

## CURRICULUM VITAE (September 2011)

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Languages : Greek (mother tongue), English (excellent), French (good), Italian (fair).

#### Education :

- 1982 Doctor of Science (ScD) degree in Geotechnical Engineering. Massachusetts Institute of Technology (MIT), Cambridge, MA. USA.
- 1980 Master of Science (SM) degree in Geotechnical Engineering. Massachusetts Institute of Technology (MIT), Cambridge, MA. USA.
- 1977 Diploma in Civil Engineering. National Technical University of Athens, Greece.

#### Academic Experience :

- 1977-82 Graduate Research Assistant, Department of Civil Engineering, MIT.  
Worked on the constitutive modelling of clays and its applications in the estimation of stress field evolution around driven piles, during installation and subsequent consolidation.
- 1982 Post-Doctoral Associate, Department of Civil Engineering, MIT.  
Worked on the above topics in a NOAA funded project titled "Ultimate capacity of offshore friction piles in clays".
- 1987-92 Lecturer, Geotechnical Department, Civil Engineering Faculty, National Technical University of Athens, Greece. Taught undergraduate courses on "Soil Mechanics", and performed research on laboratory testing and numerical modelling of stiff soils.
- 1992-97 Assistant Professor, Geotechnical Department, Civil Engineering Faculty, National Technical University of Athens, Greece. Taught undergraduate courses on "Soil Mechanics" and "Environmental Engineering" and graduate courses on "Environmental Geotechnics" and "Design of Underground Structures". Performed funded research on:
  - (1) Investigation of the mechanical properties of naturally cemented soils.
  - (2) Constitutive modelling of clays with emphasis on repetitive loading and unloading.
  - (3) Design of underground structures.
- 1993 Visiting Assistant Professor, Massachusetts Institute of Technology (MIT), Cambridge, MA, USA.  
Worked on constitutive modelling of soils and its Finite Element Implementation.
- Since 1998 : Associate Professor, Geotechnical Department, Civil Engineering Faculty, National Technical University of Athens, Greece.  
Teaches the undergraduate courses: "Soil Mechanics", "Foundation Engineering", "Computational Geotechnics", "Dam Engineering" and the graduate courses "Design of Underground Structures" and "Computational methods in the analysis of underground structures". Performs funded research on Constitutive Modelling of Structured and Partially Saturated Soils and Weak Rock Tunnelling.

