquake resistance"
- **Member of the Working Group for the revision of the PRINCIPLES FOR THE PRESERVATION OF HISTORIC TIMBER STRUCTURES (ICOMOS -International Wood Committee).**

Books and manuals

"Wood as a structural material". (P. Touliatos, E. Tsakanika, Z. Konteas), book/manual in Greek.

"Wood as a structural material". (P. Touliatos, K. Katsaragakis, E. Tsakanika, R. Kresteniti, Z. Konteas), Technical Chamber of Greece (in Greek).

"Technical notes for the calculation of Timber structures using Eurocode 5". Technical Chamber of Greece, (E. Tsakanika, Z. Konteas) (in Greek),

E. Tsakanika, M. Skarvelis, produced in the frame of the research project "Timber Building for Agricultural Uses".

Chapters in collective volumes

E. Tsakanika – Theohari 2008, "**The constructional analysis of timber load bearing systems as a tool for interpreting Aegean Bronze Age architecture**", Verein zur Forderung der Aufarbeitung der Hellenischen

Geschichte e.V., 2nd International Symposium «Bronze Age Architectural Traditions in the Eastern Mediterranean. Diffusion and Diversity», Munich, 7th–8th May, 2008, p.127-142.

P. Toulaiatos, E. Tsakanika, V. Tsouras 2010: **“Gazi Hasan paşa mosque on the island of Kos in Greece. Study and reconstruction of the timber roof”** Ed. A. Stefanidou, Special edition – Collective volume «*The Ottoman Monuments of Greece. Their protection, conservation and restoration*», AIMOS, University Studio Press, p. 251-266.

E. Tsakanika – Theohari, 2012. **“Minoan structural systems. Anti-seismic characteristics. The role of timber”**. Edition in the frame of the International Workshop “Out of rubble’: Interdisciplinary Perspectives on Minoan Earthquakes”, organized by the Aegean Interdisciplinary Studies research group (AegIS-UCL-INCAL-CEMA), the Geodynamics and Geofluids research group (KU Leuven) and the Center for Archaeological Sciences (CAS-KU Leuven), Belgium, 2017.

Branco Jorge M., Descamps Thierry, Tsakanika Eleftheria, **“Repair and Strengthening of Traditional Timber Roof and Floor Structures”** in “Strengthening and Retrofitting of Existing Structures”, Springer, 978-981-10-5858-5 (2017).

Maistrou E., Efessiou E., Tsakanika E., Balodimou M., Alexiou M., Kouimtzoğlu T., Chapter: **The Historical Stone Bridge of Plaka in Greece: Historical, architectural and constructional documentation after the collapse in 2015**, in the book **Stone bridge of Plaka. The research work of NTUA for the restoration**, 2016 NTUA.

E. Tsakanika, J. Branco **“Reinforcement of Historic Timber roofs”**, RILEM committee. State of the art chapter. Edition of Rilem in special issue for reinforcement of Timber structures (under preparation).

Tsakanika E. **“Horizontal timber reinforcements of masonry. An effective earthquake-resistant system for the connection of timber roof and floor diaphragms to the walls. Case studies from Greece”** in Proceedings of the Institution of Civil Engineers, “Structures and Buildings” Themed Issue ‘*Role of structural timber in the earthquake protection of masonry buildings*’ Champions: Professor Jason Ingham (University of Auckland, NZ), Professor Maurizio Piazza (University of Trento, IT) and Dr Ivan Giongo (University of Trento, IT) (under edition).

Papers in peer-reviewed journals

Cruz, H.; Yeomans, D.; Tsakanika, E.; Macchioni, N.; Jorissen, A.; Touza, M.; Mannucci, M.; Lourenço, P.B. – **“Guidelines for the on-site assessment of historic timber structures”**. International Journal of Architectural Heritage: Conservation, Analysis, and Restoration. Volume 9, Issue 3, 2015.

Branco J., Sousa H., Tsakanika E., **«Non-destructive assessment, full-scale load-carrying tests and local interventions on two historic timber collar roof trusses»**. Engineering Structures, 2017.

Branco J. M., Descamps T., Tsakanika E., 2018, **“Repair and Strengthening of Traditional Timber Roof and Floor Structures”**, In: Costa A., Arêde A., Varum H. (eds) Strengthening and Retrofitting of Existing Structures. Building Pathology and Rehabilitation, vol 9. Springer, Singapore. pp 113-138.

