

Curriculum Vitae – Panagiotis K. Panetsos

INDIVIDUAL DATA

Name/Surname : Panagiotis Panetsos
Birth place : Athens
Birth date : 1965
Family Status : Married
Home Address : 19 Stadiou Str, Panorama, Thessaloniki
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GRADUATE/ POST GRADUATE STUDIES

1991 Civil Engineer of Aristotle University of Thessaloniki

Section of Applied Science and Technology of Structures. Department of civil Engineering.

1998 Dr. Civil Engineer of Aristotle University of Thessaloniki.

Section of Applied Science and Technology of Structures. Department of civil Engineering.

Doctoral dissertation entitled:

«States of Extreme Seismic Displacement of multistory buildings»

PROFESSIONAL EXPERIENCE

7/2006 – today. Head of the Structures Health Monitoring and Maintenance Unit, Maintenance Department, Egnatia Odos S.A. As supervisor of the Unit, consisted by 12 engineers and technicians, he is responsible for the preparation and execution of all the types of **inspection and evaluation** of existing (already constructed or under construction) bridges, tunnels and geotechnical works in Greece and in Balkans. He conducted the completion of the following special projects and activities:

- Visual inspection, condition evaluation of the structural and functional integrity and sufficiency rating of thousands of bridges and other structures in Greece and in Balkans (Egnatia Motorway, Athens-Thessaloniki national road, regional and old national road bridges of Thessaly and Macedonia, National roads DN24 & DN18 in Romania, Skopje, Milot – Morine motorway in NE Albania).
- Extensive application of non destructive testing for concrete bridges in EgnatiaMotorway, old national roads, Balkans, by the equipment of the unit (Shmidt hammer, pulse velocity, half cell, covermeter, bar detectors e.t.c).
- Extensive application of destructive testing for concrete bridges in EgnatiaMotorway, old national roads, Balkans, by the equipment of the unit (Core sampling for strength testing, chemical and petrographic analysis)
- Development and extensive application of innovative instrumental vibration monitoring techniques on tens of bridges of Egnatia Motorway and on many bridges of other Greek national motorways. Ambient vibration monitoring of N.Ikonio (Athens) railway bridge. Also he carried out monitoring activities on bridges in Albania (Milot – Morine motorway) and in Romania.
- Analytical Evaluation of the measurements from the hundred of sensors installed on the Egnatia Bridges. Modal identification, model updating, damage detection innovative techniques were developed and applied for the monitored bridges in Greece as well as in Balkans.
- Heavy load permits management for the Egnatia Motorway. Analytical assessment of the traffic load capacity of concrete bridges. Experimental validation of traffic load capacity with fiber optic strain monitoring of bridges.

- Design, Bidding, Supervision of bridge maintenance works (expansion joints, concrete repairs, strengthening, bearing replacements, foundation strengthening, river bedding and hydraulic protection of piers e.t.c.) for bridges of Egnatia as well as for bridges of old national and regional roads in Greece as well as in Balkans.
- Development and use of Bridge maintenance electronic Data Base and Bridge Maintenance Management software.
- Visual inspection, instrumental monitoring of geotechnical works (landslide monitoring with hundred of inclinometers installed across Egnatia affected embankments).
- Instrumental monitoring of the ground vibrations of the Tempi Valley slopes, induced by the tunnel excavation explosions, using the accelerometers of the Unit, in cooperation with Institute of Earthquake Engineering (I.T.S.A.K.)
- Specifications and Manuals for Technical Audit and Visual/ Instrumental Inspection and Maintenance of Concrete Bridges.

2000– 6/2006. Senior Bridge Engineer, Egnatia Odos S.A., Structures discipline/Design Department.

- Supervisor of Design call-up contracts for the definitive design of bridges, overpasses, underpasses, retaining walls and culverts of the Egnatia Motorway. Total construction budget of **40 millions euros**.
- **Bridge structural design review**, independent analytical structural checking, revising of reinforcement drawings, for the definitive designs of bridges and structures, having a construction budget of **100 millions euros**.

1997-1998. Site supervisor engineer of the structural restoration tasks of the byzantine basilica of Panagia Achiropiitos (5th b.c., the most significant byzantine monument of Thessaloniki), 9th Byzantine Antiquities Division, Ministry of Culture.

1992- today Structural and geotechnical design of many reinforced concrete or steel buildings as a free lancer or as a partner of Greek design/construction companies ΓΕΩΤΕΧΝΟΛΟΓΙΚΗ Α.Τ.Ε. (1999 - 2000) and ALFOS S.A. Definitive Design of many concrete bridges in Greece and in Skopje, FYROM.

Definitive design of reinforced concrete bridges in Balkans (2010 -2012)

ACADEMIC EXPERIENCE

1999 – today. Teaching of the undergraduate courses «Statics I & II» and «Reinforced Concrete I & II», in the Department of Architectural Engineering, University of Thessaly, as an assistant professor (PD 407/80).

