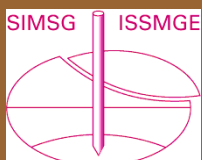


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δρόμο Μετσόβου - Ανηλίου

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ΕΠΙΣΤΗΜΟΝΙΚΗ
ΕΤΑΙΡΕΙΑ
ΕΔΑΦΟΜΗΧΑΝΙΚΗΣ
& ΓΕΩΤΕΧΝΙΚΗΣ
ΜΗΧΑΝΙΚΗΣ

Τα Νέα της Ε Ε Ε Ε Γ Μ

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(*) Οι Καταρράκτες της **Έδεσσας** αποτελούν ένα φυσικό φαινόμενο το οποίο δημιουργήθηκε από ισχυρό σεισμό τον 14ο αιώνα. Από τότε και με την πάροδο του χρόνου σημειώθηκαν αρκετές αλλαγές στην μορφολογία τους εξαιτίας μικρότερης κλίμακας σεισμών. Κύρια πηγή αυτών αποτελεί ο υδροβιότοπος Άγρα-Νησίου, από τον οποίον ρέει το κυρίως ποτάμι ο Έδεσσαίος, του οποίου οι διακλαδώσεις αποτελούν τους καταρράκτες.

ΑΝΤΑΠΟΚΡΙΣΕΙΣ

Γεφύρι της Πορτίτσας

Εμμανουήλ Σούνδιας

Μιας και αυτό το καλοκαίρι κατάφερα να πάω κάποιες μέρες διακοπές (στην Ήπειρο), βρήκα την ευκαιρία να στείλω κάποιες φωτογραφίες για το ηλεκτρονικό περιοδικό της Ε.Ε.Ε.Ε.Γ.Μ. από τις γεωλογικές ομορφιές της χώρας μας αλλά και ένα ιστορικό γεφύρι από τα τόσα που κοσμούν τα δύσβατα μέρη της Ηπείρου και της Πίνδου, δείγμα της δομικής τέχνης και της μαστοριάς των Ηπειρωτών τεχνιτών. Όλοι ξέρουμε πόσο σημαντικός ήταν ο ρόλος των γεφυριών και πόσο στήριξαν τον πολιτισμό και την άνθηση των χωριών της ορεινής Ελλάδας μέχρι και τα μέσα του 20ού αιώνα. Δυστυχώς το θυμηθήκαμε με άσχημο τρόπο στις κακοκαιρίες του φετινού φθινοπώρου.

Πρόκειται για το Γεφύρι της Πορτίτσας, κοντά στο χωριό Σπήλαιο Γρεβενών. Βρίσκεται μέσα στην Περιφερειακή ζώνη προστασίας του Εθνικού Πάρκου Βόρειας Πίνδου, Η κατασκευή του γεφυριού υπολογίζεται το 1743, και σύμφωνα με πηγές κτίστηκε με προσφορές από το Μοναστήρι της Παναγιάς του Σπηλαίου. Το άνοιγμα του μεγάλου τόξου φθάνει τα 13,80 m και του μικρού τα 5 m. Το συνολικό του μήκος είναι 34 m και το πλάτος του 2,70 m, ενώ το μέγιστο ύψος του φθάνει τα 7,80 m. Γεφυρώνει τον ποταμό Βενέτικο, παραπόταμο του Αλιάκμονα. Από το γεφύρι ξεκινά λιθινό μονοπάτι που οδηγεί στο χωριό Σπήλαιο.



Η είσοδος του φαράγγιού της Πορτίτσας όπως φαίνεται από το γεφύρι.



Το γεφύρι με τα απόκρημνα τοιχώματα του φαράγγιού της Πορτίτσας πίσω του.



Άποψη του γεφυριού από την κοίτη του ποταμού Βενέτικου (δυτική πλευρά). Το καλοκαίρι το νερό είναι λιγοστό, αντίθετα με τον χειμώνα. Το πλάτος της κοίτης που εδώ βλέπουμε γεμάτο με φερτά υλικά κατακλύζεται από τα νερά.

Και ένα τελευταίο αλλά όχι ασήμαντο για όσες και όσους δεν έχουν εμπειρία από την περιήγηση σε τέτοια δύσβατα μέρη: αρκετές φορές ορισμένοι "υπεύθυνοι" χωρίς να πάρουν τη γνώμη κάποιου γνώστη Μηχανικού θεωρούν σκόπιμο να στρώσουν τους διαβρωμένους χωματόδρομους με αδρανή από τα ρέματα και τα ποτάμια, δηλαδή συνήθως στρογγυλεμένα χαλίκια και κροκάλες που καμία σχέση δεν έχουν με οδοστρώση. Το αποτέλεσμα είναι συχνά τα υλικά αυτά να γίνονται παγίδες για τους τροχούς των αυτοκινήτων. Αν λοιπόν θέλετε να κατεβείτε στις χαράδρες από τέτοιους δρόμους χωρίς όχημα 4X4 αλλά με ένα συμβατικό αυτοκίνητο πόλης, ξανασκεφτείτε το. Ασφαλέστερο θα ήταν να το αφήσετε κάπου και να συνεχίσετε με πεζοπορία !



Άποψη του γεφυριού από την πλευρά του φαραγγιού (ανατολική πλευρά). Φαίνεται καθαρά η περίτεχνη διαμόρφωση των λίθινων τόξων. Πολύ χαρακτηριστική είναι η διαμόρφωση του τόξου πάνω από το μεσαίο βάθρο: όχι μόνον βοηθά στην εξοικονόμηση υλικών (το πελέκημα της πέτρας είναι δαπανηρή εργασία) αλλά μειώνει και την επιφάνεια προσβολής ώστε να διευκολύνεται η παροχέτευση της ροής χωρίς κίνδυνο παράσυρσης του βάθρου.

Με συναδελφικούς χαιρετισμούς

Δρ Μηχ. Εμμ. Σούνδιας
MARNET A.T.E.

Uncovering the causes of far-field, seismic-induced liquefaction

Sarah Derouin, Ph.D.

If you've ever stood on a wave-soaked beach, you've probably experienced small-scale liquefaction. Maybe your feet gradually sank in the sand under your own weight (known as static or flow liquefaction), or you wiggled your toes, creating mini seismic waves that shook the wet sand, slowly sending you deeper as the ground went from solid to liquid (known as cyclic liquefaction). In both scenarios you were standing on a compactable material that had a lot of water dispersed between the grains of sand.

Zooming out from the shoreline to the built environment, seismic waves from earthquakes can trigger soils under buildings and roadways to lose their strength — that is, liquefy — and behave like fluids. The results can be profound — buildings can tilt and sink, underground infrastructure like pipelines can float to the surface, roads can crack and crumble, and people can be harmed or killed in the aftermath.

Traditionally, liquefaction was considered a potential problem when there were undrained soils and a triggering event, like high-energy earthquakes. But there have been many earthquake-liquefaction events that don't fit into this neat scenario — some soils liquefy far from the earthquake epicenter under low-energy shaking conditions in far-field locations.

Far-field locations are considered places at distances greater than one fault rupture length from the hypocenter of an earthquake — a spot where the seismic energy is well below the 30 joules per sq m threshold needed to trigger near-field liquefaction.

So what are the driving forces in these locations?

