

TECHNICAL UNIVERSITY OF CRETE
SCHOOL OF ENVIRONMENTAL ENGINEERING
ENVIRONMENTAL HYDRAULICS & GEOENVIRONMENTAL ENGINEERING DIVISION
COMPUTATIONAL DYNAMICS & ENERGY (CODEN) RESEARCH GROUP
HEAD: PROFESSOR YIANNIS TSOMPANAKIS



Short CV

Yiannis Tsompanakis

Dr Yiannis Tsompanakis is a civil engineer specialized in computational dynamic methods in engineering. He is Professor in the School of Environmental Engineering of the Technical University of Crete, Greece, and Head of Computational Dynamics & Energy (CODEN) Research Group. He teaches undergraduate & postgraduate courses and has supervised PhD, MSc and Diploma theses. He is expert in development and application of advanced simulation techniques and computational methods for structures and infrastructures. His research and engineering interests and expertise include structural and geotechnical earthquake engineering, geoenvironmental engineering, soil-structure interaction, structural optimization, probabilistic mechanics, structural integrity assessment & monitoring, life-cycle analysis & performance-based design, and artificial intelligence methods. As an internationally recognized researcher he has published more than 250 publications (journal papers, international conference papers, book chapters, edited books and conference proceedings). He has also prepared special issues in journals and organized several conferences, special sessions and mini-symposia. He is reviewer in many archival scientific engineering journals. Dr Tsompanakis has excellent leadership, interpersonal and negotiating skills and many international cooperations with other scientific groups and engineering firms in Greece and abroad (USA, UK, Italy, Germany, France, Serbia, etc). He is highly skilled in implementation and management of quantitative/qualitative state-of-the-art research. He has significant practical and scientific experience from his participation in many national and international projects, working either with his group or jointly with other collaborating teams. He is Secretary of Technical Committee TC4: Life-cycle performance, cost and optimization της International Association for Structural Safety and Reliability (IASSAR). He is Organizer of the International Conference Series on Soft Computing Technology in Civil, Structural and Environmental Engineering. Moreover, he is Technical Editor of the Structure and Infrastructure Engineering Journal (Taylor & Francis Publ.).

CODEN Research Group consists of several under-graduate and post-graduate students and post-doc research associates. The scientific expertise of the CODEN Research Group focuses mainly in the broad area of Computational Dynamics. Main research and scientific fields with strong know-how of CODEN are related with this area. In particular, innovative computational tools and methodologies are developed and applied for the analysis and design of structures and infrastructures under static or dynamic/seismic loading. CODEN group main expertise is the development and application of advanced simulation techniques and computational methods for structures and infrastructures (buildings, geostructures, lifelines, etc).

Research interests of CODEN group include structural and geotechnical earthquake engineering, soil-structure interaction, structural optimization, probabilistic mechanics, structural integrity assessment & monitoring, mitigation of geohazards, life-cycle analysis & performance-based design, artificial intelligence methods in engineering, etc. CODEN group has many cooperations with other scientific groups in Greece and other countries and has participated in national and international projects. CODEN group has given particular emphasis on various engineering problems related to geohazards for structures and energy infrastructure, aiming to assist in the protection of the environment, population and energy infrastructures (transportation networks, pipelines, plants, tanks, etc) from natural and man-made disasters. Indicative research fields: a) design of onshore and offshore gas pipelines against geohazards (active faults, landslides, soil liquefaction, etc), b) seismic design of liquid fuel tanks and storage terminals, c) onshore and offshore wind turbine design with emphasis on dynamic soil-structure interaction, d) seismic vulnerability of dams, waste landfills, tailings dams, etc.

Academic Position

Professor of Structural & Earthquake Engineering, Head of Computational Dynamics & Energy (CODEN) Research Group, School of Environmental Engineering, Technical University of Crete (TUC), Greece.

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Education

- Diploma of Civil Engineering, National Technical Univ. of Athens (NTUA), Greece.
- Ph.D. in Computational Mechanics: Large-scale structural optimization using serial and parallel computations, School of Civil Engineering, National Technical University of Athens, Greece.

