

## **SHORT RESUME**

OF

### **PROF. Dr. Constantine I. SACHPAZIS**

Dr. Geotechnical Engineer - Civil Engineer & Dipl. Geologist  
(BEng (Hons) Civil Eng. UK, Dipl. Geology, M.Sc.Eng UK, Ph.D. NTUA (E.M.Π.), Post-Doc. UK, Gr.m.ICE)  
Director of GEOSTATIC LTD

#### **PERSONAL INFORMATION**

**NAME (f,m,l):** CONSTANTINE I. SACHPAZIS

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#### **KEY QUALIFICATIONS**

- Geotechnical Site Investigation planning and Implementing in major projects concerning Foundations, Tunnels, Roads & Railways, Underground Works & Dams, etc.
- Soil – Foundation – Structure Interaction Analysis under Seismic Excitation
- Analysis and Design of Specific & Complicated Foundation Systems.
- Deep Anchored Piled Retaining Walls (Analysis, Design, Detailing).
- Design, Construction and Supervision of Soil and Rock slopes and excavations. (Slope stability analyses problems and Retaining structures. Slope Stabilization techniques).
- Design of Ground Improvement techniques.
- Design of Geotechnical Engineering Monitoring Systems and Instrumentation in Geotechnical Applications.
- Soil stabilization techniques and soil properties improvement – cement, chemical grouting, etc.
- Suitability of building stones and aggregates for concrete - railway ballast & skid resistant pavements.
- Implementation of quality control procedures.
- Management and protection of underground/surface water resources and the environment, using integrated Computerized Intelligent Engineering Systems.
- Laboratory testing on concrete, soils and rocks and evaluation of their suitability as construction materials for various purposes.
- Structural Modelling, Analysis, Design and Detailing to E.C.2 & E.C.3.
- Reviewing and approving Civil & Geotechnical Engineering Reports for various construction purposes.
- Preparation of technical proposals and method statements.
- Responsibility on internal training of staff in Civil Engineering Projects.

#### **KEY SKILLS**

- Leadership Capabilities. (He is the Founder & Managing Director of “GEODOMISI Ltd” Civil & Geotechnical Engineering Consulting Company - <http://www.geodomisi.com>).
- In addition, he is the co-Founder & co-Managing Director of “GeoStatic Ltd”, Civil, Geotechnical & Structural Engineering Consulting Company, Registered in England & Wales with Reg. No.: 09868532/UK - <http://www.geostatic.eu>).

- Preparation of commercial proposals and tenders.
- Financial analysis for annual budgets.
- Overall responsibility for project cost control and income/contract increase.
- Handling of customer complaints and setting up curative, corrective and proactive actions.
- Implementation for QA / QC Systems - ISO.
- Good presentation skills.
- Good sense for business opportunities.
- Understanding of market volume and competitors.
- Establishment of strategic and development plans for new project.
- Establishing Business Plans and Feasibility Studies for potential local and regional areas.
- Ability to develop strategic relationships with potential clients and/or partners.
- Experience and judgment to plan and accomplish goals.
- Ability to perform a variety of complicated tasks.
- Communication. Ability to deal with internal and external clients at all levels via telephone, email and/or face to face, to ensure successful communication through actively listening and probing questions.
- Problem solving. Ability to resolve in-depth engineering queries in a methodical manner independently and with internal and external business partners to find appropriate resolutions, efficiencies and high level of quality.
- Team Player. He enjoys sharing knowledge and encouraging development of other senior / junior engineers to achieve specific team goals.
- Planning and organizing. Refined planning and organizational skills that balance work, team support and ad-hoc responsibilities in a timely and professional manner.
- Systems knowledge - Pert, Gantt, Oracle, MS Project Professional 2010. Experience in preparing and analyzing reporting data for management accurately and to timescales.