In [“Drainage explains soil liquefaction beyond the earthquake near-field”](#), a paper published Sept. 27 in *Nature*, researchers reported on their investigation into how soils can liquefy in drained conditions using laboratory experiments. They found that in drained conditions there is still enough fluid in the soils for liquefaction to occur, even under low-seismic, far-field conditions. They note their work highlights the importance of considering liquefaction hazards for a variety of environments.

Seismic-induced liquefaction

Liquefaction is an expected hazard that occurs in relatively close proximity to the epicenter of earthquakes in wet areas that experience intense shaking. In 1989, the Loma Prieta earthquake that had its epicenter about 97 km from San Francisco liquified [sandy materials that had been used to fill in a lagoon](#) in 1915 to create the Marina District within the city.

But there have been many documented cases of liquefaction in far-field areas — away from the highest-energy seismic waves, explained Liran Goren, Ph.D., an associate professor of geology at Ben-Gurion University of the Negev and co-author of the *Nature* article, who answered questions for *Civil Engineering Online* on behalf of all the authors. “Many of the liquefaction events that occurred during the famous Canterbury 2010-2011 earthquake sequence (that caused an enormous amount of damage in Christchurch, New Zealand) occurred in the far field, under very low-seismic energy density input,” the researchers say via Goren.



After the 2010 earthquake near Christchurch, New Zealand, liquefaction occurred throughout the city, including at this gas station. (Image courtesy of Martin Luff)

The 2010 Canterbury earthquake was a moment magnitude 7.1 event that had its epicenter 40 km west of Christchurch. Aftershocks continued through 2011.

The authors of the study also include Shahar Ben-Zeev, Ph.D., postdoctoral researcher in geophysics at the Hebrew University of Jerusalem; Renaud Toussaint, Ph.D., CNRS, the director of research at the National Center for Scientific Research at the Earth and Environment Institute of Strasbourg; and Einat Aharonov, Ph.D., professor of geophysics at the Hebrew University of Jerusalem.

Intrigued by these and other liquefaction events around the world, the researchers “wondered if drained liquefaction could be invoked to explain those puzzling, far-field events,” the researchers say.

To test this, the team created a transparent tank filled with saturated silt grains. Team members induced shaking, filmed the grain motion with a high-speed camera, and measured fluid pressures. “By performing experiments and simulations, we could establish correlations between local strain within the grain layer and the flow and pressurization of the pore fluid,” they say. “This approach provided valuable insights into the interplay between granular materials and fluid dynamics.”

Lastly, the team developed a physics-based theory to predict the preferred conditions for liquefaction in drained soils. (While undrained soils include a combination of trapped water and soil, drained soils are either dry or have clear pathways for water to escape during shaking events.) The researchers discovered that low levels of seismic shaking can still trigger interstitial fluid flow in drained conditions.

Based on observations in the lab, the team proposes that there is a “mechanistic link between the effective drainage conditions we applied in the experiments and simulations and the possibility of liquefaction with small seismic energy density.”

Liquefaction and drained soils

When earthquake waves pass through undrained soil, the water counteracts the soil's ability to compact and causes the sediment to lose any resistance to shear forces, resulting in liquefaction. With drained soils, however, as the grains become more compacted, the small amount of water that is still present within the soil moves toward the surface.

This process can cause a surprising effect. The researchers found that during an earthquake, the seismic waves create a compaction front moving upward through the ground in far-

field locations. This wave essentially divides the soil column into a compacted layer at the bottom and a liquefied layer at the top as the water is pushed out. They pointed to a [video shot shortly after the 2011 Tohoku, Japan, earthquake](#), showing how the water escapes to the surface.



Nearly 3 ft of settlement occurred at this water purification plant in Japan after the 2011 Tohoku earthquake. Measuring the damage are Jennifer L. Donahue, Ph.D., P.E., M.ASCE, a member of the Geotechnical Extreme Events Reconnaissance team from the National Science Foundation, and an engineer from the Wanigawa Water Purification Plant. (Photo by Scott Ashford, courtesy of Oregon State University)

"Our research reveals that drained liquefaction is triggered by the fluid flow itself. As the soil compacts due to deformation and disturbance of contacts between grains, the fluid begins to move upward and out of the compacting soil, and pore pressure gradients build up to support the draining pore fluid," they explain.

What's more, the team said that the key factor influencing whether drained liquefaction occurs is seismic power or the magnitude and duration of shaking. "This intensity property is rarely calculated or discussed, and we think it is worthwhile exploring the correlation between the seismic power and the occurrence of liquefaction using natural liquefaction catalogs," they add.

"Like in many other scientific projects, what we discovered at the end is not exactly what we hunted for in the beginning," the researchers note. "We didn't start with the hypothesis that drained liquefaction can be triggered with a very low-seismic energy density input. This discovery emerged from the simulations, experiments, and theory."

While the results are a "step forward" in liquefaction research, Jorge Macedo, Ph.D., P.E., A.M.ASCE, a civil engineering assistant professor at Georgia Institute of Technology, pointed out the experiments took place in idealized laboratory conditions. "We know that liquefaction in the field is not going to be either fully drained or undrained; it's going to be partially drained."

The team members are positive about their findings, however, noting that "this newfound insight could shed light on the mechanisms behind numerous liquefaction events happening far from the earthquake's epicenter, where seismic energy density is low — an aspect that was previously considered a mystery."

This article is published by [Civil Engineering Online](#).

11/28/2023, <https://www.asce.org/publications-and-news/civil-engineering-source/civil-engineering-magazine/article/2023/11/uncovering-the-causes-of-far-field-seismic-induced-liquefaction>

Τα Λίθινα Φράγματα Βάρους της Δασικής Υπηρεσίας ως «Ζώσα Ύλη»



Δεν ήτο ύλη σκέτη το λίθινο φράγμα στο δασικό χώρο. Είχε ζωή· αυτήν που έπαιρνε από την ένταξή του στη φύση. Ήταν ύλη που εξυπηρετούσε τη φυσική λειτουργία, και ως τέτοια, για ν' ανταποκριθεί στο ρόλο της, έπρεπε να ενσωματωθεί στη φύση και να λειτουργήσει ως στοιχείο της. Είχε φύσημα ζωής από το δημιουργό κι ανάσα από τη φύση οπου εντάσσονταν, γι' αυτό κι είχε συμπεριφορά ζώντος στοιχείου, ως μέρος ενός ενεργού όλου –ήτο «ζώσα» ύλη. Το έπαφ' της με το νερό, με το έδαφος, με το φυτό, με τον δημιουργό, αλλά και το γήινο της δημιουργίας της –καθώς, με υλικό της γης, την πέτρα, φτιάχνονταν–, έδινε στο φράγμα χαρακτήρα φυσικό και τώκαμε να «επικοινωνεί» ζωτικά με τα μετέχοντα στοιχεία στο όλον της δημιουργίας –άλλως, θάχε αποβληθεί ως ξένο σώμα. Τα φράγματα αυτά της δασικής υπηρεσίας «αναφύονταν» από τη γης, έχοντας φυσική γέννηση και φυσικό προορισμό.