Professional/Scientific Experience

- Academic: teaching, lecture notes and e-notes, laboratory exercises and project preparation.
- Translation of scientific books (e.g., "Vector Mechanics for Engineers, Statics", by: Beer F.R., Johnston, R., Eisenberg E.R. and Staab G.H)
- Lecturing in seminars for civil engineers of the public sector in advanced computational topics in earthquake engineering (Athens, 2008).
- Participation in research projects.
- Preparation of research proposals.
- Participation in conferences and seminars
- Organization of scientific meetings and conferences.
- Design and construction of structures as a civil engineer since 1992.
- Consulting for engineering firms.
- Field trip experience from the post-earthquake visit in L'Aquila (2009) in Italy, in cooperation with Technical Univ. of Bari and the Organization of Earthquake Protection of Italy.

Teaching

- Postgraduate lessons in TUC: "Dynamics of Structures", "Computational Mechanics", "Computational Dynamics", "Advanced Topics in Structural Earthquake Engineering", "Geotechnical & geoenvironmental engineering and earthquake related geohazards".
- Undergraduate lessons in TUC: "Mechanics of Structures", "Introduction to Earthquake Engineering and Engineering Seismology", "Introduction to Finite Element for Structural Analysis", "Design of Reinforced Concrete Structures".
- Undergraduate lessons in Technological Institute of Crete (2000-2003).

Supervising

- Supervisor of two completed PhD and four PhD's in TUC that are under development, three of which are funded by two research projects. Furthermore, he was member of the examining committee of PhDs in TUC and participated in another one at the School of Civil Eng. of NTUA, Greece. He has been external examiner in two completed PhD and in one more PhD that is under development in Technical Univ. of Bari, Italy.
- He has supervised several Master theses in TUC, one of which was funded by a research project. One more Master is under development. Also, he has been a member of the examining committee for Masters in other Departments of TUC.
- He has supervised several Diploma theses of his undergraduate students from the Environmental Engineering Department of TUC. One more Diploma theses is under development and he has been member of the examining committee of several more Diploma thesis.
- He has supervised many technical project reports of postgraduate students in Mechanics Division of TUC.

Refereeing & Editing

- Reviewing of papers for scientific journals and conferences.
- Referee of research proposals.
- Referee of scientific book and journal proposals.
- Experience from editing papers for special sessions, minisymposia and conferences.
- Editorial experience from editing journal special issues and preparing scientific volumes.
- Editorial experience from handling journal Structure and Infrastructure Engineering Journal (Taylor&Francis Publ) as Technical Editor.

Memberships

- Technical Chambers of Greece.
- Greek Civil Engineers' Association.
- Greek Association of Computational Mechanics - GRACM.

- Greek Earthquake Engineering Association.
- International Society of Structural and Multidisciplinary Optimization-ISSMO.
- International Association of Life-Cycle Civil Engineering - IALCCE.
- International Association for Bridge Maintenance and Safety - IABMAS.
- European Association for Structural Dynamics - EASD.
- International Association for Structural Safety and Reliability-IASSAR.
- Secretary of T4 Technical Committee IASSAR: on Life-Cycle Performance, Cost and Optimization.

Recent Research Projects

- TEMPUS EU Programme 543898-TEMPUS-1-2013-1-ES-TEMPUS-JPHES, "WIMB: Development of Sustainable Interrelations between Education, Research and Innovation at WBC Universities in Nanotechnologies and Advanced Materials where Innovation Means Business", 2013-2017.
- Research Program THALIS, "Wireless Admittance-based structural health Monitoring System-WiAMS", Co-funded by Greek General Secretary of Research and Technology and European Union, 2012-2015.
- Research Program Hrakleitos "Advanced seismic design methods for geosynthetically reinforced embankments", Co-funded by Greek General Secretary of Research and Technology and European Union, 2010-2015.
- Greek Ministry of Development-General Secretariat of Research and Technology Research Coupon grant 54640909-05-000070 "Numerical investigation of an elastic foundation method for buildings, 2010-2011.
- TEMPUS EU Programme, "Curricula Development Project JEP-CD-40104-2005: Engineering Business Management and Services Master Module", 2006-2009.
- Research Program PENED 2003-03ED-454 "Seismic response of waste landfills", Co-funded by Greek General Secretary of Research and Technology and European Union, 2005-2010.

