

CURRICULUM VITAE

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Nationality: Greek
Current Post: Tenured Professor (Applied Geophysics),
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EMPLOYMENT RECORD

2015- Professor (Applied Geophysics) Aristotle University of Thessaloniki, Greece
2005-2015 Associate Professor(2010), Assistant Professor (2005), Lecturer (2000),
Aristotle University of Thessaloniki, Greece
1998-2000 Technical Manager in Geomentor Geotechnical Company
1996-1998 Independent Geophysical consultant

EDUCATION

1992-1996 Department of Electronics, University of York, U.K., D.Phil. Thesis (Applied Geophysics): «Modeling Interpretation and Inversion of Multielectrode Resistivity Survey Data».
1986-1991 Department of Geology, Aristotle University of Thessaloniki , Greece
1980-1986 5th Gymnasium - Lyceum of Thessaloniki

SABBATICAL LEAVES

2013 Visiting Professor (June 2013), Faculty of Engineering, The University of Western Ontario (Canada) after receiving the Western University Scalar Program award.
2011 Visiting Researcher (May-July 2010), the Korea Institute of Geosciences and Mineral Research (KIGAM) after receiving "Brainpool" program scholarship.

ACHIEVEMENTS-AWARDS

- 2021-today** Editor in Chief for Near Surface Geophysics Journal (ISI)
- 2019-2020** Deputy Editor for Near Surface Geophysics Journal (ISI)
- 2015-today** Associate Editor for Journal of Applied Geophysics ISI Journal
- 2013** Visiting University Scholar Program award of the Faculty of Engineering at the University of Western Ontario (Canada).
- 2010** Distinguished Researcher Grand (Brainpool program) from the Korean Association of Scientific and Technological Societies (KOFST) for research work in the Korean Institute of Geosciences and Mineral Exploration (KIGAM).
- 2003-today** Associate Editor for geoelectrics of the Near Surface Geophysics ISI Journal
- 2000-2003** Member of the advisory editorial board of the international journal: "European Journal of Environmental and Engineering Geophysics".
- 2018,2013, 2007,2009** Author or co-author of five papers which received "Best Paper Awards in 5 International Conferences (23rd, 18th, 14th European Conference of Environmental and Engineering Geophysics, 9th, 8th International Conference on Archaeological Prospection)
- 1994** K.M.Stott Price of the Department of Electronics of the University of York (UK) for distinguished doctoral research for the academic year 1993-1994.
- 1993-1995** Case Award Grand (CA-12257) of the British Geological Survey for conducting research on Electrical Resistivity Tomography
- 1993** Recipient of the Centenary Bursary from the British School of Athens

RESEARCH ACTIVITY

I have lead or participated many research/industrial projects funded by private companies, regional government and the European Union. Most of the projects involved long periods of data collection in the field.

Further to the experience in collecting and interpreting geoelectrical data (ERT, SP, IP), I gained experience in a wide range of geophysical methods applied to environmental. archaeometric, geotechnical, hydrogeological, seismotectonic, mining and environmental investigations.

In particular, I gained experience in collecting and interpreting data using the following geophysical techniques: geomagnetic, GPR, VLF, seismic refraction for near surface applications, radiometry-radon measurements, well logging etc.

In total, I have been involved in more than 90 national and international projects. I was the principle investigator in 20 of these projects.