Εξάλλου, το γεγονός ότι ο άνθρωπος της γης, ο υπαίθριος Έλλην, που είχε μιαν πηγαία γήινη σχέση με το φυσικό αντικείμενο, είδε βαθύτερα την επικοινωνία του με τη «ζώσα» τούτη ύλη, έχοντας εξάρτηση ζωής από αυτήν, δηλώνει ότι η επαφή με τα γήινα δεν αποτελεί πρακτική ανάγκη μόνο, αλλά προκύπτει ως εσωτερική επαφή του δημιουργού με το δημιούργημα –άλλο αν σήμερα, που πάσαμε νάμαστε δημιουργοί και χάσαμε την επαφή μας με τη μάνα γη, δεν επικοινωνούμε με αυτήν κι είμαστε ξένοι στο γύρω μας!

Τα χαμηλά φράγματα που κατασκεύασε για τις διευθετήσεις των χειμαρρικών νερών η δασική υπηρεσία –κι απ' αυτά, τα λιθόδομητα και ξηρολίθινα στα οποία εν προκειμένω μένουμε–, είναι ευθύγραμμες σε κάτοψη φραγματικές μορφές με ύψος από 2 έως 15 μέτρα (φτάνοντας σε κάποιες περιπτώσεις τα 20 μέτρα), με συμπαγή κορμό και υδατοχετούς. Είναι φράγματα βάρους, ακριβώς γιατί χρησιμοποιούν το βάρος τους για να εξουδετερώσουν τις εξωτερικές δυνάμεις που δέχονται (κατά κύριο λόγο, του νερού και των γεωμαζών που μεταφέρονται). Είχαν συνεπώς από τη φύση της κατασκευής τους φυσική διάσταση, παρά τ' ό,τι αποτελούσαν τεχνικά έργα.

Μένουμε στα λιθόδομητα και στα ξηρολίθινα φράγματα διότι, πέραν της προσαρμογής τους στο φυσικό περιβάλλον, αναδεικνύουν την όμορφη τέχνη της πέτρας, η οποία χρησιμοποιήθηκε για να γενούν κατασκευές μικρής κατά βάσιν ζωής, για τις οποίες εκτιμήθηκε ότι ο άνθρωπος αξίζει να τεχνουργήσει, ως αφιέρωση στη φύση –για την οποία δημιουργεί– θαρρείς.

Από στατική άποψη λειτουργούν ως τοίχοι αντιστήριξης. Λόγω της φύσης των υλικών κατασκευής τους (της πέτρας και του σκυροδέματος), που έχουν μικρή αντοχή στον εφελκυσμό, πρέπει ν' αποφεύγονται εφελκυστικές τάσεις στο εσωτερικό του φράγματος. Για να συμβεί αυτό και να υπάρχει εξουδετέρωση των εξωτερικών δυνάμεων, πρέπει η συνισταμένη όλων των δυνάμεων που δρουν στη φραγματική κατασκευή να διέρχεται από το εξωτερικό άκρο του μέσου τρίτου της βάσης (για κατακόρυφο άναντες μέτωπο) ή λίγο

εσωτερικότερα από το άκρο αυτό (για κεκλιμένο άναντες μέτωπο), επιτυγχάνοντας έτσι την ιδανική φραγματική διατομή (την ελάχιστη και στατικά άριστη).

Η διαστασιολόγηση κατά τούτο δίνει σχετικά ογκώδεις (για το μέγεθος του υδάτινου αγωγού) φραγματικές διατομές, οι οποίες όμως, λόγω της φύσης των υλικών των φραγμάτων και της αρχιτεκτονικής τους κατασκευής, δεν προκαλούν με την παρουσία τους, αλλά αντίθετα, βρίσκονται σε αρμονία με το φυσικό περιβάλλον κι εμφανίζουν πλήρη ενσωμάτωση σε αυτό –η δε αντιοικονομική θεώρηση της κατασκευής, λόγω του όγκου της, δεν ισχύει όταν χρησιμοποιούνται υλικά και μέσα της περιοχής του έργου (π.χ. λίθοι του χειμαρρικού ρεύματος), καθώς και ντόπιο εργατικό δυναμικό.

Οι τοπικές κοινωνίες, πέραν της εξυπηρέτησής τους από τη λειτουργία του έργου, ωφεληθήκαν και κατά το στάδιο της κατασκευής του, που πραγματοποιούνταν με αυτεπιστασία της δασικής υπηρεσίας, αφού χρησιμοποιήθηκαν μαστόροι της περιοχής και ντόπιο εργατικό δυναμικό, καθώς και μέσα του τόπου. Με τον τρόπο αυτό δόθηκε ένα πρόσθετο εισόδημα στους κατοίκους των ορεινών περιοχών, που το είχαν ανάγκη λόγω των μικρών τους εισοδημάτων, ενώ μέσα κι υλικά της επιχείρησης χρησιμοποιήθηκαν και λήφθηκαν κατά το δυνατόν από τις τοπικές κοινωνίες. Ταυτοχρόνως εξυπηρετήθηκε και η δασική υπηρεσία για την ολοκλήρωση του έργου, αφού χρησιμοποιήσε ανθρώπους που γνώριζαν τον τόπο και ήταν εξοικειωμένοι με τις συνθήκες του, κι επιπροσθέτως ήξεραν να δουλεύουν την πέτρα κι είχαν αναπτύξει τη μαστορική της, λόγω του ό,τι, σχεδόν αποκλειστικά τη χρησιμοποιούσαν στις κατασκευές τους.

Τα φράγματα βάρους που αναφερόμαστε είναι συμπαγείς μάζες συγκολλημένων ή μη λίθων, που με τη σωστή στατική τους φράζουν τους υδάτινους αγωγούς και προκαλούν ανάσχεση της χειμαρρικότητας, χωρίς να θίγονται από τις ομολογουμένως ισχυρές δυνάμεις που τα βάλλουν, τις δυνάμεις του νερού και των γεωμαζών, που κινούνται με μεγάλη ταχύτητα και δημιουργούν ισχυρές κρουστικές δυνάμεις, τις πλευρικές ωθήσεις από τα πρηνή, το βάρος των προσχώσεων από τα φερτά υλικά κ.ά. [φράγματα βάρους είναι επίσης, εκτός από τα λίθινα, και τα κατασκευαζόμενα από κορμοτεμάχια, τα σκυρόδομητα (που, από τη δεκαετία του 1970 και μετά χρησιμοποιήθηκαν ευρύτατα), καθώς και τα χωμάτινα]. Κι αυτό γιατί, με τη σωστή στατική, οι μεταβολές που εξαιτίας των εξωτερικών δυνάμεων δέχονται οι τοίχοι των φραγμάτων, είναι πρακτικά ασήμαντες, ενώ αυτές του υποκείμενου υποθέματος (που είναι κατά κύριο λόγο βραχώδες), είναι αμελητέες. Το ύψος τους και η απόσταση μεταξύ τους προκύπτει κατόπιν υπολογισμού, σύμφωνα με τον οποίο πρέπει με τις προσχώσεις να επιτυγχάνεται η κλίση αντιστάθμισης της κοίτης του ρεύματος (κλίση αντιστάθμισης είναι η κλίση της κοίτης του ρεύματος που με συγκεκριμένες συνθήκες χειμαρρικότητας, αυτό μεταφέρει στερεά υλικά χωρίς να μεταβάλλει την κοίτη του, είτε γιατί δεν παρασύρει υλικά από αυτήν είτε γιατί δεν αποθέτει υλικά σε αυτήν, είτε ακόμα κι αν παρασύρει, αποθέτει τόσα, ώστε ν' αντισταθμίζει τα παρασυρόμενα).