Recent Selected Publications (2008-)

I. Edited Volumes

- Y. Tsompanakis N.D. Lagaros and Papadrakakis M. (Eds.), Structural optimization considering uncertainties, Structures and Infrastructures Series, Vol I, Book Series Editor: D.M. Frangopol, Taylor&Francis, 2008.
- M. Papadrakakis, D.C. Charmpis, N.D. Lagaros and Y. Tsompanakis (Eds.), Computational Structural Dynamics and Earthquake Engineering, Structures and Infrastructures Series, Vol II, Book Series Editor: D.M. Frangopol, Taylor&Francis, 2009.
- B.H.V. Topping and Y. Tsompanakis (Eds.), Soft Computing Technology in Civil, Structural and Environmental Engineering, Computational Science, Engineering and Technology Series No. 23, Saxe&Coburg Publ., 2009.
- Y. Tsompanakis and B.H.V. Topping (Eds.), Computational Technology Reviews, Computational Vol. 4, Saxe&Coburg Publ., 2011.
- B.H.V. Topping Y. and Tsompanakis (Eds.), Civil and Structural Engineering Computational Technology, Engineering and Technology Series No. 28, Saxe&Coburg Publ., 2011.
- Y. Tsompanakis and B.H.V. Topping (Eds.), Soft Computing Methods for Civil and Structural Engineering, Engineering and Technology Series No. 29, Saxe&Coburg Publ., 2011.
- Y. Tsompanakis, P. Ivanyi and B.H.V. Topping (Eds.), Computational Technology Reviews, Computational Vol. 8, Saxe&Coburg Publ., 2013.
- Y. Tsompanakis, P. Ivanyi and B.H.V. Topping (Eds.), Civil and Structural Engineering Computational Methods, Engineering & Technology Series No. 32, Saxe&Coburg Publ., 2013.

- D.M. Frangopol and Y. Tsompanakis (Eds.), Maintenance and Safety of Aging Infrastructure, Structures and Infrastructures Series, Vol II, Book Series Editor: D.M. Frangopol, Taylor&Francis, 2014.
- J. Kruis, Y. Tsompanakis and B.H.V. Topping (Eds.), Civil and Structural Engineering Computational Technology, Engineering and Technology Series No. 38, Saxe&Coburg Publ., 2015.
- J. Kruis, Y. Tsompanakis, and B.H.V. Topping (Eds.), Computational Technology Reviews, Computational Vol. 11, Saxe&Coburg Publ., 2015.
- Y. Tsompanakis, J. Kruis, and B.H.V. Topping (Eds.), Computational Technology Reviews, Computational Vol. 12, Saxe&Coburg Publ., 2015.
- N.D. Lagaros, Y. Tsompanakis and Papadrakakis M. (Eds.), New trends in seismic design of structures, Saxe&Coburg Publ., 2015