## Professional Experience :

- 1982-87 Senior Geotechnical Engineer and head of the Soil Mechanics Laboratory, GEOMECHANIKI Consulting Soils Engineers, Athens, Greece. Worked on various Soil Investigation and Foundation Engineering projects in Greece and overseas.
- 1982-87 Senior Geotechnical Consultant, Archirodon Construction (Overseas) Co., a multi-national corporation operating as a Civil Works Contractor in Europe, Middle East and North Africa. Worked on various geotechnical projects in Greece, Saudi Arabia, Egypt, Sudan and Cyprus.
- 1987-90 Senior Geotechnical Consultant, GEOMECHANIKI Consulting Soils Engineers, Athens, Greece. Worked on various Soil Investigation and Foundation Engineering projects in Greece and overseas.
- Since 1990: Geotechnical Consultant on geotechnical dam engineering, for several government authorities in Greece including EYDAP (monitoring the Mornos dam for the water supply of Athens) and the Ministry of Public Works (design and construction of the Evinos dam to supplement the water supply of Athens), and Design Offices like OTME, KARAVOKYRIS Associates, HYDROEXIGIANTIKH, K. MACHAIRAS, HYDRODOMIKI, HYDROTEC on the design of several embankment dams in Greece.
- Since 1990: Geotechnical Consultant on the stability of slopes and cuts for several government authorities in Greece including the Public Power Corporation (stability of the cuts in the lignite mines), EGNATIA ODOS (Metsovo, Malakasi) and the Ministry of Public Works (Malakasa slide) and Design Offices like GEOMECHANIKI, ODOTECHNIKI, ODOMICHANIKI and SOTIROPOULOS Associates on the design and rehabilitation of several highway slopes and cuts in Greece.
- Since 1993: Geotechnical Consultant on tunnelling for several government authorities in Greece including the Hellenic Railway Organization (on the construction of the tunnels along the High Speed Railway Link), the Ministry of Public Works (major highway projects to be constructed in the Athens area including the Ymittos tunnel, the proposed Salamis-Perama underwater link and the Elefsis-Stayros-Spata freeway) and EGNATIA ODOS A.E. (design of cuts and tunnels along the West-East highway link in Greece crossing the Pindus mountains).
- Since 1993 : Geotechnical Consultant on tunnelling for several Design Offices : ODOTECHNIKI Ltd, EVPALINOS ATE (design of several tunnels in Greece), ODOMECHANIKI Ltd (design of the highway and railway tunnels at Kakia Skala), DOMH OE (design and construction supervision of a tunnel in Sxisto Attikis) and C.I.SARANTOPOULOS (construction of a tunnel along the Patras bypass highway).
- Since 1995 : Senior Geotechnical Consultant of ARCHIRODON Construction S.A. Consulted on various projects in Saudi Arabia (marine terminals, power and desalination plants, deep excavations for pumphouses, highway projects, piling projects), Egypt (marine terminals, underground parking, deep excavations for pumphouses), the Gulf Countries (marine oil terminals, jetties, power plants, bridge piling projects) and Singapore (deep excavations).
- 1994-2001 : Geotechnical Consultant on tunnelling for ATTIKO METRO AE, the company managing the construction of the Athens Metro project.
- 1999-2003 : Member of the Board of Experts of ERGOSE S.A., the public company managing the construction of the new high-speed railway links in Greece. including several long railway tunnels (up to 9000m long).
- Since 1998 : Core member of the International Drafting Committee for Eurocode 7 (Geotechnics).
- 1997 Geotechnical Consultant of the Design Office KARAVOKYRIS ASSOCIATES for the design of two water reservoirs in Samothraki.
- 1997 Geotechnical Consultant of the Design Office OTME CONSULTANTS for the design of the Asterion earth-dam in Achaia.
- 1998 Geotechnical Consultant of the Design Office HYDROEXYGIANTIKI in the design of the Triantafillia earth-dam in Florina.
- Since 1999 : Geotechnical Consultant for the Ministry of Public Works on geotechnical problems related to the Greek Highway infrastructure.
- Since 1999 : Geotechnical Consultant for the European Commission (DG XVI), on tunnelling projects in Greece funded by the European Cohesion Fund.
- 1999 – 2004 : Member of the Board of Geotechnical Experts of the Public Power Corporation (PPC), on the construction of hydroelectric projects in Greece.

