

CURRICULUM VITAE

1. **Family name:** EXADAKTYLOS

2. **First names:** GEORGE

3. **Date of birth:** 20/12/1961

4. **Nationality:** GREEK

5. **Civil status:** GREEK

6. **Education:**

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:
National Technical University of Athens [1980-1985]	Diploma of Mining & Metallurgical Engineering
Virginia Polytechnic Institute and State University [1987-1988]	Master of Science in Mineral Resources Engineering
National Technical University of Athens [1986-1989]	Doctor of Philosophy in Engineering

7. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

<i>Langue</i>	<i>Read</i>	<i>Spoken</i>	<i>Written</i>
English	1	1	1

8. **Membership of professional bodies:**

Technical Chamber of Greece, Hellenic Society of Mining Engineering, Hellenic Society of Soil Mechanics & Foundation Engineering, International Society of Rock Mechanics (I.S.R.M.), Affiliate Member in the Porous Media Research Institute (PMRI)-University of Waterloo (Canada), Member of European Committee CEN-TC 246: Mechanical properties of Natural Building Stones, and Technical Committee 34 of the ISSMGE (International Society of Soil Mechanics and GeoMechanics) entitled 'Prediction and Simulation Methods in Geomechanics'

9. **Other skills:** (e.g. Computer literacy, etc.)

CAD systems for quarry design, Geostatistics numerical simulation tools for ore reserves estimation, Finite Elements numerical codes for stability analyses of underground quarries

10. **Present position:**

Professor of Rock Mechanics & Mining Engineering, Department of Mineral Resources Engineering, Technical University of Crete; also **Director of Mining Engineering Design Laboratory** in the same Department.

11. **Years within the firm:**

Fifteen (15) in Technical University of Crete as Assistant Professor, Associate Professor, Professor and Director of Mining Engineering Design Laboratory.

12. Key qualifications: (Relevant to the assignment)

Mining Engineering Design of Underground and Open Pit Mines and Quarries, Tunneling, Rock Blasting, Geostatistics, Ore Reserve calculation, Quarries Evaluation, Stability of underground and surface structures, Selection of excavation systems of rocks, Mechanical Excavation design and performance analysis, Experimental Rock Mechanics, Mapping and simulation of discontinuities of rocks, Fluid flow through porous and jointed rocks, Feasibility studies for mining and tunneling projects.

Teaching and training in the past 15 years of 4 undergraduate courses and 2 graduate courses in Mining Engineering for the Training of Mineral Resources Engineering students and professionals. Supervision of more than 40 dissertations theses, MSc theses and PhD theses.

13. Specific experience in the region:

Country	Date from - Date to	Description

14. Professional experience

Date from - Date to	Location	Company	Position	Description
1989	Athens	PMS & ERGO Construction Company	Mining Engineer	Blasting Engineer
1991-1992	Athens	DIONYSSOMARBLE Co. S.A.	Mining Engineer	Production engineer in three quarries: Dionyssos marble quarry, Tinos marble quarry (Verdi di Tino, GRECIAN) and Naxos marble quarry
1992	Athens	National Technical University of Athens	Research associate	Rock engineering analysis of underground bauxite mines mined with the room and pillar method
1998	Athens	DIONYSSOMARBLE Co. S.A.	Consultant	Ore reserve estimation of four (4) marble quarries owned by the company.
1993-1997	Crete	Technical University of Crete	Assistant Professor	Teaching and Research in Mining Engineering and Rock Mechanics. Undergraduate Courses: Stability of Underground & Surface Constructions , Mining Engineering and Tunneling Mechanics, Theory of Elasticity & Fracture Mechanics, Design of Open Pit Quarries & Mines Post-graduate courses: Stability of geotechnical & building constructions, Durability of construction materials
1997-2001	Crete	Technical University of Crete	Associate Professor	Teaching and Research in Mining Engineering and Rock Mechanics Undergraduate Courses: Stability of Underground & Surface Constructions , Design of Mining Engineering & Tunneling, Theory of Elasticity & Fracture Mechanics, Design of Surface Quarries Post-graduate courses: Stability of geotechnical & building constructions, Durability of construction materials