II. Conference Proceedings

- B.H.V. Topping and Y. Tsompanakis (Eds.), CSC2009: 1st International Conference on Soft Computing Technology in Civil, Structural and Environmental Engineering, 1-4 September 2009, Madeira, Portugal.
- B.H.V. Topping and Y. Tsompanakis (Eds.), CC2011: 13th International Conference on Civil, Structural and Environmental Engineering Computing, 6-9 September 2011, Chania, Greece.
- Y. Tsompanakis and B.H.V. Topping (Eds.), CSC2011: 2nd Int. Conference on Soft Computing Technology in Civil, Structural and Environmental Engineering, 6-9 September 2011, Chania, Greece.
- Y. Tsompanakis (Ed.), CD-ROM Proceedings of CSC2013: 3rd International Conference on Soft Computing Technology in Civil, Structural and Environmental Engineering, Civil-Comp Press, 3-6 September 2013, Cagliari, Sardinia, Italy.
- J. Kruis, Y. Tsompanakis, and B.H.V. Topping (Eds.), CD-ROM Proceedings of CC2015: 15th International Conference on Civil, Structural and Environmental Engineering Computing, Civil-Comp Press, 1-4 September 2015, Prague, Czech Republic.
- Tsompanakis, J. Kruis, and B.H.V. Topping (Eds.), CD-ROM Proceedings of CSC2015: 4th International Conference on Soft Computing Technology in Civil, Structural and Environmental Engineering, Civil-Comp Press, 1-4 September 2015, Prague, Czech Republic.

III. Journal Special Issues

- Frangopol D. and Tsompanakis Y., (Guest Eds.), Structural optimization considering uncertainties, Special Issue in Journal of Structural Safety, 31, 449-522, 2009.
- Tsompanakis Y., (Guest Ed.), Advances in Vulnerability Assessment of Structures and Infrastructures, Special (Double) Issue in Journal of Structure and Infrastructure Engineering, 6(1-2), 1-301, 2010.
- J.M. Adam, D. Camotim, L. Dunai, K. Marti, I.K. Nikolos, F.J. Pallarés, M.P. Papadopoulou, M.P. Saka, G.I. Schuëller, T. Vietor, Y. Tsompanakis, B.H.V. Topping, (Guest Eds.), Soft Computing Technology in Civil, Structural and Environmental Engineering, Special Issue in Journal of Advances in Engineering Software 44(1), 2012.
- Elnashai A. and Tsompanakis Y., (Guest Eds.), Uncertainties in Life-cycle Analysis and Design of Structures and Infrastructures, Special Issue in Structure and Infrastructure Engineering, 2012.
- Y. Tsompanakis and B.H.V. Topping, (Guest Eds.), Soft Computing Technology in Civil, Structural and Environmental Engineering, Special Issue in Journal of Advances in Engineering Software 66, 1, 2013.
- Tsompanakis, Y., Iványi, P., Beck, A.T., Beer, M., Neves, L.F.C.; and Girardi, M., Jensen, H., Marti, K., Rizzi, N.L., Da Silva, J.G.S., Taflanidis, A.A., Topping, B.V. (Guest Eds.), Special Issue: Civil-Comp, Journal of Advances in Engineering Software, 89(11), 2015.

- Bittencourt, T.N., Frangopol, D.M., Beck, A.T. and Tsompanakis Y. (Guest Eds.), Bridge analysis, design, assessment, monitoring and management, Special Issue in Journal of Structure and Infrastructure Engineering, 14(4-6), 2018.
- Kruis, J., Tsompanakis, Y., Iványi, P., Logo, J., Sextos, A., Topping, B.V. (Guest Eds.), Special Issue: Civil-Comp - Part 2, Journal of Advances in Engineering Software, 120, 2018.
- Bakker, J., Frangopol, D.M. and Tsompanakis Y. (Guest Eds.), Life-cycle of Engineering Systems: Emphasis on Sustainable Civil Infrastructure, Special Issue in Journal of Structure and Infrastructure Engineering, 14(7-9), 2018.
- Kruis, J., Tsompanakis, Y., Topping, B.V. (Guest Eds.), Special Issue: Civil-Comp, Journal of Computers and Structures, 207, 2018.
- Powers, N., Frangopol, D.M., Al-Mahaidi, R., Caprani, C. and Tsompanakis Y. (Guest Eds.), Maintenance, monitoring, risk and life-cycle performance of bridges, Special Issue in Journal of Structure and Infrastructure Engineering, 16(1), 2020.
- Caspeelee, R., Frangopol, and Tsompanakis Y. (Guest Eds.), Life-cycle of engineering systems: Emphasis on sustainable civil infrastructure, Special Issue in Journal of Structure and Infrastructure Engineering, 16(4), 2020.