- 1999 – 2004 : Geotechnical Consultant of the Public Power Corporation (PPC) on the design of the following earth-dams (for hydro-electric power generation) : Papadia dam in Florina, Ilarion dam in Kozani, Ag. Varvara dam in Verria, Metsovitikos dam in Ioannina.
- Since 2002 : Geotechnical Consultant of the AKTOR - IMPREGILO Joint Venture for the construction of the Extension of the Athens Metro (4000 m long extension of Line 3 to Egaleo).
- 2002 – 2008 : Geotechnical Consultant of the Ministry of Public Works (YPEXWDE) for the construction of Gadoura earth-dam in Rhodes.
- Since 2004 : Member of the Board of Geotechnical Experts of EGNATIA ODOS S.A. on the construction of the Egnatia Highway (which includes 86 tunnels and many deep cuts, high embankments and bridges).
- 2004 – 2009 : Geotechnical Consultant of the Ministry of Public Works (YPEXWDE) for the construction of the Aposselemis earth-dam in Heraklion - Crete.
- 2006 – 2009 : Geotechnical Consultant of the Contractor MHXANIKH AE in the construction of the Sykia earth dam in Arta.
- 2007 : Geotechnical Consultant of the Design Office KARAVOKYRIS ASSOCIATES in the design of the Mavromati dam in Fthiotida.
- 2007-09 : Geotechnical Consultant of the Design Office HYDROTEC AE in the design of two dams in Corfu island.
- 2008-10 : Geotechnical Consultant of the Design Office ECOS AE in the design of the Iasmos dam in Rodopi.
- 2009-2010 : Geotechnical Consultant of the Design Office KARAVOKYRIS ASSOCIATES in the design of two hard-fill dams in Tersefanos, Cyprus.
- 2009-10 : Geotechnical Consultant of the Design Office ECOS AE in the design of the Petrenia dam in Chalkidiki.
- 2010 : Design of the Shoring and Dewatering system for the Jeddah SWRO III Project – New Seawater Intake Pumphouse, jedah, KSA.
- 2010 : Geotechnical Consultant of the Design Office OK MELETITIKI in the design of two tailings dams for the Hellas Goldmines in Chalkidiki.
- 2011 : Geotechnical Design of two Hardfill dams in Cyprus (Archaggelos, Kammitsi). General Designer : KARAVOKYRIS Associates.
- 2011 : Geotechnical Design of five Flood Retention dams (rockfill with upstream concrete slab, rockfill with central asphalt core) in Jeddah, Saudi Arabia. Contractor : HUTA-HEGERFELD Ltd, Jeddah, KSA.

### Distinctions – Memberships – Invited Lectures :

Associate Member, American Society of Civil Engineers (ASCE).

Member, American Scientific Research Society "Sigma Xi".

Member, Technical Chamber of Greece and Greek Association of Civil Engineers.

1991 - Invited Discussion Leader, 10th European Conference on Soil Mechanics and Foundation Engineering, Florence, Italy, 1991, on the constitutive behaviour of soils.

1991 - Invited Lecturer, Ecole Centrale de Paris, on Constitutive Laws for cemented soils, November 1991.

1993 - Invited Discussion Leader, 1<sup>st</sup> International Symposium on Hard Soils - Soft Rocks, Athens, 1993, on the mechanical behaviour of structured soils.

1994 - Invited Lecturer, Universite Libre de Brussels (ULB) on the Mechanical Behaviour of Structured Soils, June 1994.

1995 - Invited Lecturer, International Symposium on Computational Plasticity (COMPLAS IV), Barcelona, Spain, 1995, on the constitutive behaviour of structured soils.

1995 - Invited teacher, Short Postgraduate Course on the Mechanical Behaviour of Structured Soils, Universita degli Studi di Roma "La Sapienza", October 1995.

1995 - Member of the CEN Special Committee for the updating of Eurocode-7 (Geotechnics), since 1995.

1996 Invited Lecturer on "Tunnelling in weathered rock: Rock or Soil Mechanics approaches?", International Symposium on the Geotechnical Aspects of Underground Construction in Soft Ground, City University, London, April 1996

1997 General Co-Reporter on Case Histories of Geological, Rock and Mining Engineering" at the 4<sup>th</sup> Int. Conf. on Case Histories in Geotechnical Engineering, St. Louis, Missouri, USA, 1997. Report on the design and construction of the Olympion Underground Station (Athens Metro).