Τα όμορφα λιθόδομητα και ξηρολίθινα φράγματα που κατασκευάζονταν από τη δασική υπηρεσία, νόμιζες ότι αναδύονταν από το βραχώδες υπόθεμα αποτελώντας συνέχεια της γης, καθώς στήνονταν ως στέρεες αρμοστές κατασκευές πάνω της. Οι δυνάμεις που δέχονταν εξουδετερώνονταν με το βάρος τους ή με τη μεταφορά τους στα εκατέρωθεν πρηνή. Είναι μιαν ιδέα της στατικής αυτής, παρμένη από τη λειτουργία της φύσης, που θέλει τα στοιχεία της να αλληλενεργούν και να αλληλοσυμπληρώνονται παρέχοντας ισορροπία. Η τριπλή πάκτωση των φραγμάτων στην κοίτη και στα εκατέρωθεν πρηνή, καθώς και η μεγάλη πίεση που ασκείτο τόσο στα θεμέλιά τους από το βάρος τους, όσον και στα πρηνή από τη μεγάλη δύναμη του νερού και των στερεοϋλικών (αφού, όπως προείπαμε, οι δυνάμεις στους τοίχους των φραγμάτων μεταφέρονται στα πρηνή), έδινε σε αυτά ελαστική συμπεριφορά –μη παρατηρούμενη αλλά υπαρκτή!

Είναι η συμπεριφορά του τεχνικού στοιχείου που έγινε ένα με τη γη, λες και το «φύτεψε» ο άνθρωπος σ' αυτήν!, ανταποκρινόμενο στις αντιδράσεις της. Γινόταν έτσι τούτο ένα με το τοπίο, ως μέρος της φύσης. Τα χαμηλά, συμπαγή φράγματα αποτελούν μικρογραφίες –θα λέγαμε– των υψηλών φραγμάτων, αφού εμφανίζουν τους ίδιους παράγοντες να επενεργούν και τις ίδιες ιδιότητες με αυτά. Μόνο που, λόγω του μικρότερου μεγέθους τους και της διαφορετικής φύσης του υδάτινου αγωγού που φράζουν, έχουν πιο απλοποιημένο, αλλά και διαφοροποιημένο στατικό μηχανισμό. Όμως σε γενικές γραμμές, η στατική τους συμπεριφορά είναι ίδια με των υψηλών φραγμάτων.

Οι δημιουργοί στο ρέμα δεν αλλοίωναν και δεν κατέστρεφαν για να κατασκευάσουν, δε διατάρασσαν και δεν αναστάτωναν, αλλά έφτιαχναν έργα της φύσης για την ανόρθωσή της, τη λειτουργία και τη συνέχειά της. Η αρχή τους απέρρευε από τη φυσική λειτουργία, και για το λόγο τούτο προσάρμοζαν το έργο τους στις κανόνες της. Χρησιμοποιούσαν πρώτη ύλη από την ίδια τη φύση (την πέτρα του χειμάρρου που διευθετούσαν, που ήταν γεμάτος με τέτοιο υλικό), αποφεύγοντας να μετακινηθούν για να το φέρουν από αλλού και δημιουργήσουν αναστάτωση στο φυσικό χώρο. Προσέγγιζαν τη θέση του έργου κι εξυπηρετούνταν εκεί με ζώα (μουλάρια, άλογα ή γαϊδούρια), χρησιμοποιώντας φυσικά περάσματα και παραδοσιακά μονοπάτια για τις μετακινήσεις τους. Λόγω της πρακτικής αυτής και γενικότερα τής μη χρήσης μηχανικών μέσων μετακίνησης, ο φυσικός χώρος δε διαταράσσονταν. Οι μαστόροι παίρναν την ύλη και της δίναν «ψυχή» με το έργο τους, κάμοντας ισχυρή την αίσθηση της δημιουργίας. Η «παραδοσιακή» αυτή δημιουργία, είχε τη λογική της μικρότερης δυνατής επίπτωσης του ανθρώπινου έργου στο φυσικό περιβάλλον και της ένταξής του στο φυσικό δημιούργημα, ούτως ώστε να λειτουργήσει ως μέρος του. Για να κατανοήσουμε την αντίληψη που διακατείχε κείνους τους δημιουργούς, αρκεί ν' αναφέρουμε ότι, εάν το φράγμα έβρισκε κατά το στήσιμό του σε βράχο της γης να το εμποδίζει, αυτός δε διαλύονταν (με ανατίναξη ή με μηχανικά μέσα) αλλά ενσωματώνονταν στην κατασκευή, ως μέρος της συμπαγούς φραγματικής διαμόρφωσης!

Όλην αυτήν η ύλη τελικά, είχε πολλή έγνοια μέσα της και φιλοσοφία δημιουργική. Δεν ημπορούμε συνεπώς να την ιδούμε στεγνά και μόνον τεχνοκρατικά, και να την ξεπεράσουμε ως ανάρμοστη με την εξέλιξη των καιρών. Πρέπει με την αξία της ύπαρξης που υποστηρίζει να την ιδούμε και να την εκτιμήσουμε για τη σχέση της με τη γη...

Η ένταξη στο φυσικό σύστημα κι εντέλει η εναρμόνιση στο φυσικό όλον των φραγμάτων της δασικής υπηρεσίας, που σκοπό είχαν την αποκατάσταση και την εν συνεχεία ομαλή λειτουργία του φυσικού τούτου συστήματος, αποτελεί ένα ιδανικό κι όμορφο παράδειγμα αναβάθμισης της φύσης, της «φυσικής» ύλης με τη βοήθεια της «τεχνητής» ύλης. Ήταν η εποχή που η δασική υπηρεσία «τεχνουργούσε» στο φυσικό χώρο δημιουργώντας φύση, μετατρέποντας την τεχνητή ύλη σε φυσικό δημιούργημα.

Αυτά τα όμορφα, τα φιλοσοφημένα, τα φυσικά έργα του ανθρώπου, τα λιθόδητα και ξηρολίθινα χαμηλά φράγματα της δασικής υπηρεσίας, σήμερα θεωρούνται «παραδοσιακά» και «ξεπερασμένα». Πιο εύκολα στην κατασκευή τους φράγματα προτιμώνται πια, τα σκυρόδητα, και νέοι τύποι φραγμάτων προτείνονται, τα «διαλογικά». Τα τελευταία προτείνονται ως πιο ελαφρές κατασκευές σε σχέση με τα βαριά «παραδοσιακά» φράγματα, έχοντα φιλοσοφία περισσότερο μηχανική και λιγότερο περιβαλλοντική· επικρατεί δηλαδή η τεχνοκρατική κι υπολογιστική αντίληψη της επέμβασης του ανθρώπου στο φυσικό σύστημα κι όχι η φυσιοκρατική, όπως παλιά. Με αυτά τα φράγματα διακρατούνται με συστήματα διαλογής υλικά της στερεομεταφοράς και μειώνονται με την κατάλληλη κατασκευή οι πλημμυρικές παροχές του ρεύματος.