COORDINATED RESEARCH-INDUSTRIAL PROJECTS		
Date	Title	Funding Body
2020	Geophysical mapping of weathered zones	Hellas Gold S.A.
2019	Geophysical measurements within the mining are of the the Milos Island Phase III	IMERSYS S.A.
2018	Geophysical measurements at Western Peloponese for mapping the geological bedrock.	ENERGEAN S.A.
2018	Geophysical measurements within the mining are of the the Milos Island Phase II	IMERSYS S.A.
2017	Geophysical measurements within the mining are of the the Milos Island Phase I	IMERSYS S.A.
2017	Geophysical investigations for locating subsurfave water resources at the Paranesti (Drama) area.	Domain C. Lazaridis S.A.
2016-2017	Surface and cross-hole ERT measurements contributing to studying the hydrogeological regime.	Hellas Gold S.A.
2015	3D Imaging of the structure of the Mavrorachi (Thessaloniki region) Landfill Cells 1 and 2 using 3D ERT techniques.	Regional Association of Solid Waste Management Agencies of Central Macedonia.
2014-2015	Research and recommendations for the occurrence of surface cracks in the area of Valtonera in Amyntaio Florina.	Regional Government of Western. Macedonia-Florina Prefecture
2014-2015	Preventive survey for locating leaks in the Grammatiko Landfill cell (Attica) using geophysical methods.	Mesogeos S.A.
2012-2014	Geological - Geophysical Study of groundwater in the 3rd and 4th cells of the landfill of Mavrorachi, and qualitative and quantitative monitoring of groundwater in the region.	Regional Association of Solid Waste Management Agencies of Central Macedonia.
2012	Investigation of the Ioannina landfill for potential leachate leakage using geophysical methods.	Mesogeos S.A.
2012	Subsurface investigation of the Parnassos ski center using geophysical methods.	Skovolos and Asoc.
2012-2014	Geophysical investigation of the rehabilitated Landfill of Derveni (Thessaloniki).	Regional Association of Solid Waste Management Agencies of Central Macedonia.
2012	Application of the method of electrical resistivity tomography surveys are in marine coastal areas.	Sotiropoulos& Maroulakis
2010-2013	Development of Tomographic Geophysical Techniques for the study of Geotechnical and Environmental problems.	Greek Ministry of education
2009	Marine geophysical Survey at areas of the Thessaloniki Port	Thessaloniki Port Authority

2006-2008	Borehole-To-Surface Electrical Resistivity Tomography Technology For Environmental Monitoring (Greek-Korean collaboration project)	Greek Secretariat of Research and Technology
2004-2007	Sustainable management of water resources by automated real-time monitoring (ALERT)	European Union FP-6 Research Project
2003-2005	Development of time-lapse algorithms for the inversion of 2D and 3D electrical tomographic data	British Geological Survey
2004-2005	Investigations and proposals for the problems created by the Phanos-Xino Nero's fault	Municipality of Amyntaio
2003-2005	Applications of Advanced Geophysics techniques at the Geothermal field of Sarantaporos-Konitsa (Greek-Albanian collaboration project)	Greek Secretariat of Research and Technology
1998-2000	ERT for rock mass characterization	British Geological Survey

RESEARCH HIGHLIGHTS - PUBLICATIONS

Main research activity is related to the development of modelling and special processing algorithms (software) for interpreting electrical resistivity tomography data in the framework of engineering, environmental, mining etc. applications.

Emphasis was placed into the development of novel geophysical applications involving both new measurement and processing approaches as well as new field of applications. In particular:

- Application of geoelectrical methods into the imaging and monitoring of landfills.
- Development of methodologies for locating leakage in operating and new landfills. This work is carried out as part of four research projects funded by industrial partners and landfill management agencies.
- Development of algorithms related to the processing of geoelectrical time-lapse data and its application to environmental and hydrogeological monitoring.
- Research on the feasibility of the application of the use of non-spike electrodes to collect ERT data. Special application into non-destructive testing.
- Study of electrode arrangements for surface-to-tunnel ERT investigations. A modification this approach, in the form of surface-to-horizontal borehole arrangement, is used in time-lapse mode for environmental monitoring studies.
- Study of the application of ERT into marine environments. Research began as part of relevant projects and is ongoing. It relates to marine ERT for beach-rock or geotechnical investigations and continues in a collaboration with the Geological Survey of Norway
- Use of ERT to study the flow of underground contaminants (DNPL). Research started within the framework of the PhD thesis of Dr. C. Power (completed in

2014) in collaboration with the University of Western Ontario (Canada) and Prof. J. Gerhard. The research effort is currently

Journal Publications (since 2009)