Selected papers in peer-reviewed proceedings of International and National conferences

E. Tsakanika, **«Problems in the suitability of EC5»**, (ed: Bertolini Cestari C.), Proceedings of the Culture 2000: Italian Action: «WOODEN HANDWORK / WOODEN CARPENTRY: EUROPEAN RESTORATION SITES», Torino 2001, (Elsevier), σελ. 223-234.

E. Tsakanika, **«Methodology concerning the restoration of Historical Buildings. CASE STUDIES : The Turkish Mansion and the Hagi Mehmet Aga Mosque in Rhodes»** (ed: G. Tampone), International Conference «*Conservation of Historic Wooden Structures*», Florence 2005, vol. 2, σελ.194-203.

E. Tsakanika, K. Παλυβού, Π. Τουλιάτος, **«Ο δομικός ρόλος του ξύλου στη νεοανακτορική αρχιτεκτονική»**, Δημοσίευση στα Πεπραγμένα του 1^{ου} Διεθνούς Κρητολογικού συνεδρίου (Χανιά 1-8 Οκτωβρίου 2006), Χανιά 2011, τομ. Α2, σελ. 195-214.

E. Tsakanika, **«Byzantine and Post-Byzantine Historical Timber Roofs in Greece. Typical failures, misunderstanding of their structural behaviour, restoration proposals»**, ICOMOS «XVI International Conference and Symposium of the IWC “From Material to Structure”», Florence. Δημοσίευση στην ιστοσελίδα της Διεθνούς επιτροπής WOOD COMMITTEE του ICOMOS. <http://www.icomos.org/iwc/2007.htm>

C. Bertolini, P. Toulaiatos, N. Miltiadou, N. Delinikolas, A. Crivellaro, T. Marzi, E. Tsakanika, O. Pignatelli, G. Biglione, **“The timber roof of Hagia Paraskevi Basilica in Halkida, Greece: Multi-disciplinary methodological approach for the understanding of the structural behaviour. Analysis and diagnosis”**, XVI International Conference and Symposium of the IWC “From Material to Structure”, Florence. (Δημοσίευση στην ιστοσελίδα της Διεθνούς επιτροπής WOOD COMMITTEE του ICOMOS. <http://www.icomos.org/iwc/2007.htm>

E. Tsakanika – Theohari, H. Mouzakis, 2010. **“A post-Byzantine mansion in Athens. The restoration project of the timber structural elements”**, Proceedings of the 11th World Conference on Timber Engineering, (WCTE 2010), Trentino, Italy.

Atsonios, I. Mandilaras, D. Kolaitis. E. Tsakanika-Theohari, E. Alexandrou, M. Founti, 2013. **«Large scale Measurement campaign to Assess the Thermal behavior of an 18th Century Historic Building in Athens»**, Proceedings of 3rd European Workshop on Cultural Heritage Preservation, EWCHP 2013, Bolzano, Italy, 16-18 September 2013, p. 135-142.

E. Tsakanika, 2013. **“The restoration project of the Timber-Framed Walls of Benizelo’s Mansion in Athens”**, 1st International Symposium on Historic Earthquake – Resistant Timber Frames in the Mediterranean Area (H.Ea.R.T.2013), Cosenza, Italy.

Kourmadas G., Taxiarchi P., Tsakanika E., 2017 *The Venetian floor of the “Bailo residence” in Chalcis, Greece. Deciphering its construction details*, SHATIS’17 4th International Conference on Structural Health Assessment of Timber Structures, 20-22 September 2017, Istanbul Turkey.

Maistrou E., Efessiou E., Tsakanika E., Balodimou M., Alexiou M., Kouimtzoğlu T., 2017. *The Historical Stone Bridge of Plaka in Greece: Historical, architectural and constructional documentation after the collapse in 2015*. BRIDGE : The Heritage of Connecting Places and Cultures. Ironbridge Gorge World Heritage Site, 6-10 July 2017, England (in print).

Tsakanika E., 2018. *Timber-framed structures in Greece and their earthquake response. Timber frames reinforced by masonry or timber reinforcements of masonry?*: Anti-seismic Vernacular Heritage of Anatolia and Beyond. ICOMOS Turkey, ICOMOS ISCARSAH, committee, 18-20 July 2018, Kastamonu, Turkey.