IV. Chapters in Edited Volumes

- Lagaros N.D., Tsompanakis Y., Fragiadakis M., Plevris V. and Papadrakakis M., Metamodel-based computational techniques for solving structural optimization problems considering uncertainties, in Y. Tsompanakis N.D. Lagaros and M. Papadrakakis (Eds.), Structural optimization under uncertainties, Taylor and Francis, pp 567-597, 2008.
- Tsompanakis Y., Dynamic interaction of retaining walls and retained soil and structures, in M. Papadrakakis, D.C.Charpis, N.D. Lagaros and Y. Tsompanakis (Eds.), Computational Structural Dynamics and Earthquake Engineering, Taylor&Francis, pp 447-461, 2009.
- V. Zania, Y. Tsompanakis, P.N. Psarropoulos, The effect of soil-structure interaction and site effects on dynamic response and stability of earth structures, in T. Schanz and R. Iankov (Eds.), Coupled site and soil-structure interaction effects with application to seismic risk mitigation, Springer, pp. 115-126 2009.
- Y. Tsompanakis, Issues related to the dynamic interaction of retaining walls and retained soil layer, in T. Schanz and R. Iankov (Eds.), Coupled site and soil-structure interaction effects with application to seismic risk mitigation, Springer, pp. 127-138, 2009.
- Tsompanakis Y., Issues related to seismic response of geosynthetically reinforced soil structures, in Topping B.H.V., Adam J.M. , Pallares F.J., Bru R. and Romero M.L. (Eds.), Computational Structures Technology, Saxe&Coburg Publ., 2010.
- Papazafeiropoulos G., Tsompanakis Y., Psarropoulos P.N., Dynamic interaction of concrete dams-reservoir-foundation: Analytical and numerical solutions, in M. Papadrakakis, N.D. Lagaros and M. Fragiadakis (Eds.), Computational Methods in Earthquake Engineering, ECCOMAS Series: Computational Methods in Applied Sciences, Vol. 21, Springer Publ., pp. 455-488, 2011.
- Y.Tsompanakis, P.N. Psarropoulos, Dynamic soil-structure interaction: Reality versus seismic norms, in Topping B.H.V. (Ed.), Computational Methods for Engineering Science, Computational Science, Engineering and Technology Series No. 30, Saxe&Coburg Publ., chapter 11, pp. 265-297, 2012.
- V. Zania, Y. Tsompanakis, P.N. Psarropoulos, Advances in seismic slope stability analysis of earth structures, in N.D. Lagaros, Y. Tsompanakis and M. Papadrakakis (Eds.), New trends in seismic design of structures, Saxe&Coburg Publ., pp. 429-456, 2015.

V. Journal Papers

- Tsompanakis Y., Lagaros N.D., Stavroulakis G.E., Hybrid soft computing techniques in parameter identification and probabilistic seismic analysis of structures, Adv. in Eng. Software, 39, 612–624, 2008.