1999- today	Crete	Technical University of Crete	Director of Mining Engineering Design Laboratory	Teaching and Research in Mining Engineering and Rock Mechanics Undergraduate Courses: Stability of Underground & Surface Constructions , Mining Engineering, Theory of Elasticity & Fracture Mechanics, Design of Surface Quarries Post-graduate courses: Stability of geotechnical & building constructions, Durability of construction materials
2004- today	Crete	Technical University of Crete	Professor & Director of Mining Engineering Design Laboratory	Teaching and Research in Mining Engineering and Rock Mechanics Undergraduate Courses: Stability of Underground & Surface Constructions , Design of Mining Engineering & Tunneling, Theory of Elasticity & Fracture Mechanics, Design of Surface Quarries , http://minelab.mred.tuc.gr Post-graduate courses: Stability of geotechnical & building constructions, Durability of construction materials

15. Other relevant information (e.g., Publications)

Dissertations

1. *Computer Aided Blast Fragmentation Prediction* (M.Sc, Dept. of Mining Engineering, Virginia Polytechnic Institute and State University).
2. *Effect of pre-existing rock discontinuities on the limestone excavation with explosives in underground stopes* (Phd, Dept. of Mining Engineering, National Technical University of Athens)

Papers in Refereed Journals

1. Tsoutrelis, G.E., Exadaktylos, G.E. and Kapenis, A.P., (1990). Study of the rock mass discontinuity system using photoanalysis, *Ορυκτός Πλούτος* (Mineral Wealth) 68/1990, pp. 9-18.
2. Εξαδάκτυλος, Γ.Ε. και Τσουτρέλης, Χ.Ε. (1990). Πειραματική μελέτη της επιδράσεως των ασυνεχειών στις μηχανικές ιδιότητες του Πεντελικού μαρμάρου. *Ορυκτός Πλούτος* 66, σελ. 13-22.
3. Exadaktylos, G.E., and Tsoutrelis, C.E. (1991). Fragmentation analysis using the photographic method. *Int. J. of Surface Mining and Reclamation* 5, pp. 55-64.