- Papadopoulos, N.G., Tsokas, G.N., Dabas, M., Yi, M.-J., Kim, J.-H., Tsourlos, P., (2009). Three-dimensional inversion of automatic resistivity profiling data. *Archaeological Prospection* 16 (4), pp. 267-278.
- Tsokas, G.N., Tsourlos, P.I., Stampolidis, A., Katsonopoulou, D., Soter, S., (2009). Tracing a major roman road in the area of ancient Helike by resistivity tomography. *Archaeological Prospection* 16 (4), pp. 251-266.
- Vargemezis G., Zouros N., Tsourlos P., Fikos I. (2009). High-resolution magnetic gradient and electrical resistivity tomography survey at the Plaka Petrified Forest Park in Lesvos Island, Greece. *Near Surface Geophysics*, 7, No. 3, 207-215.
- Ogilvy R.D., Meldrum P.I., Kuras O., Wilkinson P., Chambers J.E., Sen, A., Pulido-Bosch A., Gisbert J., Jorreto S., Frances I., Tsourlos P., (2009). Automated monitoring of coastal aquifers with electrical resistivity tomography. *Near Surface Geophysics*, Vol 7, No. 5-6, pp. 367-375
- Psomiadis D., Tsourlos P., Albanakis K., (2009). Electrical resistivity tomography mapping of beachrocks: application to the island of Thassos (N. Greece). *Environmental Earth Sciences*, 59, (1), 233-240.
- Vouvalidis, K., Syrides, G., Pavlopoulos, K., Papakonstantinou, M., Tsourlos, P. (2009). Holocene palaeoenvironmental changes in Agia Paraskevi prehistoric settlement, Lamia, Central Greece. *Quaternary International*, 216,64-74.
- Papadopoulos, N.G., Yi, M.-J., Kim, J.-H., Tsourlos, P., Tsokas, G.N., (2010). Geophysical investigation of tumuli by means of surface 3D Electrical Resistivity Tomography. *Journal of Applied Geophysics*, 70, 192-205.
- Vouvalidis, K., Syrides G., Pavlopoulos, K., Pechlivanidou, S., Tsourlos P., and Papakonstantinou M.F., (2010). Palaeogeographical reconstruction of the battle terrain in Ancient Thermopylae, Greece. *Geodinamica Acta* 23 (5-6), 241-253.
- Tsokas, G.N., Tsourlos P., Vargemezis G., and Pazaras N., (2011). Using surface and cross-hole resistivity tomography in an urban environment: An example of imaging the foundations of the ancient wall in Thessaloniki, North Greece. *Physics and Chemistry of the Earth*, 36 (16), 1310-1317.
- Karaoulis M.C., Kim J.H., Tsourlos P., (2011). 4D active time constrained resistivity inversion. *Journal of Applied Geophysics* 73 (1), 25-34
- Tsourlos P., Ogilvy R., Papazachos C., Meldrum P., (2011). Measurement and inversion schemes for single borehole-to-surface electrical resistivity tomography surveys. *Journal of Geophysics and Engineering* 8 (4), 487-497
- Papadopoulos N.G., Tsourlos P., Papazachos C., Tsokas G.N., Sarris A., Kim J.H. (2011). An algorithm for fast 3D inversion of surface electrical resistivity tomography data: application on imaging buried antiquities. *Geophysical Prospecting* 59 (3), 557-575.
- Tsourlos P., and Tsokas G, (2011). Non-destructive Electrical Resistivity Tomography Survey at the South Walls of the Acropolis of Athens. *Archaeological Prospection* 18 (3), 173-186.
- Vargemezis G., Tsourlos P., Stampolidis A., Fikos I., Ballas D. and Papadopoulos N.,(2012). A focusing approach to ground water detection by means of electrical

