

## CURRICULUM VITAE

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- 10 June 1957: Birth. Athens Greece.
- 1975-1980: National Technical University of Athens Department of Civil Engineering. Diploma in Civil Engineering
- 1999: Dr Engineer National Technical University of Athens.
- 2002: Assistant Professor, School of Civil Engineering, National Technical University of Athens
- 1981: Member of Technical Chamber of Greece.
- 1981-1983: Military Service.
- 1981-1986: Cooperation with the Laboratory for Earthquake Engineering of National Technical University of Athens as a research collaborator.
- 1986-2002: Research Engineer, Laboratory for Earthquake Engineering of National Technical University of Athens.
- 1981- today: Participation in several research projects using the shaking table and analytical methods.
- 1981-today: Structural design of several reinforced concrete buildings, hospitals and sports-related structures as well as studies for repair and strengthening of seismically damaged buildings.
- 1981-today: Vibration measurements of
- Buildings and bridges. The measured vibrations caused by ambient noise, wind, blasting, machine operations, excavation and subway and train operation.
  - Ground for microzonation studies.
- 2002- today: Design, installation and analysis of recorded data from Earthquake Monitoring Systems:
- Monitoring system to record seismic response of the Catholicon of Osios Lukas Monastery (Hellenic Ministry of Culture) (2002).
  - Monitoring system to record seismic response of the Catholicon of Dafni Monastery ((Hellenic Ministry of Culture) (2004)
  - Monitoring system to record seismic response of storage racks at Vogiatzoglou company at Boeotia (European Project SEISRACKS Storage Racks in seismic areas)(2005)
  - Monitoring system to record seismic response of the Parigoritissa Church at Arta ((Hellenic Ministry of Culture) (2006).
- 2002- today: Installation of Deformation Monitoring systems.
- Static Monitoring system to record deformations, and temperature of the Catholicon of Osios Lukas Monastery (Hellenic Ministry of

Culture) (2002). (Vibrating wire Crack meters, Inclometers, Displacement transducers with invar wires).

Static Monitoring system to record deformations of the Parigoritissa Church at Arta ((Hellenic Ministry of Culture) (2006) Wireless system.

1993-today: Consultant for environmental studies related to the effects of vibrations on buildings due to excavations, construction and operation of the Lines 2 and 3 of Athens Metro (subway) and their extensions. Particularly:

- Environmental Study of the construction of new Lines 2 and 3.
  1. Investigation of the vibration level generated by the various methods of construction and comparison with the existing ambient vibration levels.
  2. Vibration measurements during the construction of underground works (piling, drilling, excavations, transportation etc.).
  3. Special measurements at the archeological site of KERAMIKOS in order to estimate the vibration levels that were going to affect it and its museum. In this particular case a hydraulic hammer was used as a vibration source.
  4. Vibration measurements of various historical and sensitive buildings including the 19<sup>th</sup> century neoclassical AKADEMIA (Athens Academy) and ILIOU MELATHRON (the mansion of the famous archeologist H. Schliemann).
  5. Installation of a monitoring-alarm system in the stone masonry WEILER building (Olympion Station) for vibration monitoring during construction.
  6. Vibration measurements of the HELLENIC PARLIAMENT. An impactor was used as a vibration source.
- Environmental Study of the construction and operation of the extensions of Lines 2 and 3.
  1. Measurements of ambient vibration levels along the extensions of Athens Metro.
  2. Estimation of vibration level generated during tunnel excavation, construction by different methods (TBM, NATM, etc.)
  3. Prediction of the groundborn noise due to the operation of the new lines.
- For the prediction of Noise and Vibration levels during the operation of Lines 2 and 3.
  1. Estimation of the Standard building Transfer Functions of groundborn noise, in order to estimate the amplification or attenuation of the vibrations within reinforced concrete buildings near the existing Metro Line 1.
  2. Vibration measurements and estimation of groundborn noise for the ATHENS CONCERT HALL. Vibrations were measured at the two different halls and in the recording studio of the building using as source a fully loaded muck train.
  3. Vibration measurements and estimation of groundborn noise for the NATIONAL THEATRE. A fully loaded muck train was again used as a source.
  4. Vibration measurements were carried out once more at WEILER building using a muck train as a source, in order to estimate the soil conditions and propagation as well as the Transfer Function of the building. These measurements were also used in order to predict the vibration level at the New Acropolis Museum which will be built at the same site. For the attenuation of vibrations a floating slab will be constructed at the respective subway station.