- V. Zania, P.N. Psarropoulos, Y., Karabatsos and Y. Tsompanakis, Estimating the seismically developed acceleration levels on waste landfills, *Computers & Structures*, 86, 642–651, 2008.
- V. Zania, Y. Tsompanakis, P.N. Psarropoulos, Seismic distress and slope instability of municipal solid waste landfills, *Journal of Earthquake Engineering*, 12(2), 312-340, 2008.
- Psarropoulos P.N., and Tsompanakis Y., Stability of tailings dams under static and dynamic loading conditions, *Canadian Geotechnical Journal*, 45, 663-675, 2008.
- Y. Tsompanakis, N.D. Lagaros, P.N. Psarropoulos E. Georgopoulos, Simulating the seismic response of embankments using soft computing techniques, *Advances in Engineering Software*, 40, 640-651, 2009.
- N.D. Lagaros, Y. Tsompanakis, P.N. Psarropoulos, and E. Georgopoulos, Computationally efficient seismic fragility analysis of geostructures, *Computers & Structures*, 87(19-20), 1195-1203, 2009.
- Y. Tsompanakis, N.D. Lagaros, P.N. Psarropoulos, and E. Georgopoulos, Probabilistic seismic vulnerability analysis of embankments, *Structure & Infrastructure Engineering*, 6(1–2), 179–191, 2010.
- V. Zania, Y. Tsompanakis, P.N. Psarropoulos, Base sliding and dynamic response of landfills, *Advances in Engineering Software*, 41, 349–358, 2010.
- Kramen A. and Tsompanakis Y., Application of dynamic programming to evaluate the slope stability of a vertical extension of a balefill, *Waste Management*, 28(4), 373-382, 2010.
- V. Zania, Y. Tsompanakis, P.N. Psarropoulos, Seismic displacements of landfills and deformation of geosynthetics due to base sliding, *Geotextiles & Geomembranes*, 28, 491–502, 2010.
- P.N. Psarropoulos, Tsompanakis Y., Papazafeiropoulos G., Effects of soil non-linearities on the seismic response of restrained retaining walls, *Structure & Infrastructure Engineering*, 7, 931-942, 2011.
- Tsompanakis, Y., Discussion (by Biondini, F., Collette, M., Ghosn, M., Tsompanakis, Y.), on paper ‘Time-variant redundancy of ship structures’ by Deco A., Frangopol D., and Okasha N., *Transactions of Society of Naval Architects and Marine Engineers (SNAME)*, 119, 40-47, 2012.
- Providakis C., Stefanaki K., Voutetaki M., Tsompanakis Y., Stavroulaki M., Damage detection in concrete structures using a simultaneously activated multi-mode PZT active sensing system: Numerical modeling, *Journal of Structure and Infrastructure Engineering*, 10(11), 1451–1468, 2014.
- Providakis C., Stefanaki K., Voutetaki M., Tsompanakis Y., Stavroulaki M., A near and far-field monitoring technique for damage detection in concrete structures *Structural Monitoring and Maintenance*, 1(2), 159-171, 2014.
- Tsompanakis Y., *Earthquake return period and its incorporation into seismic actions*, Springer, *Encyclopedia of Earthquake Engineering*, 2015. Article ID: 368962.
- Tzavara I., Tsompanakis Y., Zania V., Psarropoulos P.N., Numerical dynamic analysis of geosynthetically reinforced geostructures, *International Research Journal of Engineering and Technology*, 2(6), 1-8, 2015.
- Tzavara I., Tsompanakis Y., Zania V., Psarropoulos P.N., Comparison of seismic slope stability assessment methods for reinforced geostructures, 2(7), 30-38, 2015.
- Providakis C., Tsistrakis S., Voutetaki M., Tsompanakis Y., Stavroulaki M., Agadacos J., Kampianakis E., Pentas, G., A new damage identification approach based on impedance-type measurements and 2D error statistics, *Structural Monitoring and Maintenance*, 2(4), 319-338, 2015.
- Providakis C., Tsistrakis S., Voutetaki M., Tsompanakis Y., Stavroulaki M., Agadacos J., Kampianakis E., Pentas, G., Liarakos E.V. An innovative active sensing platform for wireless damage monitoring, *Current Smart Materials Journal*, 2016.
- Lyratzakis A., Tsompanakis Y., Impact of soil saturation level on the dynamic response of masonry buildings, *Frontiers in Built Environment - Earthquake Engineering*, <https://doi.org/10.3389/fbuil.2018.00024>, May, 2018.
- Tsipianitis A., Tsompanakis Y., Seismic vulnerability assessment of liquid fuels tanks isolated by sliding-based systems. Invited paper for Special Issue on *Advances in Seismic Performance*

Assessment and Improvement of Structures, *Advances in Civil Engineering*, vol. 2018, Article ID 5304245, 14 pages, 2018. <https://doi.org/10.1155/2018/5304245>.