- 1998 Invited Lecturer, Technical University of Graz (Austria) on the experiences gained from the construction of the Athens Metro project, June 1998.
- 1998 General Reporter, 2<sup>nd</sup> International Symposium on Hard Soils - Soft Rocks, Napoli, October 1998, on Modelling the Soil Behaviour.
- 1999 Invited Lecturer, XII European Conference on Soil Mechanics and Geotechnical Engineering, Amsterdam, June 1999, on the Construction of the Athens Metro.
- 2000 Invited Lecturer, EUROCK 2000 - International Symposium on Rock Mechanics and Tunnelling, Aachen, Germany March 2000, on "Recent Tunnelling Projects in Greece".
- 2001 Invited Lecturer, Int. Conf. on Underground Infrastructure Research, Kitchener, Ontario, Canada, June 2001, on "Tunnelling in Southern Europe – Research and practice".
- 2001 Discussion Panel Member, 15<sup>th</sup> Int. Conf. on Soil Mechanics and Geot. Engrng (ICSMGE), Istanbul, Turkey, August 2001. Discussion Session on "Urban Tunnelling Techniques"
- 2001-2003 : Head of the Department of Geotechnical Engineering at the National Technical University of Athens.
- 2003 Invited Lecturer, FIG International Conference on Deformation Measurements. Lecture on "Monitoring and Modelling Ground Deformations during Tunnelling", Santorini-Greece, May 2003.
- 2004 Invited Lecturer, AMIREG-2004 International Conference. Lecture on " Quantitative risk assessment in geotechnical and mining projects ", Chania-Greece, June 2004.
- 2004-2006 : Deputy Director of the Post-graduate course on "Design and Construction of Underground Structures" at the National Technical University of Athens.
- 2005 Invited Lecturer, International Conference on Computer Methods and Advances in Geomechanics (IACMAG), Torino, June 2005. Lecture on «Numerical Analysis in the Design of Urban Tunnels».

#### CURRENT RESEARCH INTERESTS

- (1) Investigation of the properties of naturally cemented soils (bonding, yield loci, de-structuration etc) and partially saturated soils.
- (2) Constitutive modelling of soils with emphasis on repetitive loading, based on Plasticity Theory and the Critical State concepts.
- (3) Underground structures (tunnels, large openings) and deep excavations.

#### PUBLICATIONS

##### (a) Books & Textbooks :

- M. Kavvadas (2009), "Principles of Soil Mechanics" (in Greek), SYMEON Publishers, Athens Greece
- R. Frank, C. Bauduin, R. Driscoll, M. Kavvadas, N. Krebs Ovesen, T. Orr and B. Schuppener (2004), "Designer's Guide to EN 1997-1, Eurocode 7 : Geotechnical Design – General Rules", published by Thomas Telford, London, ISBN 0 7277 3154 8.
- M. Kavvadas (1998), "Design of Underground Structures" (in Greek), textbook for a graduate course at the National Technical University of Athens, Published by the Nat. Tech. Univ. of Athens.
- M. Kavvadas (1996), "Principles of Environmental Geotechnics" (in Greek), textbook for a graduate course at the National Technical University of Athens, Published by the Nat. Tech. Univ. of Athens.
- M. Kavvadas (1993), "Principles of Soil Mechanics" (in Greek), textbook for an undergraduate course at the National Technical University of Athens, Published by the Nat. Tech. Univ. of Athens.

##### (b) Theses:

- 1982 'Non-Linear Consolidation around Driven Piles in Clays', ScD Thesis, Dept. of Civil Engineering, MIT, Cambridge, MA., USA, 666p.
- 1980 'Stress-Strain Models for Soils based on Plasticity Theory', SM Thesis, Dept. of Civil Engineering, MIT, Cambridge, MA., USA, 165p.
- 1977 'Non-Linear Stress-Strain Behaviour of Plain and Reinforced Concrete under Cyclic Loading', Diploma Thesis (in Greek), Dept. of Civil Engineering, National Technical University of Athens, Greece, 112p.