## PROFESSIONAL ACTIVITIES - EXPERIENCE

Since 1983, as a professional Geotechnical Engineer - Civil Engineer and as a founder of GEODOMISI Ltd, Consulting Engineering Company, he has carried out, or participated in over one thousand (1000) Geotechnical Engineering, Civil Engineering, Soil Mechanics, Rock Mechanics, Foundation Engineering, Seismic Risk Analysis, Geological Engineering, Environmental Engineering and Water Resources Management projects, both in Private and mainly in Public Sector, being engaged in fieldwork and design of Special Foundations, Landslides, Retaining Walls & Systems, Soil and Rock Slope Stability Analysis, Geotechnical Site Investigations, Tunnels, Dams, Highways, Hydrogeology, Management of Water Resources using G.I.S., Waste Management and Disposal, etc.). In addition, during his M.Sc.(Eng) / Ph.D. researches & studies he performed a great deal of various soil and rock mechanics laboratory tests.

He participated in European Community Research Programs (Envireg), relevant to issues of Geotechnical Engineering. He has considerable experience in studies of Slope Stability Analysis problems in both Soils and Rocks masses (Bishop - Morgenstern-Price, GLE, Spencer, Hoek - Bray - Brown) by using Limit Equilibrium (LEM), Limit Analysis (LAM) and Finite Element Analysis Methods (FEM), as well as in Structural Analysis & Design of Earth Retaining Systems. He has extensive experience in all classification systems and methods of Soil and Rock masses and their applications in tunnel support design. (i.e.: Terzaghi, Deere et al, Lauffer, Wickham et al (R.S.R.) Bieniawski (C.S.I.R.), Barton et al (Q - N.G.I.), Bouvard et al (A.F.T.E.S.), Swiss Specifications SIA 198 - SIA 199, New Austrian Tunnelling Method (N.A.T.M.), Pacher et al., etc. During 1989 - 1991 he was responsible for the Soil and Rock mechanics study of the stability analysis of Alistrati Cave - Tunnel in Serres district. (Works and Studies: Analysis of discontinuities using Schmidt and Kamb Stereographic nets. - C.S.I.R. (Bieniawski) classification of jointed rock mass. - Wedge or plane failure analysis (on Roofwall and Sidewall) - Two-dimensional Boundary Element Stress Analysis - Conclusions on Rock Stability problems and Support design (Rockbolts, Shotcrete, mesh, etc). During 1995 - 1996, he had cooperated with P. Kotzias - A. Stamatopoulos Ltd Company, for the excavation works and the retaining walls of the garage of the Athens Concert Hall, as well as for the design of the new railway line at Platamon

(Greek Railways O.S.E.). In addition, he has cooperated with major Contractors of Public Works, for the analysis & design of various earth & rock retaining walls and slope stabilization for a number of highway & structural projects. He has also been exclusive geotechnical engineering consultant of ATTIKO METRO S.A. for the Design and Calculations of 40 Anchored piled Retaining Walls, 19,45 m deep, of Agios Antonios Metro Station at Peristeri – Attica - Greece. Furthermore, he has been geotechnical engineering consultant of both EGNATIA ODOS S.A. and ERGOSE S.A. for the design of large scale motorway and railway projects and underground works, as foundation of bridges, tunnels and protection and stabilization of slopes from landslides. Moreover, he has also been the exclusive geotechnical engineering consultant of OLYMPIC GAMES ATHENS 2004 for the execution and the design of the geotechnical investigation and foundation engineering aspects for the construction of the Marathon Olympic rowing game centre roads at Schinias – Attica/Greece. Finally, during 2009 - 2011, he was the exclusive geotechnical engineering consultant (via his company Geodomisi Ltd) for the planning and construction of the biggest Greek natural gas fired Combined Cycle Power Plant (CCGT) Project, developed and owned by the Joint Venture between the Greek Public Power Corporation (PPC) and Steel Production Incorporated Industry «HALYVOURGIKI S.A.». In this project he was cooperating and working along with the general Energy Project Consultant «Mott MacDonald Limited».

Finally, he is a founding member of the journalistic union, titled: "European Union of Journalists for Environment and Life Quality"

#### PROFESSIONAL LICENSES

He is chartered in Greece & Europe, holding the following professional licenses:

- ✓ Professional License issued by the Ministry for Development, Competitiveness, Infrastructure, Transport & Networks. Registration Number: 440, Category/Class 21/C' & 20/C' & 13/B'.
- ✓ Professional License issued by the Ministry of Defence for executing Military Projects concerning "NATO-FORTIFICATION-TOP SECRET". Registration Number: 1947-F.589.6/76033-S.2092.
- ✓ Professional License issued by the EUROPEAN COMMISSION-E.C.-Directorate-General III. Registration Number: 003908/26-02-1997.