## 1. Publications

Papers with review:

- A-1 Carydis P. and H.P. Mouzakis: “Ambient vibration measurements of undamaged, seismically damaged and repaired buildings”, *Earthquake Spectra*
- A-2 M. Papadrakakis, H. Mouzakis, N. Plevris and S. Bitzarakis: “A Lagrange multiplier solution method for pounding of buildings during earthquakes”, *Earthquake Engineering and Structural Dynamics*, 20, 981-998 (1991).
- A-3 M. Papadrakakis and H.P. Mouzakis, “Earthquake simulator testing of pounding between adjacent buildings”, *Earthquake Engineering and Structural Dynamics* 24, 811-834 (1995).
- A-4 Y. Lu, H. Hao, P. Carydis, H. Mouzakis, “Seismic performance of RC frames designed for three different ductility levels”, *Engineering Structures*, 23, 537-547, (2001).
- A-5 J. Bouwkamp, A. Plakas, H. Mouzakis, P. Carydis, “THE ATHENS TESTS: Behaviour of a Moment Connection of a Beam with slab under Seismic Loading”, *Seismic behaviour and design of composite steel concrete structures* (2001).
- A-6 A. Plakas, J. Bouwkamp, H. Mouzakis, P. Carydis, “Composite Behaviour under quasi-static and dynamic loading”, *European Earthquake Engineering*, Vol. XVI- n1. -2002, pp 31-39, (2002).
- A-7 Mouzakis, H., Psycharis, I. N., Papastamatiou, D. Y., Carydis, P. G., Papantonopoulos, C. and Zambas, C., “Experimental investigation of the earthquake response of a model of a marble classical column”, *Earthquake Engineering and Structural Dynamics*, Vol. 31, pp. 1681-1698, 2002.
- A-8 Papantonopoulos, C., Psycharis, I. N., Papastamatiou, D. Y., Lemos, J. V. and Mouzakis, H., “Numerical Prediction of the Earthquake Response of Classical Columns Using the Distinct Element Method”, *Earthquake Engineering and Structural Dynamics*, Vol. 31, pp. 1699-1717, 2002.
- A-9 H. Mouzakis, M. Papadrakakis, “Three dimensional nonlinear building pounding with friction during earthquake”, *Journal of Earthquake Engineering*, Vo. 8, No. 1, 107-132, (2004).
- A-10 A. Elghazouli, B. Broderick, J. Goggins, H. Mouzakis, P. Carydis, J. Bouwkamp, A. Plumier, “Shake table testing of tubular steel bracing members”, *Structures & Buildings*, 158, Issue SB4, 229-241, (2005).
- A-11 C. Castiglioni, H. Mouzakis, P. Carydis, “Constant and variable amplitude cyclic behaviour of welded steel beam – to column connections”, Υποβλήθηκε προς κρίση στο περιοδικό *Journal of Earthquake Engineering* (2006).

- A-12 Psycharis, I. N., Mouzakis, H. P. and Carydis, P. G., "Experimental Investigation of the Seismic Behaviour of Prefabricated RC Structures", 2nd International fib Congress, Naples, Italy, 5-8 June 2006.
- A-13 Psycharis, I.N., Mouzakis, H.P., Carydis, P.G., Tsoukantas, S.G., Kremmyda, G.D., "Experimental Results of a Full-Scale Investigation on the Seismic Behaviour of Precast RC Structures", 3<sup>rd</sup> International Conference on Structural Engineering, Mechanics and Computation (SEMC 2007), Cape Town, S. Africa, 10-12 Sept. 2007.
- A-14 Psycharis, I., Mouzakis, H., Pavlopoulou, E., Miltiadou, A., "Investigation of the Seismic Response of a Byzantine Church – Comparison with the Existing Damage", International Symposium on Studies on Historical Heritage, Antalya, Turkey, 17-21 Sept. 2007.
- A-15 Psycharis, I.N., Mouzakis, H.P., Miltiadou, A., Pavlopoulou, E.P., Taflampas, I.M., "Estimation of the seismic response of historical structures and evaluation of interventions", 3<sup>rd</sup> Greece-Japan Workshop, Santorini, 22-23 Sept. 2009.
- A-16 Psycharis, I. N., Mouzakis, H. P., Miltiadou, A., Pavlopoulou, E. P., Taflampas, I. M., "Investigation of the seismic response of a Byzantine church and evaluation of the effectiveness of proposed interventions", Earthquake Spectra, Vol. 26, No. 2, pp. 473-497, 2010.