- and EM methods: the case of Paliouri, Northern Greece. *Studia Geophysica et Geodaetica* 56 (4), 1063-1078.
- Tsokas, G.N., Van de Moortel A., Tsourlos P., Stampolidis A., Vargemezis G., and Zachou E., (2012). Geophysical investigations on the islet of Mitrou (Tragana, Central Greece). *Hesperia*, 81, 383-482.
- Milea C., Papazachos C.B., Tsokas G.N. and Tsourlos P., (2012). Assessment of the Effect of Instrumental and Discretization Errors on Derivative based Potential field Geophysical Methods. *Archaeological Prospection* 19 (2), 75-87.
- Atzemoglou A., and Tsourlos P., (2012). 2D interpretation of vertical electrical soundings: application to the Sarantaporon basin (Thessaly, Greece). *Journal of Geophysics and Engineering* 9 (1), 5.
- Tsokas G., Diamanti N., Tsourlos P., Vargemezis G., Stampolidis A. and Raptis K., (2013). Geophysical prospection at the Hamza Bey (Alkazar) monument, Thessaloniki, Greece. *Mediterranean Archaeology and Archaeometry*, . 13, 1., 9-20.
- Kim J.-H., Supper R., Tsourlos P., Yi M.-J., (2013). Four-dimensional inversion of resistivity monitoring data through L_p norm minimizations. *Geophysical Journal International* 195 (3), 1640-1656.
- Power C., Gerhard J.I., Tsourlos P. and Giannopoulos A. (2013). A new coupled model for simulating the mapping of dense nonaqueous phase liquids using electrical resistivity tomography. *Geophysics*, 78 (4), EN1-EN15.
- Karaoulis M., Revil A., Tsourlos P., Werkema D.D., Minsley B.J., (2013). IP4DI: A software for time-lapse 2D/3D DC-resistivity and induced polarization tomography. *Computers & Geosciences*, 54, 164-170.
- Simyrdanis K., Tsourlos P., Soupios P., and Tsokas G., (2013). Simulation of ERT surface-to-tunnel measurements. *Bulletin of the Geological Society of Greece*. vol. XLVII.
- Power C., Gerhard J.I., Karaoulis M., Tsourlos P., and Giannopoulos A., (2014). Evaluating four-dimensional time-lapse electrical resistivity tomography for monitoring DNAPL source zone remediation. *Journal of Contaminant Hydrology*, 162, 27-46.
- Tsourlos P., Papadopoulos N., Papazachos C., Yi M.J., Kim J.H., (2014). Efficient 2D inversion of long ERT sections. *Journal of Applied Geophysics* 105, 213-224
- Kim J.H., Tsourlos P., Yi M.J., Karmis P., (2014). Inversion of ERT data with a priori information using variable weighting factors. *Journal of Applied Geophysics* 105, 1-9
- Tsourlos P., Papadopoulos N., Yi M.J., Kim J.H. and Tsokas G., (2014). Comparison of measuring strategies for the 3-D electrical resistivity imaging of tumuli. *Journal of Applied Geophysics* 101, 77-85.
- Karaoulis M., Tsourlos P., J.H. Kim, A. Revil, (2014). 4D time-lapse ERT inversion: introducing combined time and space constraints. *Near Surface Geophysics* 12 (1), 25-34.
- Papadopoulos N.G., Sarris A., Parkinson W.A., Gyucha A., Yerkes R.W., Duffy P.R. and Tsourlos P., (2014). Electrical Resistivity Tomography for the Modelling of Cultural Deposits and Geomorphological Landscapes at Neolithic Sites: a Case Study from Southeastern Hungary. *Archaeological Prospection*.
- Tsokas G., Tsourlos P., Kim J.H., Papazachos C., Vargemezis G. and Bogiatzis P., (2014). Assessing the condition of the rock mass over the tunnel of Eupalinus in Samos