#### MEMBERSHIPS

1. International Society of Soil Mechanics and Geotechnical Engineering (I.S.S.M.G.E.).
2. International Society for Rock Mechanics (I.S.R.M.).
3. European Water Resources Association.
4. Geotechnical Chamber of Greece (179/85).
5. Greek Scientific Society of Soil Mechanics and Foundation Engineering.
6. British Geotechnical Society (B.G.S.).
7. International Tunnelling Association (I.T.A.).
8. International Association of Engineering Geology (36/128).
9. Greek Geological Society (760/84).
10. Greek Tunnelling Society.
11. Greek Committee of Engineering Geology.
12. Greek Association of Geologists.
13. Photogrammetric Society of Greece.
14. European Union of Journalists for Environment and Life Quality.
15. Hellenic Association of the National Technical University of Athens (N.T.U.A.).
16. Since 25<sup>th</sup> of February 2013, he is a Graduate Member of "The Institution of Civil Engineers" (ICE). ICE Membership Number: 67689219.
17. Founding and Constitutional Member of the Scientific, Non-Profit Organization called: "Greek Local Association of the Institute of Civil Engineers", briefly "Greek Local Association of ICE", 2014.

## LANGUAGES

He speaks, writes, reads English and Greek fluently, and has a limited working knowledge of French language.

## P.C. SKILLS

He uses and programs Computers. He has developed more than 150 software programs, concerning Geotechnical Engineering, Civil Engineering, Soil Mechanics, Rock Mechanics, Foundation Engineering and Hydrogeological applications. He has a profound and extensive knowledge on using and configuration / setting up Operating Systems and Platforms like: ESXi v. 4.1 & v.5.0 platform, MS Servers 2008 R2 Enterprise Ed & MS Server 2012 RC, MS Exchange Servers 2010, FTP Servers, Web Servers, Oracle, Asterisk VoIP Call Centres (Trixbox), NAS storage systems, PLCs, etc, as well as on controlling remotely Servers & WorkStations by using remote access software like remote desktop, VNC, TeamViewer, iLO2, WinSCP for Linux systems, etc. Moreover, he has from good to excellent experience in the following Geotechnical - Structural Engineering software: Lusas 2015, Dlubal, CYPE 2015, Prokon, Etabs 2016, LimitState RING 3.1, CSiCol 9, IDEA StatiCa 6 x64, GeoStru 2016 MegaPack, MASTER EC7 Foundations 2015, ACECOMS GEAR, AFES 3.0, Shaft3D, Tedds 2015, Digital Canal, GeoStructural Analysis, Strater 4, StabiPro v3.0, RetainPro 10, ConSteel 9.0, csJoint 9.0, ENC20-Anemos, foundationPro, GROUND\_ANCHORS 1.6, LPILE v2015, AllPile7, SAAP2000, CSC ORION, ETABS, SAFE, CSIBRIDGE, FESPA, 3D Tunnel FEM, GEMSoft, Tunnel analysis programs, by the NATM New Austrian Tunneling Method, Larix-5S/5G/5M, Plaxis, Geosolve Slope, Rocscience software Suite 2012 (Dips, Examine3D, Phase2, Roc Data, RocFall, RocPlane, RocSupport, Settle3D, Slide, Swedge, Unwedge), Talren-4, Geo 5, Slope Oasys Geo 5, Soil Package, Limit State Geo, Clara-W, Slope-W, Galena, SVS Slope, Slide, Tslope, RockWare Inc, ROC Rocscience, DATASURGE, Tunnel Assistant, ROCKPACK, Rockmate, ROCKJRM, ROCKJR, Pillar, Kbtunnel, Vec, HYFRACP3D, GEOROK, GDA (Geomechanical Design Analysis), Cpillar, Classex, CLASROCK, BLOCK, Slope Stability Analysis Software (STABL), TAGAssoft, Mitre Software Corporation, Wedge Failure Analysis, WEDGE, SLOPEPACK, ROTOMAP, RocPlane, ROCKPF, ROCKPACK III, ROCK3D, Plane Failure Analysis, Kbslope, Geoslide/Proslide, GeoRock (GeoStru), EzSlide, CLU\_STAR, ACCECALC, Slope stability and inclinometer software, GeoStudio 2012 Universal (SLOPE/W, SEEP/W, SIGMA/W, QUAKE/W, TEMP/W, CTRAN/W, AIR/W, VADOSE/W).