Papers without review (Conferences, Workshops eth.)

- B-1 Carydis P. and Mouzakis H. "Ambient vibration measurements of undamaged and seismically damaged buildings", Proceedings of the 7<sup>th</sup> E.C.E.E., Athens, Greece, September 20-25, 1982, Vol.3, p.p. 323-330
- B-2 Mouzakis H., Carydis P. 'Contribution to the estimation of loss of function of buildings, determined after post earthquake survey', παρουσιάστηκε στο 'Regional Seminar on Earthquake Preparedness' Unesco, UNDP και UNDRO, Αθήνα 11-14 Ιανουαρίου 1983.
- B-3 P. G Carydis, H.P. Mouzakis, J.M. Taflambas, E.A. Vougioukas "Response of infilled frames with brickwalls to earthquake motions" 10 WCEE Madrid 1992 pp 2829-2834.
- B-4 P. G Carydis, H.P. Mouzakis, J.M. Taflambas, E.A. Vougioukas 'Shaking table tests of composite steel-concrete, beam-column connections" 10 ECEE Vienna 1994 pp 2435-2440.
- B-5 M. Papadrakakis, H.P. Mouzakis, A.S. Alevridis 'Three dimensional non-linear analysis of building pounding during earthquakes' Earthquake resistant engineering structures Editors G.D. Manolis, D.E. Beskos, C.A. Brebbia. Computational Mechanics Publications(1996) pp 253-267.

- B-6 Carydis P.G, Mouzakis H.P., Vougioukas E.A, Franchioni G, (1994). Comparative shaking table studies at the National Technical University of Athens and at Bristol. 10ECEE, Vienna
- B-7 P.G.Carydis, H.P. Mouzakis, C. Papantonopoulos, D. Papastamatiou, I.N. Psycharis, E.A. Vougioukas and C. Zambas ‘Experimental and numerical investigations of the earthquake response of classical monuments’ 11WCEE (1996) paper No 1388.
- B-8 P.G. Carydis, H.P. Mouzakis, E.A. Vougioukas, A.J Crewe, C.A. Taylor, G. Franchioni, R. Bairrao “Comparative assessment of shaking tables” 11WCEE (1996) paper No 2044
- B-9 H.P. Mouzakis, M. Papadrakakis, A.S. Alevridis ‘Three dimensional non-linear analysis of building pounding during earthquakes’ Engineering structures under earthquake loading (1997). Edited by G. Thierauf. Civil Comp Press pp 43-50.
- B-10 C. Papantonopoulos, H.P. Mouzakis, D. Papastamatiou, I Psycharis, C. Zambas, J.V. Lemos “Predictability of experiments on the seismic response of classical monuments” 11 ECEE (1998).
- B-11 P. Carydis H. Mouzakis, D. Benedetti, P. Pezzoli “Repair and strengthening of seismically damaged traditional masonry buildings” 11 ECEE (1998)
- B-12 P. Carydis, H. Mouzakis and Yong Lu ‘Shaking table testing of two storied RC frames designed for different ductility classes and using different types of reinforcement’ 11 ECEE (1998).
- B-13 M.Papadrakakis, H. Mouzakis, S. Bitzarakis “Dynamic contact between adjacent structures using a formulation with Lagrange multipliers” Eurodyn ’90, Bochum, 1990.
- B-14 C.A. Castiglioni, C. Bernuzzi, L. Calado, P. Carydis, H. Mouzakis “ Shaking table tests for seismic performance evaluation of steel frames” IV Workshop Italiano sulle Costruzioni Composte, Palermo, November 2000.
- B-15 N.L.Ninis, A.K.Kakaliagos, H. Mouzakis, P. Carydis, “ Numerical simulation of shear sliding effects at the connecting interface of two monolithic column drums”, Proceeding of 5<sup>th</sup> International Conference of Analysis of discontinuous deformation, Beer-Cheva, Israel, Y.H. Hatzorv, Balkema, pp. 145-152, 2002.
- B-16 J. C. Queval, P. Sollogoub, R. Bairrao, H. Mouzakis, P.Carydis, “Description of a non linear specimen to estimate the performance of European shaking tables”, 17<sup>th</sup> International conference on Structural Mechanics in Reactor Technology (SMiRT 17), Prague, August 2003.
- B-17 A. Elghazouli, B. Broderick, J. Goggins, H. Mouzakis, P. Carydis, J. Bouwkamp, A. Plumier, “Shake- table testing and seismic performance