4. Τσουτρέλης, Χ.Ε. και Εξαδάκτυλος, Γ.Ε. (1992). Υπολογισμός της ακτίνας θραύσεως του πετρώματος περίξ του θαλάμου της εκρήξεως - Μια προσεγγιστική λύση. *Ορυκτός Πλούτος* **76**, σελ. 13-22.
5. Εξαδάκτυλος, Γ.Ε. (1992). Θραυστομηχανική Μικτού Τύπου (ΘΜΤ). *Ορυκτός Πλούτος* **79**, σελ. 55-64.
6. Tsoutrelis, C.E., and Exadaktylos, G.E. (1993). Effect of rock discontinuities on certain rock strength and fracture energy parameters under uniaxial compression. *Geotechnical and Geological Engineering* **11**, pp. 81-105.
7. Tsoutrelis, C.E., Exadaktylos, G.E., and Kapenis, A.P. (1993). Estimation of the modulus of deformation of a heavily jointed rock mass lying between rocks of known moduli. *Mineral Wealth* **82**, pp. 17-20.
8. Tsoutrelis, C.E., Exadaktylos, G.E., and Kapenis A.P. (1992). Estimation of the Rock Mass Modulus of Deformation Using Geomechanical Relations and Mathematical Models. *Ορυκτός Πλούτος/Mineral Wealth* **1992**, σελ. 285-302, τόμος που εκδόθηκε προς τιμήν του Καθηγ. Λ. Μούσσουλου.
9. Tsoutrelis, C.E., Exadaktylos, G.E., and Gikas, N.G. (1994). Ultrasonic characterization of apparently isotropic decorative stones. *Mineral Wealth* **89**, pp.7-12.
10. Μοσχόβης, Ε., Βαφειδής, Α. και Εξαδάκτυλος, Γ. (1994). Εφαρμογή μεθόδου σεισμικής τομογραφίας για το χαρακτηρισμό της ασυνέχειας κοιτασμάτων μαρμάρου. *Ελληνικό Μάρμαρο* **112**, Νοέμβριος-Δεκέμβριος, σελ. 43-45.
11. Exadaktylos, G. and Tsoutrelis, C.E. (1995). Pillar failure by axial splitting in brittle rocks. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.*, Vol. 32, No. 6, pp. 551-562.
12. Bardzokas, D. and Exadaktylos, G. (1995). Plane contact of a cylindrical opening stiffened by a thin shell. *Engineering Transactions*, **43** (1-2), pp. 27-44.
13. Bardzokas, D. and Exadaktylos, G. (1995). Integral equations of thermoelasticity and thermoconductivity for cracked isotropic or anisotropic multiply connected bodies with reinforcement. *Arch. Mech.*, **47**(2), pp. 173-202.
14. Τσουτρέλης, Χ.Ε. και Εξαδάκτυλος, Γ. (1995). Υπόγειος εκμετάλλευση του Πεντελικού μαρμάρου: Η αναβίωση μιας αρχαίας τέχνης με σύγχρονο εξοπλισμό. *Ελληνικό Μάρμαρο*, **115**, σελ. 71-83.
15. Bardzokas, D., Exadaktylos, G.E. and Anastaselos, G. (1996). The effect of stringers and patches on the stress intensities around cracks in plates. *Engineering Fracture Mechanics*, Vol. 55, No. 6, pp. 935-955.
16. Vardoulakis, I., Exadaktylos, G. and Aifantis, E., (1996). Gradient elasticity with surface energy: Mode III crack problem. *Int. J. Solids Structures*, Vol. 33, No. 30, pp. 4531-4559.
17. Exadaktylos, G., Vardoulakis, I. and Aifantis, E. (1996). Cracks in gradient elastic bodies with surface energy. *Int. J. Fracture* **79**, pp. 107-119.
18. Exadaktylos, G. and Aifantis, E. (1996). Two and three dimensional crack problems in gradient elasticity. *J. Mech. Beh. Mtls.*, Vol. 7, No. 2, pp. 93-117.
19. Τσουτρέλης, Χ.Ε. και Εξαδάκτυλος, Γ.Ε. (1997). Συμβολή της γεωμηχανικής στον σχεδιασμό των θαλάμων σε υπόγειες εκμεταλλεύσεις μαρμάρου. *Ορυκτός Πλούτος*, **103**, pp. 7-24.
20. Tsoutrelis, C.E., Exadaktylos, G.E., Gikas, N.G., and Nomikos, P.P. (1997). Fracture control growth in plexiglas under decoupled conditions. *Explosives Engineering*, March 1997, pp.4-9.
21. Τσουτρέλης, Χ., Εξαδάκτυλος, Γ., Νομικός, Π. και Ασβεστάς, Γ. (1997). Ευστάθεια της οροφής των θαλάμων σε υπόγεια εκμετάλλευση μαρμάρου. *Τεχνικά Χρονικά*, Τόμ. 17, No 1-2, pp. 17-31.
22. Antipov, Y., Bardzokas, D., and Exadaktylos, G. (1997). Partially stiffened elastic half-plane with an edge crack. *International Journal of Fracture* **85**, pp. 241-263.
23. Antipov, Y.A., Bardzokas, D., and Exadaktylos, G.E. (1997). Interface Edge Crack in a Bimaterial Elastic Half-Plane. *International Journal of Fracture*, **88**, pp. 281-304.
24. Exadaktylos, G. and Vardoulakis, I. (1998). Surface instability in gradient elasticity with surface energy. *Int. J. Solids Structures* Vol. 35, No. 18, pp. 2251-2281.
25. Exadaktylos, G., (1998). Gradient elasticity with surface energy: Mode-I crack problem. *Int. J. Solids Structures* Vol. 35, Nos 5-6, pp. 421-456 .