(c) Scientific papers in refereed journals (only papers in the English language):

- 1991 A.G. Anagnostopoulos, N. Kalteziotis, G.K. Tsiambaos and M. Kavvadas.  
"Geotechnical properties of the Corinth Canal marls", Geotechnical and Geological Engineering, Vol. 9, pp 1-26.
- 1992 M. Kavvadas, A. Giolas and G. Papacharalambous.  
"Drainage of supported excavations", Technical Note, Geotechnical and Geological Engineering, Vol. 10, pp 141-157.
- 1992 Gazetas G., Fan K., Tazoh T., Shimizu K., Kavvadas M., Makris N.  
"Seismic pile group – structure interaction", ASCE Geotechnical Specialty Publication No 34, pp 56-93
- 1993 M. Kavvadas and G. Gazetas.  
"Kinematic seismic response and bending of free-head piles in layered soil", Geotechnique, Vol. 43, No. 2, pp. 207-222.
- 1994 A.J. Whittle and M. Kavvadas  
"Formulation of the MIT-E3 constitutive model for overconsolidated clays", Journal of the Geotechnical Engineering Division, ASCE, Vol 120, No 1, pp 173-198.
- 1994 M. Kavvadas and P. Marinou.  
"Prediction of groundwater table lowering for lignite open-cast mining in a karstic terrain in western Macedonia, Greece", Quarterly Journal of Engineering Geology, Vol 27, Supplement: p S41-S55. Published: AUG 1994
- 1994 M. Kavvadas, B.P. Papadopoulos and N. Kalteziotis.  
"Geotechnical properties of the Ptolemais lignite", Geotechnical and Geological Engineering, Vol 12, p 87-112.
- 1996 P. Marinou and M. Kavvadas  
"Environmental effects in a karstic aquifer due to seepage from an in-river reservoir", Bulletin of the Int. Assoc. Eng. Geology (IAEG), October 1996, Vol 54, pp 111-117.
- 1996 M. Kavvadas and P. Marinou  
"Rise of the groundwater table when the flow is obstructed by tunnels", Groundwater Geo-engineering (Journal of the IGEA), Vol 7, pp 3-6.
- 1997 P. Marinou and M. Kavvadas  
"Effects of shallow tunnels on the groundwater table levels", Bulletin of the Int. Assoc. Eng. Geology (IAEG), Vol 56, pp 51-64.
- 2000 M. Kavvadas and A. Amorosi  
"A constitutive model for structured soils", Geotechnique, Vol 50, No 1, pp 263-273.
- 2005 M. Kavvadas  
"Monitoring ground deformation in tunnelling : Current practice in transportation tunnels", Engineering Geology, Vol. 79, No 1-2, pp 93-113. Published: JUN 2005
- 2006 Bardanis M.E., Kavvadas M.  
"Prediction of the Limiting Void Ratio of clayey soils after drying", ASCE Geotechnical Special Publication on Unsaturated Soils, vol 147, pp 1085-1096  
permalink : [http://dx.doi.org/10.1061/40802\(189\)88](http://dx.doi.org/10.1061/40802(189)88)
- 2010 Belokas G., Kavvadas M.  
"An Anisotropic Constitutive Model for Structured Soils – Part I: Theory", Computers and Geotechnics, Volume 37 (6), Pages: 737-747, DOI: 10.1016/j.compgeo.2010.05.001.
- 2010 Petroutsatou K., Lambropoulos S., Kavvadas M.  
"Road Tunnelling in Variable Ground In Greece: Design Practices, Construction Methods And Cost Estimates", International Journal of Engineering and Management (IJEM)
- 2010 Elia G., Amorosi A., Chan A.H.C., Kavvadas M.  
"Fully coupled dynamic analysis of an earth dam", Geotechnique, Vol 61, No 7, pp 549-563 [doi: 10.1680/geot.8.P.028]
- 2010 Elia G., Amorosi A., Chan A.H.C., Kavvadas M.  
"Numerical prediction of the dynamic behaviour of two earth dams in Italy using a fully-coupled non-linear approach", International Journal of Geomechanics, ASCE (accepted Oct. 2010, permalink : [http://dx.doi.org/10.1061/\(ASCE\)GM.1943-5622.0000043](http://dx.doi.org/10.1061/(ASCE)GM.1943-5622.0000043))