Όμως, με όλα τούτα και με τη νέα αντίληψη περί περιβαλλοντικής αποκατάστασης και λειτουργίας της φύσης,

έχει απωλεσθεί η «μαγεία» της κατασκευής, έχει χαθεί η αξία της μαστορικής, δεν υφίσταται η τέχνη του τεχνουργού, κι έχει εισβάλλει η μηχανική στο φυσικό χώρο, χρησιμοποιώντας ξένα κι αλλότρια ως προς αυτόν υλικά, που τον μεταλλάσσουν σε σχέση με το φυσικό του γίνεσθαι. Έχει, δηλαδή, πάψει η ύλη να είναι «ζώσα»!..

(από το βιβλίο του συγγραφέα "ΛΙΘΙΝΟΙ ΤΟΙΧΟΙ. Τοιχίζοντας και διευθετώντας το φυσικό χώρο", έκδοση ιδίου, Αθήνα 2018, <https://www.bookstation.gr/Product.asp?ID=49135>)

ΝΕΑ ΑΠΟ ΤΙΣ ΕΛΛΗΝΙΚΕΣ ΚΑΙ ΔΙΕΘΝΕΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΝΩΣΕΙΣ



130 Ερευνητές του Εθνικού Μετσόβιου Πολυτεχνείου συμπεριλαμβάνονται στους κορυφαίους επιστήμονες του κόσμου για το έτος 2022

Στην πρόσφατα δημοσιευμένη μελέτη που πραγματοποιείται κάθε χρόνο από ερευνητές του Πανεπιστημίου του Στάνφορντ (ΗΠΑ) στην οποία παρατίθεται ο κατάλογος με το 2% των ερευνητών με την μεγαλύτερη επιστημονική επιρροή σε παγκόσμιο επίπεδο, συμπεριλαμβάνονται 130 Ερευνητές του Εθνικού Μετσόβιου Πολυτεχνείου εκ των οποίων οι 128 είναι υπηρετούντα ή αφυπηρετήσαντα μέλη του Διδακτικού και Ερευνητικού Προσωπικού (ΔΕΠ) του Ιδρύματος. Τα ενεργεία μέλη ΔΕΠ που αναφέρονται στη μελέτη είναι 78, αριθμός που αντιστοιχεί στο 20% του συνόλου των υπηρετούντων μελών. Η μελέτη αντλεί στοιχεία από τον ιστότοπο SCOPUS (<https://www.scopus.com/>) τη μεγαλύτερη βάση δεδομένων επιστημονικών δημοσιεύσεων παγκοσμίως.

Η συγκεκριμένη επιτυχία είναι απόδειξη του κύρους του ΕΜΠ και της αδιαμφισβήτητης εκτίμησης που απολαμβάνει το Ίδρυμα στο διεθνές ακαδημαϊκό περιβάλλον. Θερμά συγχαρητήρια σε όλους τους συναδέλφους αλλά και σε όλη την ερευνητική κοινότητα του ΕΜΠ που ωθεί το Ίδρυμα συνεχώς ψηλότερα και σε όλο μεγαλύτερες επιτυχίες.

Μεταξύ των ονομάτων των ερευνητών του ΕΜΠ που συμπεριλαμβάνονται στους καταλόγους της συγκεκριμένης μελέτης είναι και αυτά των Νίκου Γερόλυμου και Γιώργου Γκαζέτα του Τομέα Γεωτεχνικής.

Τα σχετικά στοιχεία είναι διαθέσιμα στο: <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6>



**Πολυτεχνική Σχολή
Αριστοτελείου Πανεπιστημίου Θεσσαλονίκης
Εκπαιδευτική εκδρομή του μαθήματος Εδαφομηχανική Ι**

Το Εργαστήριο Εδαφομηχανικής, Θεμελιώσεων και Γεωτεχνικής Σεισμικής Μηχανικής του Τομέα Γεωτεχνικής Μηχανικής

του Τμήματος Πολιτικών Μηχανικών ΑΠΘ πραγματοποιήσε στις 3-4 Νοεμβρίου 2023 εκπαιδευτική εκδρομή στο πλαίσιο του μαθήματος "Εδαφομηχανική Ι". Με τη Θεοδώρα Τίκα και τον Γιάννη Χαλούλο επισκεφθήκαμε δύο υδροηλεκτρικά έργα της ΔΕΗ Α.Ε. (https://lnkd.in/d/T3_d3N5): το φράγμα του Ιλαρίωνα στον ποταμό Αλιάκμονα στην Αιανή Κοζάνης και τον υπό κατασκευή υπόγειο υδροηλεκτρικό σταθμό στον ποταμό Μετσοβίτικο στο Μέτσοβο Ιωαννίνων, καθώς και το εργοτάξιο της ΑΚΤΩΡ Α.Τ.Ε. (<https://lnkd.in/d/N3hwHUX>) στη σήραγγα της Κλεισούρας στην Καστοριά.





Ευχαριστούμε θερμά την [#PPC-S.A.](#), την [#AKTOR](#), την [#Egnatiaodos](#), την [Zacharoula \(Chara\) -Rea Papachatzaki](#), τον [Christos Dimou](#), τον [Dimitrios Tsoros](#) και την [Eleni Sakoumpenta](#) για τη φιλοξενία και τη διάθεση να ξεναγήσουν τους φοιτητές μας στα υπό κατασκευή έργα τους.

[Konstantinos Georgiadis Professor at Aristotle University of Thessaloniki](#)



International Society for Soil Mechanics and Geotechnical Engineering

ISSMGE News & Information Circular November 2023

www.issmge.org/news/issmge-news-and-information-circular-November-2023

1. ISSMGE BULLETIN

ISSMGE is launching a new bulletin edition and the President, Vice-Presidents and all board members are encouraging you to send an article or summary about your completed or planned activities, or special projects in your country, for publication in the next issue. Please send to the ISSMGE Secretariat (secretariat@issmge.org) with a copy to the Editor-in-Chief, Professor Anthony Leung (ceanthy@ust.hk).

Please keep feeding us with your exciting news regularly so that our bulletin from now on becomes richer and more animated!

The latest edition of the ISSMGE Bulletin (Volume 17, Issue 5, October 2023) is available from the website.

2. THE BIOGRAPHY OF VICTOR DE MELLO IS AVAILABLE TO DOWNLOAD!

ISSMGE is happy to inform its members that the biography of Victor F. B. de Mello is available for download : *The man who chose what he loved* (2023, 406 pages)

Please visit the website: victorfbdemello.com.br; select your language and select BIOGRAPHY BOOK

Victor F. B. de Mello was the ISSMGE President during the period 1981-1985. The book makes for an elegant and enjoyable read and covers his personal life as well as his professional life as a geotechnical engineer. There is much information on the history of the ISSMGE itself. The book is written in Portuguese and in English (in the final part of the book) and is richly illustrated with numerous reproductions and photographs with captions in both Portuguese and English. It was written by a team led by Lucia Beatriz and Luiz Guilherme de Mello.

It will be of great interest not only to his generation of geotechnical engineers, but also to all geotechnical engineers.

Note that all the 8 Victor de Mello Lectures and the 5 de Mello Goa Lectures are also available for download from the website.

(Roger FRANK, Past President of ISSMGE, 2013-2017)

3. ANNOUNCING THE 7TH McCLELLAND LECTURER DR PHILIPPE JEANJEAN

ISSMGE Technical Committee 209 Offshore Geotechnics is delighted to announce that Dr Philippe Jeanjean of bp has been invited to deliver the 7th McClelland Lecture.