26. Tsoutrelis, C.E., Gikas, N., Nomikos, P., and G. Exadaktylos (1998). Use of Notched Boreholes for Fracture Controlled Blasting in the Ornamental Stone Quarries. *FRAGBLAST, The International Journal for Blasting and Fragmentation* 1, pp. 445-463.
27. Kourkoulis, S.K., Exadaktylos, G.E., and Vardoulakis, I. (1998). U-notched Dionysos-Pentelicon marble beams in three point bending: A demonstration of non-linearity, anisotropy and microstructural effects. *International Journal of Fracture* 98, pp. 369-392.
28. Vardoulakis, I., Exadaktylos, G.E., and Kourkoulis, S.K. (1998). Bending of marble with intrinsic length scales: A gradient theory with surface energy and size effects, *J. Phys. IV France* 8, pp. 399 - 406.
29. Mistakidou, E., Bambakidou, K. and Exadaktylos, G. (1998). Einfluss der mineralogischen und technischen eigenschaften bei der marmorexplorierung im beispiel von marmorsteinbruchen aus Volakas und Nikisiani, Griecheland. *European Journal of Mineralogy* Vol. 10, No. 1, 1998, p. 197.
30. Exadaktylos, G.E. (1998). Some Basic Half-Plane Problems of the Cohesive Elasticity Theory With Surface Energy. *Acta Mechanica*, Vol. 133 No. 1-4, 1999, pp. 175-198.
31. Sulem J., Vardoulakis I. and Exadaktylos G. (1999). Microstructural effects in stress concentration and fracture mechanics problems in rock mechanics. *Chapter VI* in "Fracture Series on Nonlinear Fracture Mechanics and Damage Mechanics" (WIT Press), Edited by Prof. Aliabadi of the University of London, pp. 161-200.
32. Exadaktylos G., Tiano P. and Filareto C. (2000). Validation of a model of rotary drilling of rocks with the drilling force measurement system. *Internationale Zeitschrift für Bauinstandsetzen und Baudenkmalpflege*, 6. Jahrgang, Aedificatio Publishers, Heft 3, 307-340.
33. Exadaktylos G. and Kaklis K. (2000). Applications of an explicit solution for the transversely isotropic circular disc compressed diametrically. *Int. J. Rock Mech. & Mining Sci.* 38, pp. 227 - 243.
34. Exadaktylos, G.E. and Vardoulakis, I. (2001). Microstructure in Linear Elasticity and Scale Effects: A Reconsideration of Basic Rock Mechanics and Rock Fracture Mechanics. *Tectonophysics*, 335, Nos. 1-2, pp. 81-110.
35. Exadaktylos, G.E., Vardoulakis, I., and Kourkoulis, S.K. (2001). Influence of nonlinearity and double elasticity on flexure of rock beams-I. Technical theory. *Int. J. Solids Structures* 38, pp. 4091-4117.
36. Exadaktylos, G.E., Vardoulakis, I., and Kourkoulis, S.K. (2001). Influence of nonlinearity and double elasticity on flexure of rock beams-II. Characterization of Dionysos marble. *Int. J. Solids Structures* 38, pp. 4119-4145.
37. Kourkoulis S. and Exadaktylos G. (2001). The displacement discontinuity technique in fracture mechanics: The subsurface crack problem. *Archives of Mechanics*, 53 (4), pp. 421-437.
38. Exadaktylos, G. E. (2001). On the constraints and relations of elastic constants of transversely isotropic geomaterials. *Int. J. Rock Mechanics & Mining Sciences*, 38(7), pp. 941-956.
39. Exadaktylos, G.E., and Stavropoulou, M. (2003). A closed-form elastic solution for stresses and displacement around tunnels. *Int. J. Rock Mechanics & Mining Sciences*, 39, 905-916.
40. Exadaktylos G.E., Liolios P.A., Stavropoulou M.C. (2003). A semi-analytical elastic stress-displacement solution for notched circular openings in rocks. *Int. J. Solids Structures*, 40, 1165-1187.
41. Exadaktylos G.E., Vardoulakis I., Stavropoulou M.C. and Tsombos, P. (2003), Analogue and numerical modeling of normal fault patterns produced due to slip along a detachment plane, *Tectonophysics*, 376, Nos. 1-2, pp. 117-134.
42. Stavropoulou, M., Exadaktylos, G.E., Papamichos, E., Larsen, I. and Ringstad, C. (2003). Rayleigh wave propagation in intact and damaged geomaterials. *Int. J. Rock Mechanics & Mining Sciences*, 40, pp. 377-387.
43. Giannakopoulos, K., M.C. Stavropoulou and G.E. Exadaktylos (2005). A method for inversion of tunnel closure measurements – Application in the Tempi railway tunnel, *J. Mech. Behavior of Materials*. Vol. 16, Nos 1-2, pp. 65-73.
44. Stavropoulou M.C., Giannakopoulos, K. and Exadaktylos G.E. (2005)., A theoretical and experimental study of rock cutting *J. Mech. Behavior of Materials*. Vol. 16, Nos 1-2, pp. 131-150.