- 2011 Belokas G., Kavvadas M.  
 "An Intrinsic Compressibility Framework for Clayey Soils", Geotechnical and Geological Engineering, Vol 29, No 5 (Sept 2011), pp 855-871, permalink : DOI 10.1007/s10706-011-9422-0
- 2011 Belokas, G., Kavvadas, M.  
 "An Anisotropic Constitutive Model for Structured Soils – Part II: Verification", Computers & Geotechnics. (submitted for publication in 2011)

(d) Scientific papers in books :

- 1992 G. Gazetas, K. Fan, M. Kavvadas and N. Makris.  
 "Seismic pile-group-structure interaction", in Piles under Dynamic Loads, ASCE Specialty Publication, New York.
- 2006 Belokas G., Amorosi A. and Kavvadas M.  
 "The behaviour of a normally loaded soil and its simulation. Soil Stress - Strain Behavior: Measurement, Modeling and Analysis". A Collection of Papers of the Geotechnical Symposium in Rome. Book Series in Solid Mechanics and Its Applications. Springer. Volume 146. Part 9: 707-71. March 2006. DOI 10.1007/978-1-4020-6146-2.

(e) Scientific papers in Conferences (only papers in the English language):

- 1982 S. Pollalis, J.J. Connor and M. Kavvadas.  
 "Lateral Stiffness of a Pile subject to Static Monotonic Loading", Proc. Third Int. Conf. on the Behavior of Offshore Structures, MIT, Cambridge MA, USA.
- 1982 M. Kavvadas and M.M. Baligh.  
 "Non-Linear Consolidation Analyses around Pile Shafts", Proc. Third Int. Conf. on the Behavior of Offshore Structures, MIT, Cambridge MA, USA.
- 1983 M. Kavvadas.  
 "A Constitutive Model for Clays based on Non-Associated Elasto-Plasticity", Proc. First Int. Conf. on Constitutive Laws for Engineering Materials, Tucson, AZ, USA.
- 1983 M.P. Cleary, M. Kavvadas and K.Y. Lam.  
 "Development of a fully 3-D Simulator for the Analysis and Design of Hydraulic Fracturing in Rocks", Proc. Annual Symp. on Low Permeability Reservoirs, Denver CO, USA.
- 1986 S. Pollalis and M. Kavvadas.  
 "A Numerical Model for Offshore Foundations", Proc. Fifth Int. Symp. on Offshore Mechanics and Arctic Engineering, Tokyo, Japan.
- 1988 G.A. Leonards, E. Sotiropoulos and M. Kavvadas.  
 "Helice: the Lost Town of Ancient Greece", Proc. Int. Symp. on the Engineering Geology of Ancient Works, Monuments and Historical Sites, Athens, Greece.
- 1990 M. Zakas, I. Mihalis, C. Tsatsanifos, M. Kavvadas and E. Alkalais.  
 "Rock-mass classification by means of recording drilling parameters", Proc. Int. Symp. on Mechanics of Jointed and Faulted Rock, Vienna, Austria.
- 1990 M. Kavvadas.  
 "Some considerations on the stability of the Corinth Canal slopes", Fourth European Young Geotechnical Engineers Conference, Delft, The Netherlands.
- 1991 M. Kavvadas.  
 "A kinematic hardening constitutive model for clays", Proc. 10th European Conf. on Soil Mechanics and Foundation Engineering, Firenze, Italy.
- 1991 A.G. Anagnostopoulos, B.P. Papadopoulos and M. Kavvadas.  
 "Direct estimation of settlements on sand, based on SPT results", Proc. 10th European Conf. on Soil Mechanics and Foundation Engineering, Firenze, Italy.
- 1991 M. Kavvadas, P. Papanikolaou and E.V. Alkalais.  
 "Bearing capacity of driven piles in coral formations", Proc. Int. Conf. on Deep Foundations, Paris, France.
- 1992 M. Kavvadas, P. Marinos and A. Anagnostopoulos.