Philippe has made substantial contributions to the field of offshore geotechnics. This includes developments in offshore site investigation where he helped guide the development of large diameter, high quality soil sampling systems and various in situ testing apparatus such as the Stinger CPT; and in integrated geohazard studies including his leadership of diverse teams of geologists, geophysicists, oceanographers, geotechnical engineering, risk and reliability experts and numerical modelling specialists to address risks associated with several deepwater Gulf of Mexico projects. In recognition of his contribution to the field of site characterisation, the United States Board on Geographic Names approved the naming of an underwater feature in the Gulf of Mexico as Jeanjean Basin in 2015.

Philippe has also pioneered new engineering practices for the design of jetted conductors and led physical modelling campaigns that have informed the performance on suction anchors and laterally loaded piles and with latter culminating in a framework that will be included in the next edition of ISO 19901-4.

Philippe chaired API Committee RG7 from 1999-2014, and ISSMGE TC209 on Offshore Geotechnics from 2009-2017. He has delivered several named lectures, including as Coulomb Lecturer (2019) and Spencer J. Buchanan Lecturer (2021), and co-chaired the 4th International Symposium on Frontiers in Offshore Geotechnics held in Austin, 2022.

Congratulations Philippe!

4. ISSMGE FOUNDATION

The next deadline for receipt of applications for awards from the ISSMGE Foundation is the 31st January 2024. Click here for further information on the ISSMGE Foundation.

5. CONFERENCES

Member Societies, Technical Committees, Sister Societies and related organisations may add their events directly to the ISSMGE Events database via the link "+ Submit Event" at the top of the EVENTS page.

For a complete listing of all ISSMGE and ISSMGE supported conferences, and full information on all events, including deadlines, please go to the Events page at

<https://www.issmge.org/events>. For updated information please refer to that specific event's website.

The following events have been added or amended since the previous Circular:

ISSMGE EVENTS:

14TH AUSTRIAN GEOTECHNICAL CONFERENCE, VIENNA TERZAGHI LECTURE Dates: (01-02-2024- 02-02-2024) Venue: Vienna Messe Congress Center Language: German and English Contact information: Prof. Dr. Dietmar Adam, Email: dietmar.adam@tuwien.ac.at Organiser: VÖBU - ÖIAV - TU Wien, Website: <https://oegt.voebu.at/>, Email: office@voebu.at

28TH EUROPEAN YOUNG GEOTECHNICAL ENGINEERS CONFERENCE 2024 Dates: 25-06-2024 - 29-06-2024 Venue: Popova Kula - Demir Kapija Language: English Contact Information: Ms. Elena Angelova, Email: mag@gf.ukim.edu.mk Organiser: Macedonian Association for Geotechnics Website: <https://eygec2024.net/>

10TH AYGECEC ASIAN YOUNG GEOTECHNICAL ENGINEERS CONFERENCE Dates: 11-11-2024 - 14-11-2024 Venue: Bidakara Hotel, Jakarta, Indonesia Language: English Organizer: Indonesian Society for Geotechnical Engineering (ISGE), Website: <http://10aygec-pit28.hatti.or.id> Email: info@10aygec-pit28.hatti.com

NON- ISSMGE EVENTS:

DFI 50th ANNIVERSARY CONFERENCE ON DEEP FOUNDATIONS Dates: 20-10-2025 - 23-10-2025 Venue: Gaylord Opryland Resort & Convention Center, Nashville, United States Language: English Contact Information: Theresa Engler, Email: tenabler@dfi.org Organiser: Deep Foundations Institute, Website: <http://www.dfi.org> Email: events@dfi.org

The biography of Victor de Mello is available for download!

ISSMGE IT Administrator / General / 09-11-2023

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(Roger FRANK, Past President of ISSMGE, 2013-2017)

The 7th ERTC10 Webinar on the Second Generation of Eurocode 7 - Ground properties

ISSMGE IT Administrator / [ERTC10](#) / 20-11-2023

The 7th Webinar organised jointly by ISSMGE ERTC10, CEN TC250 SC7 and NEN is open for registration: **Second Generation of Eurocode 7 - Ground Properties** Time: Wednesday, **13 December 2023, 15:00-17:00 CET**

The webinar will be only 2h long and it is free of charge. It will cover the subject of the new version of EN 1997-2 Eurocode 7 - Part 2: Ground properties. A significant update has been provided to this part of the code to cover state-of-the-art methods and to satisfy the needs of geotechnical engineers.

The agenda includes:

1. *Introduction* - Geert Kraijema
2. *Introduction to the new Eurocode 7 Part 2 - Ground properties* - Håkan Garin
3. *State, stiffness and dynamic properties* - Sebastiano Foti
4. *Strength properties* - Marcos Arroyo
5. *Examples of deriving values of properties* - Kees-Jan van der Made
6. *Q&A session*

Link to the website with the registration form: <https://eurocode7-ground-properties.nen-evenementen.nl/>

3rd ISSMGE TC217 Online Seminar Series: 3rd Seminar on 7th December 2023

Siau Chen Chian / [TC217](#) / 18-11-2023

TC217 Land Reclamation is proud to continue the tradition of disseminating state-of-art land reclamation practices by hosting the 3rd annual series of land reclamation online seminars. The details of the 3rd and final seminar of the series are provided below.

Seminar Programme:

Title: Models, Monitoring and Data for Reclamations with Fine-Grained Soils

Speaker: Dr Thomas Vergote, Expert Engineer Soil Mechanics & Data Science, DEME

Time: 7th December 2023, 7pm (GMT+8h)

Registration link: https://us06web.zoom.us/webinar/register/WN_xHjEVfZbQnSFB_hfWq57zq

Attendees of the full series of the coming 3 seminars would be provided a certificate of attendance from the ISSMGE TC217 Chair as a gesture of appreciation of support to the seminars. Please send us your request of the certificate and we will send the softcopy to you upon verifying your attendances.

We look forward to receiving your registration and meeting you in the seminar.

Sincerely,

A/Prof Darren Chian
Secretary, TC217 Land Reclamation

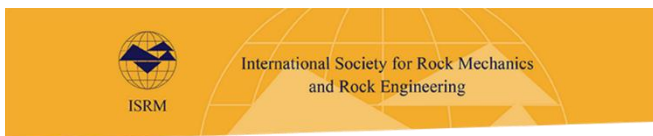
ISSMGE new video on members and national geotechnical engineering societies released

ISSMGE IT Administrator / General / 20-11-2023

ISSMGE is pleased to release this new video to all our members or all national geotechnical engineering societies, inviting them to be active within their international family.



https://www.youtube.com/watch?v=k4Ga_HUxpbk



News

<https://www.isrm.net>

Eda Quadros - in memoriam 2023-11-14

It is with great sadness that the ISRM informs the friends and colleagues of Eda Freitas de Quadros e Barton that she passed away after a long fight with her illness. The funeral services take place today in São Paulo, Brazil.

The ISRM owes Eda a lot from her enormous and constant dedication to the Society during many years, as an active member of Commissions, Vice President for Latin America and President.

Our thoughts are with Eda's husband Nick Barton and her close family and friends, to whom we present our deepest condolences.



May Eda rest in peace.