45. G. Exadaktylos (2005), Freezing-Thawing Model for Soils and Rocks, *Journal of Materials in Civil Engineering (ASCE)*, "Special Edition on "Advances in Physico-chemical Stabilization of Geomaterials", Vol. 18, No. 2, March/April 2006, pp. 241-249.
46. Liolios P.A. and Exadaktylos G.E. (2006) A solution of steady-state fluid flow in multiply fractures isotropic porous media, *Int. Journal Solids Structures*, 43, pp. 3960-3982.
47. G. E. Exadaktylos (2006), Nonlinear rock mechanics, *Chapter 5, Part 1: The Universality of nonclassical nonlinearity*, THE UNIVERSALITY OF NONCLASSICAL NONLINEARITY WITH APPLICATIONS TO NDE AND ULTRASONICS, (P.P. Delsanto, Editor), 2006, XXII, 546 p., Springer, Hardcover, ISBN: 0-387-33860-8.
48. S.K. Kourkoulis, I. Prassianakis, Z. Agioutantis, G.E. Exadaktylos (2006), Reliability assessment of the NDT results for the internal damage of marble specimens, *International Journal of Materials and Product Technology*, Vol. 26, Number 1-2, pp. 35 - 56
49. G. Exadaktylos, S. Tsouvala, P. Liolios and G. Barakos (2006), A Three-dimensional Model of an Underground Excavation and Comparison with *in situ* Measurements, *Int. J. Numer. Anal. Meth. Geomech.*, 2006; 28:1533–1541, in print.
50. M. Stavropoulou, G. Exadaktylos and G. Saratsis (2006), A Combined Three-Dimensional Geological-Geostatistical-Numerical Model of Underground Excavations in Rock, *Rock Mech. Rock Engng.* (2007) 40 (3), 213–243.
51. Exadaktylos G. and Stavropoulou M., A Specific Upscaling Theory of Rock Mass Parameters Exhibiting Spatial Variability: Analytical relations and computational scheme, *International Journal of Rock Mechanics and Mining Sciences*, in print, 2007.
52. G. Exadaktylos, M. Stavropoulou, G. Xiroudakis, M. de Broissia and H. Schwarz, A spatial estimation model for continuous rock mass characterization from the specific energy of a TBM, *Rock Mechanics & Rock Engineering*, Springer, accepted for publication, 2007.