- "Stability of open-pit lignite slopes in Ptolemais, Greece", Proc. Sixth Int. Symp. on Landslides, Christchurch, New Zealand, pp 1293-1298.
- 1993 M. Kavvadas, A. Anagnostopoulos and N. Kalteziotis.  
"A framework for the mechanical behaviour of the cemented Corinth marl", Proc. Int. Symp. on Hard Soils - Soft Rocks, Athens, Greece, pp 577-583.
- 1993 M. Kavvadas, A. Anagnostopoulos, M. Leonardos and B Karras.  
"Mechanical properties of the Ptolemais lignite", Proc. Int. Symp. on Hard Soils - Soft Rocks, Athens, Greece, pp 585-592.
- 1994 P. Marinos and M. Kavvadas.  
"Geo-environmental impact of the proposed diversion of Acheloos river (W. Greece) on its deltaic groundwater and wetlands", Proc. 4th International Congress on Soil and Groundwater Protection, Torino, March 1994.
- 1994 P. Marinos, M. Kavvadas and V. Perleros.  
"Environmental effects in a karstic aquifer due to seepage from an in-river reservoir", Proc. Int. Symp. on Geological Engng. and Geoenvironmental Protection, Constanza, Romania, pp 42-53.
- 1994 M. Kavvadas and G. Gazetas.  
"Kinematic seismic response and bending of piles in layered soil", Proc. 2nd Intern. Conf. on Earthquake Resistant Construction and Design (ERCAD), Berlin, pp 395-402.
- 1994 P. Marinos, M. Kavvadas, V. Perleros, D. Rozos, E. Nikolaou, and J. Chatzinakos.  
"Anticipated changes in groundwater conditions and environmental impact in a deltaic lowland due to a large-scale river diversion", Proc. 7th Intern. Congress of the IAEG, Lisbon, Portugal, pp 2993-3002.
- 1994 P. Marinos, G. Xeidakis, M. Kavvadas, M. Galos, B. Kleb and I. Marek.  
"Underground housing and cellars in volcanic tuffs. Variations in the geotechnical behaviour and experiences from Greece and Hungary", Proc. 7th Intern. Congress of the IAEG, Lisbon, Portugal, pp 4415-4422.
- 1994 M. Kavvadas, P. Marinos, A. Anagnostopoulos.  
"Evaluation of the abutment stability of a ninety-year-old railway bridge founded on serpentine", Proc. 7th Intern. Congress of the IAEG, Lisbon, Portugal, pp 4029-4036.
- 1994 P. Marinos and M. Kavvadas  
"Recharge and discharge regime in a deltaic lowland environment", Proc. of the 25th Congress of the Intern. Assoc. of Hydrogeologists (IAH), Water Down Under 1994, Adelaide, S. Australia, Nov. 1994
- 1995 M. Zacas, M. Kavvadas, I. Mihalidis.  
"The use of recording drilling parameters in rock-mass characterization", Proc. 8th Int. Congress on Rock Mechanics, Tokyo, Sept. 1995.
- 1995 M. Kavvadas and A. Anagnostopoulos  
"A framework for the mechanical behaviour of bonded soils", Proc. XI European Conf. on Soil Mechanics and Foundation Engineering, Copenhagen, June 1995, Vol. 3, pp 113-118.
- 1995 M. Kavvadas  
"Return mapping integration algorithms and consistent Jacobian operators for rate-independent Plasticity", Proc. 4th National Conference on Mechanics, Xanthi, Greece, June 1995.
- 1995 M. Kavvadas  
"A plasticity approach to the mechanical behaviour of bonded soils", Proc. 4th Int. Conf. on Computational Plasticity, Barcelona, Spain, April 1995 (invited paper).
- 1995 P. Marinos and M. Kavvadas  
"Estimation of large scale transmissivity and leakage of a reservoir in karstic terrain using piezometric data. A case in northern Greece", Proc. Intern. Symp. and field seminar on Karst Waters and Environmental Impacts, Antalya, Turkey, Sept. 1995.
- 1995 P. Marinos, M. Kavvadas and V. Perleros  
"Investigation of the over-exploitation and the potential remedial actions of a vast alluvial aquifer in Thessaly, Greece", Proc. 26th Intern. Congress of the Int. Assoc. of Hydrogeologists (IAH), Solutions 1995, Alberta, Canada, June 1995.