- (Greece) using both conventional geophysical methods and surface to tunnel ERT. *Archaeological Prospection*.
- Papadopoulos N., Tsokas G., Sarris A., Tsourlos P. and Vargemezis G. (2014). Ground based archaeological prospection: Case studies from Greece. *First Break*, 32, 73-80.
- Tsourlos P., Vargemezis G., Fikos I. and Tsokas G., (2014). Geoelectrical Methods Applied to Landfill Investigations: case studies from Greece. *First Break* ,32, 81-89.
- Power C., Gerhard J., Tsourlos P., Soupios P., Simyrdanis K., and Karaoulis M. (2015). Improved time-lapse electrical resistivity tomography monitoring of dense nonaqueous phase liquids with surface-to-horizontal borehole arrays. *Journal of Applied Geophysics*. 112,1-13.
- Simyrdanis K., Tsourlos P., Soupios P., G. Tsokas and J.H. Kim, (2015). Surface-to-tunnel ERT measurements. *Near Surface Geophysics*, 13, 343-354.
- Tsokas G.N., Kim J-H, Tsourlos P., Angistalis G., Vargemezis G., Stampolidis A. and Diamanti N. (2015). Investigating Behind the Lining of the Tunnel of Eupalinus in Samos (Greece) using ERT and GPR. *Near Surface Geophysics*, 13 (6), 571-583.
- Ebrahimzadeh M, Tsourlos P, Gerhard JI. (2017). Self-potential for monitoring soil remediation by smouldering: a proof of concept. *Near Surface Geophysics* 15 (5), 475-485
- Simyrdanis K, Papadopoulos N, Soupios P, Kirkou S, Tsourlos P (2018). Characterization and monitoring of subsurface contamination from Olive Oil Mills' waste waters using Electrical Resistivity Tomography. *Science of The Total Environment* 637, 991-1003
- Power C, Tsourlos P, Ramasamy M, Nivorlis A, Mkandawire M., (2018). Combined DC resistivity and induced polarization (DC-IP) for mapping the internal composition of a mine waste rock pile in Nova Scotia, Canada. *Journal of Applied Geophysics* 150, 40-51
- Angelis D., Tsourlos P., Tsokas G., Vargemezis G., Zacharopoulou G. (2018). Combined application of GPR and ERT for the assessment of a wall structure at the Heptapyrgion fortress (Thessaloniki, Greece). *Journal of Applied Geophysics* 152, 208-220.
- Tsokas, G.N., Tsourlos, P.I., Kim, J.-H., Yi, M.-J., Vargemezis, G., Lefantzis, M., Fikos, E., Peristeri, K. (2018). ERT imaging of the interior of the huge tumulus of Kastas in Amphipolis (northern Greece). *Archaeological Prospection*, 25, 347-361.
- Niebieszczański, J., Hildebrandt-Radke, I., Vouvalidis, K., Syrides, G., Andreou, S., Czebreszuk, J., Pappa, M., Tsourlos, P., Karpińska-Kończak, M., Rządkiwicz, M., Kończak, P. (2019). Geoarchaeological evidence of landscape transformations at the Neolithic and Bronze Age settlement of Nea Raedestos in the Anthemous River valley, central Macedonia, Greece. *Quaternary Research (United States)*, 91, 584-599
- Pennos, C., Lauritzen, S.-E., Vouvalidis, K., Tsourlos, P., Mouratidis, A. (2019). From subsurface to surface: a multidisciplinary approach to decoding uplift histories in tectonically-active karst landscapes. *Earth Surface Processes and Landforms*, 44, 1710-1721
- Niebieszczański J., Czebreszuk J., Hildebrandt-Radke I, Vouvalidis K, Syrides G., Tsourlos, P. and Szychalski W., (2019). Uncovering tell formation processes in the

- Anthemous Valley (Northern Greece): Geoarchaeological studies of Nea Raedestos Toumba. Journal of Archaeological Science: Reports,27,101987.
- Giannakis I, Tsourlos P, Papazachos P, Vargemezis G, Giannopoulos A. et al., (2019). A hybrid optimization scheme for self-potential measurements due to multiple sheet-like bodies in arbitrary 2D resistivity distributions. Geophysical Prospecting 67 (7), 1948-1964
- Tassis G., Tsourlos P. and , Rønning J.S., (2020). Detection and characterization of fracture zones in bedrock in marine environment: possibilities and limitations. Near Surface Geophysics, 18,91-103.
- Trento L, Tsourlos P and Gerhard J (2021). Time-lapse Electrical Resistivity Tomography for mapping in situ smouldering remediation (STAR). Journal of Applied Geophysics, 84,104244

CITATIONS

More than 1400 citations in Scopus (self-citations are excluded) resulting in an h-index of 21. Respective Google scollar citations are more than 2500 with an h-index of 28.

TEACHING-SUPERVISION

I have developed and been involved in the teaching of theoretical and laboratory classes for the undergraduate and postgraduate teaching program of the Department of Geology (A.U.Th) as well as participating in the teaching of 2 more Master Degree courses at different Universities in Greece. Further, I supervised diploma theses of final year students and trained them in field trips.

RESEARCH STUDENT SUPERVISION

- Main Supervisor of 6 Doctoral Theses
- Participating member in the advisory committee of 17 Doctoral Theses.
- Main Supervisor of 17 Master Theses.

MEMBERSHIP

Member of the following societies: Near-Surface Section E.A.G.E. (European Association of Exploration Geophysicists), S.E.G (Society of Exploration Geophysicists), Greek Geophysical Union, Greek Geological Union.