Papers in Refereed Conferences

53. Exadaktylos, G.E., and Haycocks, C. (1989). Computer Aided Blast Fragmentation Prediction. *Annual Conference on Explosives and Blasting Techniques*, held February 5-10th, 1989, New Orleans, USA.
54. Tsoutrelis, C.E., Exadaktylos, G.E. and Kapanis, A.P., (1990). Rock Mass Characterization of the Molai Mine. *Conference of Primary Raw Materials*, Santiago de Compostella, Spain, 19-25 October 1990.
55. Exadaktylos, G. and Tsoutrelis, C. (1993). Scale effect on rock mass strength and stability. *Proc. of the 2nd International Workshop on Scale Effects in Rock Masses*, (Editor: P.Da Cunha), June 1993, Lisbon, Portugal, pp. 101-110.
56. Exadaktylos, G., Agioutantis, Z. and Lambrou, E. (1994). Effect of the fracture process zone in directed crack propagation in borehole blasting, *Proc. Eurock'94 ISRM International Conference*, 29-31 August 1994, Balkema, Rotterdam, pp. 463-470.
57. Exadaktylos, G. and Tsoutrelis, C.E. (1994). Mine Pillar Design in Brittle Rock Masses. *IV CSMR/Integral Approach to Applied Rock Mechanics/Santiago*, Chile, 10-14 May 1994, pp. 449-458.
58. Exadaktylos, G., Vardoulakis, I. and Aifantis, E., (1995). Cracks in gradient elastic bodies with surface energy. *Proceedings of the 4th Greek National Congress on Mechanics* (P.S. Theocharis and E.E. Gdoutos, Ed's), Xanthi, June 26-29, 1995, pp.341-351.
59. Tsoutrelis, C., Exadaktylos, G., Livadaros, R.M. and Gikas, N.G. (1996). Plexiglas fracturing under decoupled conditions using detonating cord. *EXPLO 96-Conference*, Leeds, September 1996.
60. Exadaktylos, G. and Vardoulakis, I. (1996). Displacement potentials formulation of anisotropic gradient elasticity theory with surface energy. *2nd National Congress on Computational Mechanics*, (Ed's: D. A. Sotiropoulos and D. E. Beskos) Chania, Crete, 26-28 June 1996, pp. 635-644.
61. Sanchidrian, J.A., Garcia-Bermudez, P., Tsoutrelis, C., Exadaktylos, G.E., Cojean, R., Fleurisson, J.A., Tsimidakis, J., and Rogakis, C. (1996). Improvement of productivity in quarrying dimension stone using new drilling and blasting techniques. *Montpellier Conference*, France, September 1996.