Macchioni N., Feio A., Ruisinger U., Saporiti J., Tsakanika E., Yeomans D. *The prEN 17121: historic timber structures - guidelines for the on-site assessment of load-bearing timber structures*. SHATIS 2019, 5th International Conference on Structural Health Assessment of Timber Structures, 25-27 September 2019, Guimarães, Portugal.

Tsakanika E., Kalafata P., *The timber roof of the Neoclassical School in the Medieval city of Rhodes island in Greece. The restoration project*. SHATIS 2019, 5th International Conference on Structural Health Assessment of Timber Structures, 25-27 September 2019, Guimarães, Portugal.

Tsakanika E., S. Charalabidou., *The restoration proposal for the 4-storey load bearing timber frames of Matsopoulos Wheat Mill in Trikala (Greece). The restoration project*. SHATIS 2019, 5th International Conference on Structural Health Assessment of Timber Structures, 25-27 September 2019, Guimarães, Portugal.

Other scientific work

45 invited lectures in conferences / meetings / symposia / workshops for the design and calculation of timber structures, **for the design of structures using natural materials (strawbales, mud-bricks, raw earth etc.)** for the survey, analysis, assessment and restoration of prehistoric and historic timber structures in seismic areas.

Reviewer of papers in scientific journals/collective volumes and abstracts in several world conferences.

8 participations at Conference Scientific Committees and **4** participations as moderator and chairman of International Conferences.

Participation in the organization of **12** international conferences, seminars, scientific meetings and workshops mainly for the education of students and young scientists about the protection of cultural heritage in seismic areas, the restoration of historic timber structures and about building with natural materials.

Attendance at **33** conference, seminars and scientific events.

Citations : **219**

5. EDUCATIONAL – TEACHING ACTIVITY :

Undergraduate studies. Since 1992 as a post-graduate student (1992-2000), as adjunct lecturer (Π.Δ. 407) (2001-2012), as elected lecturer (2010) and Ass. Professor (2014-2019) at the Dept. IV – Architectural Technology, Laboratory of Building Materials of the Architecture School and the Civil Engineering School of NTUA is teaching several courses on **Building Material Technology, Timber and Steel structures, Structural mechanics, Analysis and Restoration of historic and vernacular buildings.**

Post graduate studies. Since 2000 teaching at 4 national and 3 international post graduate programs:

SCHOOL OF ARCHITECTURE, NATIONAL TECHNICAL UNIVERSITY OF ATHENS. Inter-Departmental Postgraduate Program «Protection of Monuments, Sites and Complexes – A’ Direction» (2002-2019).

ARISTOTLE UNIVERSITY OF THESSALONIKI -Interdepartmental Program of Postgraduate Studies Direction A’ - “Protection, Conservation and Restoration of Architectural Monuments” (2006-2019).

ECOLE NATIONALE SUPÉRIEURE D’ ARCHITECTURE DE PARIS-BELLEVILLE, Natural Disasters, Cultural Heritage Post Graduate Program (2016-2019).

UNIVERSITY OF FLORENCE - Intensive program SOCRATES - ERASMUS on Monitoring, Protection, and Strengthening of European Heritage. Intergovernmental Post Graduate Program (2000).

HERITAGE MANAGEMENT (School of Economic, University of Athens, University of Kent) (2013).

Other teaching activity

Teaching at **38** national and international educational seminars and workshops for : a) the training of students and young researches from different European countries for the protection of cultural heritage in seismic areas and for the use of natural building materials , b) the training of professional civil engineers for the structural analysis and design of timber structures using Eurocode 5.