2008 – 2009. Teaching of the undergraduate course «Prestressed Concrete» in the Department of Civil Engineering, University of Thessaly, as an assistant professor (PD 407/80).

1999 – 2000. Teaching of the undergraduate course «Statics», in the Department of Mechanical Engineering, University of West Macedonia, as an assistant professor (PD 407/80).

RESEARCH EXPERIENCE

1. He was managerial and scientific supervisor of Egnatia Odos S.A., as beneficiary industrial partner in the research projects: a. «**Seismic Protection of Bridges**» funded by General Secretariat of Research and Technology of the Ministry of Development (EPAN). Research budget under his responsibility: **964,000 euros**. (Duration 10/2003 –3/2007). b. «**Integrated European Industrial Risk Reduction System**» funded by European community (FP7). Research budget under his responsibility: **420,000 euros**. (Duration 10/2008 –3/2012).
2. He was managerial and scientific supervisor of Egnatia Odos S.A., of three research projects funded by the company, with a total budget of **500,000 euros**:
 - Development of a Seismic risk Assessment Software for bridges along the Egnatia Motorway. Consultancy by ITSAK, EQE Ltd & Imperial College (London) (1999 – 2002).

- Development of a Bridge Monitoring based System for Detecting damage on major bridges of Egnatia Motorway. Consultancy by ITSAK and University of Thessaly.
- Geodynamic study of the liquefaction risk of the Nestos bridge foundations. Kinematic interrelation between piles and soil. Consultancy by ITSAK and prof. Gazetas.

PUBLICATIONS

Scientific papers published in Journals

1. I.E. Avramidis, K.K. Anastasiadis, **P.K.Panetsos** Concurrent Design Forces in Structures under Three-Component Orthotropic Seismic Excitation, *Earthquake Spectra*, (Volume 18, No.1, February 2002).
2. Christodoulou, K., Ntotsios, E., Papadimitriou, C. and **Panetsos, P.** (2008). "Structural Model Updating and Prediction Variability using Pareto Optimal Models." *Computer Methods in Applied Mechanics and Engineering*, 198, 138–149.
3. Ntotsios, E., Karakostas, Ch., Lekidis, V., **Panetsos, P.**, Nikolaou, G., Papadimitriou, C. and Salonikos, T. (2009). "Structural Identification of Egnatia Odos Bridges based on Ambient and Earthquake Induced Vibrations." *Bulletin of Earthquake Engineering* 7(2), pp. 485-501.
4. Ntotsios, E., Papadimitriou, C., **Panetsos, P.**, Karaiskos, G., Perros, K. and Perdikaris, P. C. (2009). "Bridge Health Monitoring System based on Vibration Measurements." *Bulletin of Earthquake Engineering*, 7(2), pp. 469-483.
5. Moschonas, I.F., Kappos, A.J., **Panetsos, P.** Papadopoulos, V., Makarios, T., Thanopoulos, P. (2009). "Seismic fragility curves for greek bridges: Methodology and case studies". *Bulletin of Earthquake Engineering*, 7(2), pp. 439-468.

Scientific papers published in Conference proceedings

35 scientific papers have been presented and published in international/national conferences, dealing with Concrete Structures, Maintenance, Bridge Management, Bridge Health Monitoring, Earthquake Engineering.

BOOKS/ MANUALS

1. Panetsos, P., Barmba Z., Saridaki, K. "Analytical Manual of Visual Inspection of Concrete Bridges". 4th Edition, *Egnatia Odos S.A., Mars 2010*.
2. Panetsos, P., Barmba Z., "Condition Evaluation System of Inspected Bridges" 3rd Edition, *Egnatia Odos S.A, Mars 2010*.

MEMBERSHIP

E.P.E.S.: Board of Directors of the Greek Scientific Society for Concrete Research.

EN.E.P.E.O.: Board of Directors of the Union of Scientists of Egnatia Odos S.A.

Σ.E.T.E.O.: Board of Directors of the Trade Union of Egnatia Odos S.A.

E.T.A.M.: Greek Society of Earthquake Engineering

IABSE : International Association of Bridges

LANGUAGES

English (excellent), French (very good).

SOFTWARE PROFESSIONAL USE

Software packages SAP2000NL, STATICS, STATIK, NEXT, SUPER-ETABS, STRAND-F, AUTOCAD. Programming in BASIC, EXCEL, MATLAB, LINGO.

ARMY SERVICE

Reserve officer in Engineer Division of Greek Army. July 1994 – July 1996. Checker & Supervisor of Building construction/maintenance projects of the Greek Army.

REFERENCES

Available upon request.

A handwritten signature in blue ink, appearing to read 'Panagiotis K. Panetsos', with a stylized flourish at the end.

Panagiotis K. Panetsos
Dr. Civil Engineer A.U.Th.