## CONFERENCES - SEMINARS

He has delivered more than forty 40 lectures - presentations - seminars as a principal speaker in the Public Media (TV, Radio), Guest lecturer at Universities, etc..

He has also attended eighty-nine (89) conferences - seminars, concerning Foundation Engineering, Retaining Structures for Deep Excavations (Anchored piled Retaining Walls), Tunnels & Dams, Rock and Soil Mechanics, Engineering Geology, Environmental Aspects and Hydrogeology, Health & Safety Plans & Files, etc., given by various Professors and/or Companies specialized staff.

## RESEARCH WORK AND PUBLISHED PAPERS

He has thirty-one (31) papers published in both International and Greek Scientific Bulletins, in the field of Civil Engineering, Geotechnical Engineering and Engineering Geology - Hydrogeology. There are more than one hundred fifty (150) citations found so far on International scientific papers of other authors scientific work. He has also written four (4) academic books, titled: a) «Introduction to Soil Mechanics I», b) «Remote Sensing and photogeology. A tool to route selection of large highways and roads», c) «Introduction to Soil Mechanics II and Rock Mechanics», and d) of «Geotechnical Engineering for Dams and Tunnels». He has also written the following course lectures notes: 1) Clay Mineralogy, 2) Soil Classification, 3) Phase Relations

4) Soil Compaction, 5) Permeability 6) Shear strength of soils, 7) Consolidation, 8) Lateral Earth Pressures, 9) Geotechnical Site Investigation, and 10) Introduction to Geotechnical Engineering.

## EDUCATION

He was educated in both British and Greek Universities:

- 1) Diploma in Applied Geology. Aristotle University of Thessaloniki. Greece. 1980.
  - 2) Attendance of final year of the Bachelor degree (B.Sc. Eng.) in the Civil Engineering Faculty at the University of Newcastle Upon Tyne, England, 1982.
  - 3) M. Sc. Eng., in Geotechnical Engineering. Civil Engineering Department. University of Newcastle Upon Tyne, England. (Specialized in: Foundation Engineering, Soil Mechanics, Rock Mechanics, Laboratory testing-researching of Soils and Rocks, Engineering Geology, Underground water flow). 1983.
  - 4) Ph.D., in Geotechnical Engineering - Engineering Geology, at the National Technical University of Athens (N.T.U.A.) - Greece, 1988. Grade: Excellent Unanimously. Specialized in: Geotechnical Engineering - Rock Mechanics - Rock Testing.
  - 5) Post-Doc Research fellow invitation in Carbon Critical Geotechnics at Newcastle University, U.K., 2012.
  - 6) B.Eng (First Class Honours) in Civil Engineering, at the University of Portsmouth, England. (Ranking place: Top student distinction because he achieved the highest overall grade in the cohort of 120 classmates).
- During academic years 1983-84, 1984-85 and 1985-86, he was sponsored by the Postgraduate Scholarship Committee of the National Technical University of Athens. He served in the Military corps of Engineers as a Computer Programmer.

## ADDITIONAL HONORS & AWARDS

- 2013: ICE Student Prize Winner Award. The Institution of Civil Engineers awarded him the "2013 ICE Student Prize" for his University. The prize is awarded to the best civil engineering student at each participating university and is based not only on examination performance but also takes into account course work and ability in civil engineering design.
- 2013: During his studies in B.Eng. (Hons) Civil Engineering, in the United Kingdom, he achieved a top student distinction because he obtained the highest overall grade, 86%, in the cohort of 120 classmates in his final year.
- 2012: In addition, during his pre-final year, he achieved a second ranking place with an average mark of 83 %.
- 1984-1986: Scholarship from the Hellenic State Scholarship Foundation (IKY) for Ph.D. research.