62. Vardoulakis, I., Exadaktylos, G., Kourkoulis, S., and Papadopoulos, C. (1997). Characterization of mechanical properties and damage of natural building stones in historical monuments. *IVth International Symposium on the Conservation of Monuments in the Mediterranean Basin*, Rhodes, 6-11 May 1997.
63. Exadaktylos, G. (1997). Characterization of Mechanical Properties and Damage of Natural Building Stones in Historical Monuments. *First Annual Workshop on Environmentally Friendly Construction Technologies* (Targeted Research Action), Organized by ECCREDI, Toulouse, France, October 30th-31st, 1997.
64. Vardoulakis, I. and Exadaktylos, G.E. (1997). The asymptotic solution of anisotropic gradient elasticity with surface energy for a mode-II crack. IUTAM Symposium on Non-Linear Singularities in Deformation and Flow. D. Durban Ed., Technion Haifa, 17-21 March, 1997, KLUWER ACADEMIC PUBLISHERS, pp. 87-98.
65. Exadaktylos, G. (1997). Rock Mechanics and Fracture Mechanics Theories and Their Seismological Applications: The Gulf of Corinth Case and the Deep Drilling Problem. *ICDP Workshop at Athens (F. Cornet Ed.)*, Kavouri October 26-28, 1997, pp. 51-53.
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67. Exadaktylos, G.E., Georgiadis, H.G., and Vardoulakis, I. (1998). Surface Wave Propagation in a Gradient-Elastic Half-Space. *5th National Congress on Mechanics*, Ioannina, August 27-30, 1998, pp 227-234.
68. Vardoulakis, I., Exadaktylos, G.E., Tsombos, P., Stavropoulou, M., and Antonopoulos, D. (1997). Connection between faulting and base detachment - Modeling considerations. *Proceedings of the 1st Workshop on the Development of a Multiborehole Observatory at the Gulf of Corinth*, Athens - October 26-28; 1997, pp. 58-60.
69. Efremidis, G.T., Ning, J., Exadaktylos, G.E., and Aifantis, E.C. (1998). Gradient Elasticity and Size Effects. *Proceedings 5th National Congress on Mechanics*, Ioannina, August 1998, pp. 915-922.
70. Vardoulakis, I., Kourkoulis, S.K., and Exadaktylos, G.E. (1998). Elasticity of Marble, Recent Advances in Mechanics, Xanthi, Greece, July 10-12, 1998, Kounadis A.N. & Gdoutos E.E. eds.
71. Prasianakis I., Kourkoulis S.K., Vardoulakis I. and Exadaktylos G. (1999). Non-destructive damage characterization of marble subjected to bending. *2nd Int. Conference on "Emerging Technologies in NDT"*, Athens, Greece, May 24-26, 1999.
72. Exadaktylos G. (1999). Gradient elasticity solutions for crack problems in brittle geomaterials. *Fracture and Damage Mechanics: An International Conference*, M.H. Aliabadi Editor, London, 1999.
73. Kourkoulis S., Stavropoulou M., Exadaktylos G. and Vardoulakis I. (1999). Local strains due to punch effect in three point bending of marble beams. 9th ISRM Congress, Paris, France, 25-28 August 1999, pp. 623 - 626.
74. Exadaktylos G. (1999). Characterization of mechanical properties and damage of natural building stones in historical monuments. 3rd Annual Workshop on "Environmentally Friendly Construction Technologies", Lisboa, Portugal, October 28th-29th, 1999.
75. Exadaktylos G. and Tiano P. (2000). Determination of the compressive strength and angle of internal friction of rocks by microdrilling. Proceedings of the DRILLMORE Workshop: Drilling Methodologies for Monuments Restoration, BLfD - MUNICH (D), March 16-17, pp. 22 - 29 (Invited lecture).
76. Kourkoulis S., Exadaktylos G. and Vardoulakis I. (2000). The degradation of the mechanical properties of natural building stones: An "Elastic-Damage" model. In Structural Integrity in the 21st Century "The lifetime of plant, structures and components: Evaluation, Design, Extension and Management", (J.H. Edwards *et al.*, editors), Churchill College, Cambridge, UK, 19-21 September 2000, pp. 171 - 179.
77. Exadaktylos G. (2000). Characterization of mechanical properties and damage of natural building stones in historical monuments. 4th Annual Workshop on "Environmentally Friendly Construction Technologies", Prague, Czech Republic, October 12th-13th, ECCREDI (European Council for Construction Research and Development and Innovation, 2000.