- Tsipianitis, A., and Tsompanakis, Y. Impact of damping modeling on the seismic response of base-isolated liquid storage tanks. Invited paper for Special Issue: “Seismic Analysis and Design of Special, Complex and Irregular Structures”, *Soil Dynamics and Earthquake Engineering*, 121, 281–292, 2019.
- Chatzidakis, D., Tsompanakis Y., Psarropoulos P.N., An improved analytical approach for simulating the lateral kinematic distress of offshore pipelines, *Applied Ocean Research Journal*, 90, 101852, 2019.
- Lyratzakis A., Tsompanakis Y., Psarropoulos P.N., Efficient mitigation of high-speed trains induced vibrations of railway embankments using expanded polystyrene blocks, *Transportation Geotechnics* 22 (2020) 100312, 2020, <https://doi.org/10.1016/j.trgeo.2019.100312>.
- Chatzidakis, D., Tsompanakis Y., Psarropoulos P.N., A semi-analytical approach for simulating oblique kinematic distress of offshore pipelines due to submarine landslides, *Applied Ocean Research Journal*, 98, 102111, 2020, <https://doi.org/10.1016/j.apor.2020.102111>.
- Tsipianitis, A., and Tsompanakis, Y. Improved Cuckoo Search algorithmic variants for constrained nonlinear optimization. *Journal of Advances in Engineering Software*, Vol. 149, November 2020, Article ID 102865, 18 pages. <https://doi.org/10.1016/j.advengsoft.2020.102865>.
- Lyratzakis A., Tsompanakis Y., Psarropoulos P.N., Mitigation of HST-induced vibrations by EPS blocks applied in railway embankments. Invited paper for Special Issue “Noise and Vibration from Transportation of Journal of Zhejiang University-SCIENCE A (accepted), 2020.
- Psarropoulos, P.N., Kapogianni, E. and Tsompanakis, Y. Real-time remote monitoring and risk management of oil & gas facilities subjected to natural hazards. *Pipeline Technology Journal*, Issue, 2, 2020
- Tsipianitis A., Tsompanakis Y., and Psarropoulos P.N., Impact of dynamic soil-structure interaction on liquid storage tanks response. Invited paper for Special Issue “Advanced computational approaches in onshore and offshore energy infrastructure”. *Frontiers in Built Environment: Journal of Computational Methods in Structural Engineering*, 2020. doi 10.3389/fbuil.2020.00140.
- Makrakis N., Psarropoulos, P.N., Chatzidakis, D., and Tsompanakis Y., Route optimization of offshore lifelines taking into account potential earthquake-related geohazards. Invited paper for Special Issue “Advanced computational approaches in onshore and offshore energy infrastructure”. *Frontiers in Built Environment: Journal of Computational Methods in Structural Engineering*, 6, 112, 2020. doi: 10.3389/fbuil.2020.00112.

VI. Invited talks in International Conferences & Seminars

- Tsompanakis Y., Open issues in dynamic interaction of retaining walls and retained soil and structures, *Advanced Research Workshop on Coupled site and soil-structure interaction effects with application to seismic risk mitigation*, Borovets, Bulgaria, 30 August-3 September 2008.
- Tsompanakis Y., Issues related to seismic response of geosynthetically reinforced soil structures, in *ECT-2010: The 7th International Conference on Engineering Computational Technology*, Valencia, Spain, 14-17 September, 2010.
- Tsompanakis Y., Towards a realistic consideration of Dynamic Soil-Structure Interaction in urban environments (retaining walls & retained structures), *14th Italian Congress of Earthquake Engineering, XIV CONVEGNO ANIDIS - L'Ingegneria Sismica in Italia (ANIDIS2011)*, Bari, 18-22 Sept 2011.
- Tsompanakis Y., Local site conditions and dynamic soil-structure interaction in Eurocode 8, *External Experts Lecture Series, Department of Civil & Environmental Engineering, University of Cyprus*, Nicosia, March, 2012.
- Tsompanakis Y. & Psarropoulos P.N., Dynamic Soil-Structure Interaction: Reality versus Seismic Norms, in *ECT-2012: The 8th International Conference on Engineering Computational Technology*, Dubrovnic, Croatia, 4-7 September, 2012.