- evaluation of bracing members”, paper No. 2651, 13<sup>th</sup> WCEE, Vancouver, 2004.
- B-18 R. Bairrao, O. Busri, P. Carydis, G. Magonette, H. Mouzakis, D. Tirelli, M. Williams, “Benchmark testing an dperformance comparison of shaking tables and reaction walls”, paper No. 441, 13<sup>th</sup> WCEE, Vancouver, 2004.
- B-19 E. Fechling, M. Nejati, P. Carydis, H. Mouzakis, “Seismic behaviour of capacity designed masonry walls in low seismicity regions”, paper No. 1801, 13<sup>th</sup> WCEE, Vancouver, 2004.
- B-20 I. Psycharis, H. Mouzakis, P. Carydis, “Experimental investigation of the seismic behaviour of prefabricated RC structures”, Proceeding of the 2<sup>nd</sup> International Conference, Fib, Naples, 2006.
- B-21 F. Molina, R. Bairrao, T. Blakeborough, O. Bursi, D. Tirelli, G. Magonnete, H. Mouzakis, M. Williams, “Testing performance benchmark for shaking tables and reaction walls within the Neforeee project”, First European Conference on earthquake Engineering and Seismology, paper No. 303, Geneva, Switzerland, September 2006.
- B-22 R. Bairrao, M. Falcao Silva, P. Carydis, H. Mouzakis, L. Karapitta, J.C. Queval, “NEFOREEE- Performance benchmark of three major European shaking tables”, First European Conference on earthquake Engineering and Seismology, paper No. 110, Geneva, Switzerland, September 2006.
- B-23 G. Vasconcelos, P. Lourenco, H. Mouzakis, L. Karapitta, “Experimental Investigations on dry stone masonry walls”, 1<sup>st</sup> International Conference on Restoration of heritage Masonry Structures, Cairo, 2006.
- B-24 H. Mouzakis, P. Carydis, L. Karapitta, B. Kaloidas, “Seismic response of reinforced concrete structures subjected to earthquake excitation during setting or hardening of concrete”, Proceedings of the 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek), No. 2039.
- B-25 H. Mouzakis, “Analytical investigation of the behaviour of strengthened masonry with composite materials under monotonic imposed displacement”, Proceedings of the 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek), No. 2040.
- B-26 L. Karapitta, H. Mouzakis, P. Carydis, “Constitutive models for the analysis of unreinforced masonry under cyclic loading”, Proceedings of the 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek), No. 2041.
- B-27 P. Carydis, H. Mouzakis, L. Karapitta, “Experimental evaluation of the effectiveness of rehabilitation measures for existing buildings with pilotis”, Proceedings of the 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek), No. 2042.

- B-28 H. Mouzakis, L. Karapitta, S. Antoniou, P. Touliatos, A., Miltiadou, “Analytical Investigation of the seismic response of the Catholicon of Docharion Monastery”, Proceedings of the 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek), No. 2046.
- B-29 Mouzakis, H., Dasiou, M.-E., Psycharis, I., Papantonopoulos, C., Vayas, I., “Experimental investigation of columns and colonnades of classical temples”, 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek).
- B-30 Psycharis, I., Mouzakis, H., Pavlopoulou E., Miltiadou, A., Taflampas, I., “Analysis of the seismic response of a Byzantine Church before and after the interventions”, 3rd Hellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, 5-7 Nov. 2008 (in Greek).

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