78. Vardoulakis I., Stavropoulou M. and Exadaktylos G. (2000). Nonlinearity of hard crystalline rocks in uniaxial compression - tension loading. 20th International Congress of Theoretical and Applied Mechanics, ICTAM 2000 (International Union of Theoretical and Applied Mechanics, IUTAM), 27 August - 2 September, 2000, Chicago, USA, p. 95.
79. Exadaktylos G., Stavropoulou M., Papamichos E., Larsen I. and Ringstad C. (2000). Rayleigh wave propagation in elastic continua: Theory and experiment. EUROMECH 419 Colloquium "Elastic Waves in Nondestructive Testing", 3rd - 5th October 2000, Prague, Czech Republic, pp. 1 - 22 (Invited paper).
80. Exadaktylos, G., Stavropoulou, M., Vardoulakis, I., Kaklis, K. (2001). Nonlinearity of Brittle Geomaterials. 6th Int. Workshop on Non Linear Elasticity in Materials, K.U.Leuven, June 2001, pp. 1-29 (in CD-ROM).
81. Panayotounakos, D., Exadaktylos, G. and Vakakis, A. (2001). Analytical solution of the nonlinear damped Duffing oscillator. In 6th National Congress of Mechanics, Vol. II (Aifantis & Kounadis Eds.), Thessaloniki, July 19-21, 2001, pp. 189-195.
82. Vardoulakis, I., Exadaktylos, G. and Kourkoulis, S.K. (2001). Size effect on failure load of marble beams under three-point loading. In 6th National Congress of Mechanics, Vol. II (Aifantis & Kounadis Eds.), Thessaloniki, July 19-21, 2001, pp. 140-148.
83. Exadaktylos, G. (2001). The elastic punch problem revisited. In 6th National Congress of Mechanics, Vol. II (Aifantis & Kounadis Eds.), Thessaloniki, July 19-21, 2001, pp. 155-162.
84. Exadaktylos, G. and Kourkoulis, S. (2002). Three-point bending of transversely isotropic rock-type materials: An analytical, numerical and experimental study. In 4th GRACM Congress on Computational Mechanics, Patra, 27-28 June.
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1. *Bifurcation, Instabilities and Degradation in Geomechanics*, Springer, G. Exadaktylos & I. Vardoulakis (Editors), 2006, February 2007, pp. 480.
2. *Guest editor*, International Journal for Numerical and Analytical Methods in Geomechanics, Volume 31, Issue 3 (March 2007) Special Issue: Bifurcations, Instabilities and Degradation in Geomechanics. Issue Edited by I.G. Vardoulakis, G.E. Exadaktylos.

Organization of Conferences

1. 7th National Congress on Mechanics, June 24-26, 2004, Chania, pp. 236-245, Kounadis, Providakis & Exadaktylos, <http://minelab.mred.tuc.gr>
2. 7th International Workshop on Bifurcations, Instabilities and Degradation in Geomechanics (**IWBIDG 2005**) Chania, June 2005, G. Exadaktylos & I. Vardoulakis, <http://minelab.mred.tuc.gr>

Competitive Research Projects:

Scientific Responsible in 11 competitive European Projects and 1 NATO project.

Project Coordinator in 2 European Commission Projects in Rock Mechanics and Work-Package Coordinator in 1 European Commission Project in Tunneling.

Scientific Responsible in 2 Greek Projects (Ministry of Research and Industrial Development).

- o Mathematical and experimental methods of analysis of the influence of mechanical, thermal, fluid-flow and electromagnetic fields on the behavior of simply and multiply connected deformable bodies (EC, INTAS).
- o Dynamic Deformation and Failure of Marble (NATO Collaborative Research Grants Program, NTUA, TUC, California Institute of Technology).
- o “Environmentally friendly Construction Technologies: A Targeted Research Action of the European Commission”, (EU, BRITE EURAM).
- o Characterization of Mechanical Properties and Damage of Natural Building Stones in Historical Monuments. (EU , SMT4).
- o “Theoretical Modelling and Experimental Implementation of Nonlinear Acoustic Techniques for Micro-scale Damage Diagnostics” (EU, European Science Foundation, ESF).
- o Faults, Fractures and Fluids: Gulf of Corinth (3F-Corinth), (EU , EEC Energy Program)
- o Effects of Weathering on stone materials: Assessment of their mechanical durability (EU , Growth Program) , <http://minelab.mred.tuc.gr>
- o Integrated tool for in situ characterization of effectiveness and durability of conservation techniques in historical structures (EU, EESD Program), <http://minelab.mred.tuc.gr>
- o TUNCONSTRUCT: Technology Innovation in Underground Construction structures (EU, NMP Program), <http://minelab.mred.tuc.gr>
- o Degradation and Instabilities in Geomaterials with Application to hazard Mitigation (EU, RTN Program)
- o European Geotechnical Network for Research and Development GeoTechNet (EU).

Reviewer

Reviewer of six (6) International Journals: *International Journal of Solids & Structures*, *International Journal of Fracture*, *Geotechnical & Geological Engineering-An International Journal*, *Int. J. Rock Mech. & Mining Sciences*, *Engineering Fracture Mechanics*, *Rock Mechanics & Rock Engineering Journal*.