- Y. Tsompanakis, I. Tzavara, V. Zania, P.N. Psarropoulos, Impact of fault rupture on reinforced earth structures, COMPDYN 2015 – 5th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Heraklion, Greece, 25-27 May, 2015.
- Y. Tsompanakis, A. Tsiapanitis, Dynamic soil-structure interaction effects on liquid storage tanks, COMPDYN 2019 – 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Heraklion, Greece, 24-26 June, 2019.
- Y. Tsompanakis, D. Chatzidakis, P.N. Psarropoulos, N. Makrakis. Offshore geohazards threatening high-pressure gas pipelines. Workshop of Exchange-Risk: Experimental & Computational Hybrid Assessment of Natural Gas Pipelines Exposed to Seismic Risk. University of Bristol, Bristol, UK, December 17-18, 2019.

VII. International Conferences Papers

- Y. Tsompanakis and N.D. Lagaros, Seismic vulnerability assessment of embankments, Icosar09: 10th International Conference on Structural Safety and Reliability, Osaka, Japan, 13-17 September, 2009.
- P.N. Psarropoulos, V. Drosos, Y. Tsompanakis, “Soil–foundation–structure interaction of wind turbine towers on monopoles”, ECT2010: The 7th International Conference on Engineering Computational Technology, Valencia, 14-17 September, 2010.
- Y. Tsompanakis, P.N. Psarropoulos, V. Drosos, Low-cost seismic base isolation using recycled tire cushions, CC 2011: The 13th International Conference on Civil, Structural and Environmental Engineering Computing, Chania, Greece, 6-9 September 2011.
- V. Zania, Y. Tsompanakis, P.N. Psarropoulos and G. Bouckovalas, Impact of geosynthetics on reducing permanent deformations on soil embankments, XV European Conference on Soil Mechanics & Geotechnical Engineering (ECSMGE-2011), Athens, September 12-15, 2011.
- I. Tzavara, Y. Tsompanakis, V. Zania, P.N. Psarropoulos, A comparison of analytical approaches for the assessment of seismic displacements of geosynthetically reinforced geostructures, 15WCEE: The 15th World Conference on Earthquake Engineering, Lisbon, Portugal, 24-28 September 2012.
- C. Providakis, K. Stefanaki, M. Voutetaki, Y. Tsompanakis, M. Stavroulaki, Developing a multi-mode PZT sensing solution for active SHM in concrete structures, IEEE Sensors Applications Symposium (SAS2013), Galveston, Texas, USA, February 19-21, 2013.
- Lagiou M. and Tsompanakis Y., Seismic retrofitting of existing RC structures using FRP, in 10th HSTAM Congress on Mechanics Proceedings, Chania, Crete, Greece, May 25-27, 2013.
- E. Nitadorakis, Y. Tsompanakis and N.D. Lagaros, Performance assessment of seismically isolated reinforced concrete frames, in Proceedings of Icosar13: The 11th International Conference on Structural Safety and Reliability, New York, USA, 16-20 June, 2013.
- C. Providakis, K. Stefanaki, M. Voutetaki, Y. Tsompanakis, M. Stavroulaki, J. Agadacos, An integrated approach for structural health monitoring of concrete structures based on electromechanical admittance and guided waves, 6th ECCOMAS Thematic Conference on Smart Structures and Materials, Torino, Italy, June 24-26, 2013.
- C. Providakis, K. Stefanaki, T.Triantafillou, M. Voutetaki, Y. Tsompanakis, M. Stavroulaki, D. Karabalis and C. Papanicolaou, An innovative structural health monitoring technique for concrete structures based on the combination of admittance and guided wave methodologies, in Proceedings of 6th World Conference on Structural Control and Monitoring (6WCSCM), Barcelona, Spain, July 15-17, 2014.
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