## ACADEMIC ACTIVITY

- Associate Professor of Geotechnical Engineering, at the Department of Geotechnical and Environmental Engineering of the Western Macedonia University of Applied Sciences, Greece, since 2002 up to 24 May 2018. He teaches: a) Soil Mechanics I, b) Geotechnical Engineering for Tunnels and Dams, and c) Soil Mechanics II and Rock Mechanics with Computer Aided Geotechnical Engineering Design & Analysis.
- During academic years 2008-2009 until 2010-2011, he was elected as Head of the Department.
- Full Professor of Geotechnical Engineering, at the Department of Geotechnical and Environmental Engineering of the Western Macedonia University of Applied Sciences, Greece, since 25 May 2018 to date.
- Adjunct Professor at the Greek Open University in the Postgraduate (M.Sc.) programme "Waste Management", teaching Geotechnical and Environmental Engineering aspects. 2008 to 2011.
- Adjunct Professor at the Greek Open University in the Postgraduate (M.Sc.) programme "Earthquake Engineering and Seismic-Resistant Structures". 2014 to date.
- Since 2003 until 2007 he was the academic representative for the European program of mobility and exchange of professors and students «ERASMUS».

- Over the years, he has taught in a number of specific subsidised seminars to qualified Engineers, organised by the Technical Chamber of Greece and the E.U..
- Finally, he has been a Reviewer of Scientific Articles and Publications for: a) the International Publishing Organization «Elsevier», b) the International Journal of Sustainable Development & World Ecology, c) the Bio- and Medical Informatics and Cybernetics: BMIC 2011, d) the International Journal of Physical Sciences, e) the Journal of Civil Engineering and Construction Technology (JCECT), f) the International Publishing Organization «Springer». Additionally, he was a Reviewer in the 5<sup>th</sup> International Symposium on Bio- and Medical Informatics and Cybernetics: BMIC 2011 and in the 3rd International Conference on Civil Engineering and Urban Planning (CEUP 2014), held in Wuhan, China, June 20-22, 2014.

#### **OFFICIAL EVALUATOR OF THE GREEK MINISTRY OF EDUCATION**

- He is serving as an Official Approved Member of the Registered of Certified Assessors and Experts (Law 4310/2014) on Business Partnerships with Research Organizations of the "RESEARCH-CREATIVITY-INNOVATION" Action, in the Special Service for the Management and Implementation of Actions in the Sectors of Research, Technological Development and Innovation, of the Ministry of Education, Research and Religious Affairs.

#### **INDUSTRIAL EXPERT**

- He has served as an Industrial Expert, appointed by the Hellenic Republic Ministry of Education, Lifelong Learning and Religious Affairs, for the evaluation and assessment of research proposals submitted to the Inter-State Programme for Research, Innovation & Technological Development between Greece and Israel.

#### **OFFICIAL REPRESENTATIVE OF THE ITA-AITES**

- He has served as Official representative of the International Tunnelling Association (ITA) for Greece for 2014, in the Sector of "Conventional Tunnelling" – Working Group 19 (WG 19).

#### **OFFICIAL REPRESENTATIVE OF THE ISSMGE**

- He has served as Official representative of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), for Greece for 2015, in the Technical Committees: JTC1 Natural Slopes and Landslides TC303, Coastal and River Disaster Mitigation and Rehabilitation and JTC2 Representation of Geo-Engineering Data.

#### **OFFICIAL EVALUATOR OF THE RESEARCH PROMOTION FOUNDATION OF CYPRUS (RPF)**

- He is serving as an Official Approved Member of the Registered Certified Evaluators of the Research Promotion Foundation of Cyprus, in the Innovation and Research Information System (IRIS), for the evaluation of proposals submitted to the Foundation under the RESTART 2016-2020 Programs for Research, Technological Development and Innovation.

**With Respect  
to our Clients**

***Prof. Dr. Constantine I. SACHPAZIS***