Luís Lamas
Secretary General, ISRM

44th ISRM Online Lecture 14 December 2023-11-21

The 44th ISRM Online Lecture "Possible strategy for landslide prediction" by Professor Manchao from China will broadcast on 14 December at 10 A.M. GMT.

[Follow the link to know more.](#)



News

<https://about.ita-aites.org/news>

WTC2024: FULL PAPER SUBMISSION EXTENDED - 03 November 2023

Due to many requests from authors, the WTC 2024 Organizing Committee is pleased to announce that the WTC2024 full paper submission deadline has been extended to Nov.15, 2023.

Authors of accepted abstracts are kindly requested to upload the full paper via <https://conference-service.com/wtc2024/access.html> before this final deadline. No further extensions will be granted.

The full Paper acceptance notification will be sent to authors before December 15th, 2023.

ITA COSUF WORKSHOP ON DIGITALIZATION OF TUNNELS 03 November 2023

ITA COSUF, the ITA committee on Operational Safety of Underground Facilities organizes a workshop on Digitalization of Tunnels - towards BIM-based operation and maintenance. The event will take place in the Empire Riverside Hotel in Hamburg, Germany on December 6th, 2023.

It is aimed to go into what actually a BIM-related operation means, how it is designed, which functions it should incorporate and what kind of functionality a digital twin needs to have for application in tunnel operation.

This open Workshop will be free to attend for ITA COSUF members after registration. Non-COSUF members are welcome to register paying a small fee.

On the 5 December 2023 ITA COSUF Activity Group Meetings will take place.

All details about the speakers, venue and registration forms can be found on www.ita-cosuf.org/bim

Please register and we are happy to see you in Hamburg.

EXPERT ROUNDTABLE - "BEV FIRE SAFETY IN TUNNEL CONSTRUCTION" 08 November 2023

Missed the «Expert Roundtable - BEV Fire Safety in Tunnel Construction» event organized by the SubSpace Energy Hub on September 20th?

Never fear, you can access the 2 parts of the panel discussion now in catching the recording on the following links: <https://www.youtube.com/watch?v=pA2IeI0TJeY> and <http://s://www.youtube.com/watch?v=9xtW-Kid9PA>

The outcome of the discussion have been gathered in a Summary document of Take - aways. You can have a look on it.

Download document

ITACET LUNCHTIME LECTURE SERIES #31 23 November 2023

Join us to the thirty-first instalment of the Lunchtime Lecture series!

This episode will focus on «Design and construction of conventional tunnelling in urban setting». It will be run on Tuesday, December 12th and will begin at 13:00 CET time.

The episode will feature three lectures and will finish with a Q&A with all speakers.

- Challenges of tunnelling in Urban Areas - Nasri Munfah
- Conventional Tunnelling in Urban Areas - Vojtech Gall
- The Gateway Program – Putting the Pieces Together for Urban Setting in New York - James Morrison

To sign up for free subscription: [Lunchtime lecture series#31 | Itacet](#)

ITA TUNNELLING AWARDS 2023: WINNERS ANNOUNCED 27 November 2023

The 9th edition of the ITA Tunnelling Awards took place on 23 November in Mumbai, India.

This year, the event was held in hybrid mode, enabling participants to take part in the conference and Awards ceremony in stream live via the ITA's digital platform.

This platform will remain open to all participants until the end of the year so that they can see or re-watch the round tables

organised for the occasion as well as the presentations by all the finalists.

The 2023 ITA Tunnelling Awards winners:

- Major Project of the Year (over €500M)
EOLE – Paris East-West Rail Express Link, France
- Project of the Year (between €50M and €500M)
Comprehensive Project of Shenzhen Binhai Avenue (Headquarters Base Section) Coastal Wide Underground Space, China
- Project of the Year incl. Renovation (up to €50M)
Mount Royal Tunnel – Double Arch Replacement & Rehabilitation for the REM Project, Canada
- Technical Innovation of the year
Building Blocks in a Foundation Pit - Prefabrication and Assembly Construction Technology for Metro Stations, China
- Product/Equipment Innovation of the year
Hard Rock Shield + Earth Pressure + Slurry three-mode TBM, China
- Beyond Engineering
Permanent Sprayed Concrete Linings on Mumbai Metro Line 3 Sahar Road crossover cavern, India
- Young Tunneller of the year
Cláudio David Cabral Dias, Portugal

Please note that the next ITA Tunnelling awards will take place in Italy. Date and place will be announced in the coming months.

Scooped by ITA-AITES #104, 1 November 2023

[Chinese-built underwater tunnel in Bangladesh opens to traffic](#)

[Delta cyclists have their own lane through Fraser River tunnel, council still wants a second exit | Canada](#)

[Gibraltar airport tunnel opens | UK - Spain](#)

[Two CREG TBMs Shortlisted for 2023 ITA Tunnelling Awards](#)

[New images reveal scale of work as part of £11m Queensway tunnel upgrade | UK](#)

[Bengaluru Metro: Tunnel boring machine Rudra completes its job, Phase-II tunnelling to end in March | India](#)

[Distillery to produce bourbon in underground mine | USA](#)

[Metro Tunnel to take first passengers in September 2024, ahead of schedule | New Zealand](#)

[Joint Brazil Federal and State funds to build a much needed tunnel in the Santos port | Brazil](#)

[Second tunnel-boring machine breaks through at future Oak-VGH Station | Canada](#)

Scooped by ITA-AITES #105, 15 November 2023

[Decongesting express highways: BMC plans underground network at 9 junctions | India](#)

[Work on Hudson tunnel project begins | USA](#)

[Massey tunnel replacement procurement moves to next step | Canada](#)

[Details of underground works for \\$14.2b project released | Australia](#)

[National bridge, tunnel engineering vocational skills competition held in Guiyang | China](#)

[How Berlin's underground car parks could heat thousands of homes | Germany](#)

[HS2 digital concrete test to cut carbon | UK](#)

[Underwater link set to spur growth | Bangladesh](#)

[Shetland tunnels could boost economy, report finds | UK](#)

[4-km micro tunnel to tackle drainage issues | India](#)



Internal-Ring-Propping (IRP) is nothing out of the ordinary and used on many projects to support the main tunnel while excavating a cross-passage. However, Balfour Beatty's IRP system for Hinkley Point C Offshore Connections, which sits just 20,000 mm under the Bristol Channel, is one of a kind.

In their presentation, James Long and Christoph Huber will give an overview of the Tunnel-Shaft Connections and share their journey through the requirements for the design, manufacturing, and installation phase of this unique propping-system at Hinkley Point C.

This is an in-person lecture; however, it can also be live-streamed online at: <https://www.youtube.com/live/SJZqxL-rUafw?si=nDV75TnqeBzdfryQ>

Scooped by ITA-AITES #106, 28 November 2023

[TRX tunnel to open on November 29, expected to reduce traffic into the city by 30% | Malaysia](#)

[ITA Tunnelling Awards winners revealed](#)

[HS2 reaches halfway mark in tunnelling crucial side passages under the Chilterns | UK](#)

[2023 a record year for Moscow railway transport Development | Russia](#)

[5 of the world's longest road tunnels under construction](#)

[Dubai to build new metro line at a cost of \\$4.9bln | United Arab Emirates](#)

[2nd Munich S-Bahn main line: Tender for the Eastern section until the end of 2023 | Germany](#)

[Government Advised To Leverage Underground Tunnelling In Developing Infrastructure](#)

[Athlone wastewater tunnelling work at The Strand and Burgess Park to begin in new year | Ireland](#)

[Melbourne Airport says underground rail link is cheaper solution | Australia](#)



BTS September Lecture: Hinkley Point C – Balfour Beatty Marine Works 20,000 mm Under the Sea : Connecting Tunnels Under the Bristol Channel

Speakers: Christoph Huber and James Long

Thursday 16th November 2023, Institution of Civil Engineers, 1 Great George Street, Westminster, London



BTSYM November Workshop Resin Injections - "to Do or not to Do?"