- 1994, 1995, 1998. Teaching at one-week workshops for students of 5 Architecture schools of Europe, organized by the Council of Europe (PACT 19) for the Protection of Architectural Heritage in Earthquake zones, in Spain and Greece. .
- 2009-2012. Participation in 4 one week training programs / workshops for architects and civil engineers about the preservation of Architectural Heritage buildings and new buildings built with natural materials, organized by Greek Universities in collaboration with local authorities, and local institutions.
- 2005, 2007. Seminar – Educational program for the architects and civil engineers of the School Buildings Organization SA (SBO).
- 2009. Technical Chamber of Greece, Greek Eurocode Committee, Ministry for the Environment, Physical Planning and Public Works. Educational seminars for the structural analysis and design of timber structures using Eurocode 5 at 4 cities of Greece.
- 2013. COST Action FP1101, School of Architecture, NTUA. Organization and participation as trainer (with 4 lectures and hands-on practices for 4 days) at the 1st Training School of COST Action FP1101 - “Assessment, Reinforcement and Monitoring of Timber Structures”, October 7th - 10th, 2013 Athens, Greece.
- 2011-2019. Participation at 10 regional restoration camps at Gyrokaster and Berat (Albania), Negotin (Serbia) and Stolac (Bosnia and Herzegovina). Swedish Foundation “Cultural Heritage without Borders” (CHwB)-Restoration of cultural heritage being destroyed in conflicts or any other man made or natural catastrophes. Training on restoration using natural materials (lime, clay, wood, straw).
2017-2019. Training on timber restoration building techniques of local carpenters (Berat, Albania).

6. PROFESSIONAL ACTIVITY (STUDIES AND APPLIED WORK)

MODERN STRUCTURES - SELECTED PROJECTS

*Since 1989-2019 Structural design projects and supervision work of **80 timber and steel structures**, alone or as member of a team.*

Participation in structural analysis and in supervision works of 17 large span (24 till 50m long), timber structures of glued laminated timber, steel and reinforced concrete (sport-halls, swimming pools, bridges, shelters of archaeological sites).

Structural analysis and supervision of timber and steel buildings.

Structural analysis of several new timber roofs in modern reinforced concrete and masonry buildings (houses, hotels, public buildings).

4 structural design projects and supervision work on buildings with timber load bearing system and strawbales, sun dried bricks and raw earth and straw walls.

SELECTED RESTORATION PROJECTS

*Since 1989-2019 **46 restoration projects** (design and supervision work) of historical timber and masonry structures in Greece (alone or as member of a team).*

Restoration studies in monasteries of Mont Athos – Greece.

Gazi Hasan paşa mosque on the island of Kos in Greece. Study and reconstruction of the timber roof" (1995).

Restoration of the Turkish mansion in the medieval historical center of Rhodes island in Greece (2000-2001).

Restoration of Hagi Mehmet Aga mosque in the medieval historical center of Rhodes island in Greece (2001-2002).

Restoration studies for Orthodox Churches in Athens, Meteora, Pillion, Epirus, St. Peters Dominican's church in Crete.

Restoration project of a 19th century mansion in Mykonos (1999).

Restoration project of a 19th century mansion in Hydra island – Greece (2005).

Restoration project of a post-Byzantine mansion in Athens (Benizelo's House, 18th century, Ottoman period) (2009).

Restoration study of the most important mansion of Ottoman period in Ioannina (2010-2012).

Restoration project of the Venetian mansion of Vailos in Chalkis Greece (13th century and Ottoman period) (2016).

Restoration project of the timber roof of the timber roof of the Neoclassical School in the Medieval city of Rhodes island in Greece. (19th century) (2017).

Restoration project of the mosque in Kaloutsiani in Ioannina, Epirus - Greece (19th century) (2019).

Restoration project of the post-Byzantine mansion in Paidon Street in Chalkis, Euboea – Greece (18th century, Ottoman period) (2019).

7. AWARDS

Honorable distinction: Received from the Association of Monument Conservators of Poland *the golden mark* for the contribution concerning the **protection of 16 historical timber churches in Poland and Ukraine (Tserkvas of the Carpathian Region) and their inscription in the World Heritage List (Unesco).**

3 Awards in architectural competitions for timber and steel buildings as the structural engineer of the project (Two 1st Prizes and one 3^d Prize).

One of the three 1st prizes for the Modern Architectural Work (Association of Greek Architects - SADAS 2005)-Design of a Timber and Steel building. Architect : P. Paraskeva

2 projects represented Greece in International Biennale for young architects (LISBON 1994, ATHENS 2001). Architect : P. Paraskeva

4 international awards, and participation in 8 international exhibitions for the project *Sustainable house from CLT and rammed earth wall.*
Architect : A. Kitrinariis

2 international awards (EUMiesaward 19) for *Chios Mastic Museum (Glued- laminated timber steel and concrete structure)* .
Architect : Kizis Studio. (E. Tsakanika. Consultant during building works for the glued-laminated structure)