- 1996 M. Kavvadas, L.R. Hewison, P.G. Laskaratos, C. Seferoglou and I. Michalis  
 "Experiences from the construction of the Athens Metro", Proc. Intern. Symp. on the Geotechnical Aspects of Underground Construction in Soft Ground, City University, London, April 1996, pp 273-278.
- 1996 M. Kavvadas  
 "Tunnelling in Weathered Rock. Rock or Soil Mechanics approaches?", Proc. Intern. Symp. on the Geotechnical Aspects of Underground Construction in Soft Ground, City University, London, April 1996. Invited Lecture.
- 1996 P. Marinos, M. Kavvadas and V. Perleros  
 "Investigation of the over-exploitation of a major alluvial aquifer in Thessaly, Greece", Proceedings 3<sup>rd</sup> USA/CIS Joint Conference on Environmental Hydrology and Hydrogeology, Tashkent, Uzbekistan, Sept. 1996
- 1997 M. Kavvadas, I. Psycharis and C. Seferoglou  
 "Non-linear finite element analysis of the NATM excavation of an underground station for the Athens Metro", Proc. Int. Symp. on Rock Support, Lillehammer, Norway, June 1997.
- 1997 P. Marinos and M. Kavvadas  
 "Rise of the groundwater table when flow is obstructed by shallow tunnels", Proc. 27<sup>th</sup> Congress of the Int. Assoc. of Hydrogeologists on Groundwater in the Urban Environment, Nottingham, UK, September 1997.
- 1997 P. Marinos, G. Tsiambaos and M. Kavvadas  
 "Geological and geotechnical conditions of the Corinth Canal", Proc. Int. Symp. on Engineering geology and the Environment, Athens, Greece, June 1997, Vol. 3, pp. 3987-4003.
- 1998 M. Kavvadas  
 "Analysis and performance of the NATM excavation of an underground station for the Athens Metro", Proc. 4<sup>th</sup> Int. Conf. on Case Histories in Geotechnical Engineering, St. Louis, Missouri USA, March 1998, paper No 6.11.
- 1998 M. Kavvadas  
 "Hard Soils - Soft Rocks: Modelling the behaviour and selection of model parameters", General Report, Proc. 2<sup>nd</sup> Intern. Symp. on the Geotechnics of Hard Soils - Soft Rocks, Napoli, October 199, Vol. 3, pp 1441-1482, A. Balkema Publishers, Rotterdam.
- 1998 M. Kavvadas and A. Amorosi  
 "A plasticity approach for the mechanical behaviour of structured soils", Proc. 2<sup>nd</sup> Intern. Symp. on the Geotechnics of Hard Soils - Soft Rocks, Napoli, October 1998, Vol. 2, pp 591-602, A. Balkema Publishers, Rotterdam.
- 1998 M. Kavvadas and A.G. Anagnostopoulos  
 "A framework for the mechanical behaviour of structured soils", Proc. 2<sup>nd</sup> Intern. Symp. on the Geotechnics of Hard Soils - Soft Rocks, Napoli, October 1998, Vol. 2, pp 603-614, A. Balkema Publishers, Rotterdam.
- 1999 M. Kavvadas  
 "Experiences from the construction of the Athens Metro project", Proc. 12<sup>th</sup> European Conference of Soil Mechanics and Geotechnical Engineering, Amsterdam, June 1999, Vol 3, pp 1665-1676 - Invited lecture.
- 1999 A. Amorosi and M. Kavvadas  
 "A plasticity-based constitutive model for natural soils - a hierarchical approach", 3<sup>rd</sup> EuroConference on Constitutive modelling of Granular Materials, Horton, Greece, June 1999.
- 1999 I. Mihalis and M. Kavvadas  
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