**Speakers: Kevin Stubberfield and
Kaduril Kirbria**

02 November 2023, [in-person] Institution of Civil Engineers, One Great George Street, Westminster, London



In this workshop, the CK-Tech Ltd team will go through a wide variety of injection chemicals/methods and pumps for use in the tunnelling and underground space environment. The products will include Acrylics, Polyurethane, Polyurea Silicate, Colloidal Silica and Epoxy as well as a possible demon-

stration of injecting Injection Hoses.

- Theoretical introduction to injection and overview of the current methods and chemicals available on the market – pros & cons
- Networking break
- Hands-on demonstration of various chemicals to get all participants involved.
- Discussion & Close

Registration Required: [Click to Register](#)

Evening lecture: Can tunnelling ever be sustainable?

Speaker: Negin Dolatraftarhaghighi

02 November 2023 [in-person] Institution of Civil Engineers, One Great George Street, Westminster, London



This talk will explore the significance of sustainability in tunnelling, beginning with an overview of the current state of sustainable tunnel practices encompassing design, construction, and demolition. We will also examine the initiatives of colleagues in the broader industry to draw valuable lessons. Finally, we will discuss the next steps for preserving and enhancing our existing sustainable practices.

<https://youtube.com/live/Ljw8e2osKnc>

Upcoming events

BTS December Lecture: A Christmas Jamboree of Tunnelling

Speakers: David Baggs, Siva Brashanthan, Mikel Goirigolzarri Martinez, Mark Shepherd, Ivor Thomas, Christina Trigle

14 December 2023, [in-person] Institution of Civil Engineers, One Great George Street, Westminster, London



This lecture will provide an update on Tunnelling works at TfL's 1.1km long twin-bore Silvertown Road Tunnel, constructed using a single 11.91 m diameter EPB TBM. The two bores are connected through 7No. SCL cross-passages, of which 4 require ground freezing.

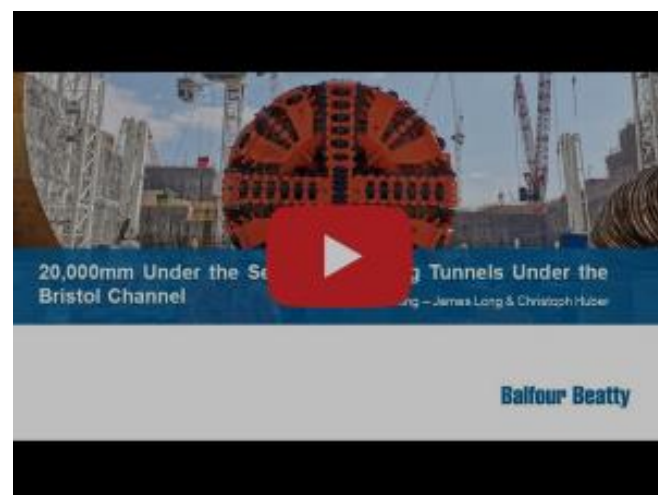
<https://www.youtube.com/watch?v=etBo-iIBQBq>

Upcoming events

- February 15th 2024 - BTSYM Evening Lecture
- March 21st 2024 - BTSYM Workshop
- April 11th 2024 - BTSYM Evening Lecture
- May 16th 2024 - BTSYM Workshop
- June 13th 2024 - BTSYM Evening Lecture
- September 12th 2024 - BTSYM Evening Lecture
- September 19th 2024 - BTSYM Workshop
- November 7th 2024 - BTSYM AGM and Evening Meeting
- November 18th 2024 - BTSYM Workshop
- December 4th 2024 - International Tunnelling Day and BTSYM XMAS Party

Past meetings

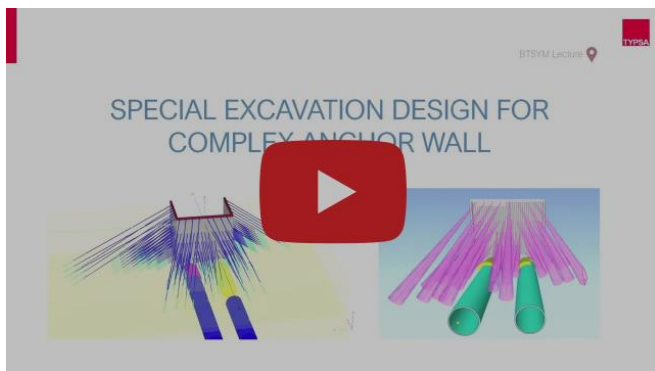
Missed a lecture? Don't forget to catch up on our YouTube Channel!



BTS November 2023 Lecture: Hinkley Point C – Marine Works: Connecting Tunnels Under the Bristol Channel



BTSYM AGM & Nov 2023 Lecture: Can tunnelling ever be sustainable?



BTSYM September 2023 Lecture: S&U update and Special excavation design for complex anchor wall



BTS Sep 2023 Lecture: Lessons Learnt from the MSV (PSV) Fire at HS2 Chiltern Tunnels



IGS 40th Anniversary Lecture Series 6-10 November 2023

Monday, November 6

- **7am Central Time (13:00 UTC):** Ask the Officer: IGS Vice President Edoardo Zannoni, with moderator Executive Director John Kraus
- **8am Central Time (14:00 UTC):** Jorge Zornberg on 'The power behind learning geosynthetics', with moderator Edoardo Zannoni



Edoardo Zannoni



Jorge Zornberg



John Kraus

[Register for Day 1](#)

Tuesday, November 7

- **7am Central Time (13:00 UTC):** David Shercliff and Kasia Zamara on '40 years saving the earth'
- **8am Central Time (14:00 UTC):** Ask the Officer: IGS Treasurer Jie Han, with moderator John Kraus



David Shercliff



Kasia Zamara



Jie Han

[Register for Day 2](#)

Wednesday, November 8

- **5pm China time (9:00a UTC):** Huabei Liu on 'Geosynthetics in China: history, manufacturing, and applications', with moderator John Kraus
- **12pm CET (11:00a UTC):** Ask the Officer: IGS Secretary General Laura Carbone, with moderator John Kraus
- **2pm South Africa time (12:00p UTC):** Jabulile Msiza, 'African case studies and opportunities', with moderator Laura Carbone



Huabei Liu



Laura Carbone



Jabulile Msiza

[Register for Day 3](#)

Thursday, November 9

- **10am Tokyo time (1:00a UTC):** Fumio Tatsuoka on 'Geosynthetic-reinforced soils structures for the last 40 years in Japan', with moderator Chungsik Yoo
- **11am KST time (2:00a UTC):** Ask the Officer:

IGS Past President Chungsik Yoo, with moderator Sam Allen



Fumio Tatsuoka



Chungsik Yoo

[Register for Day 4](#)

Friday, November 10

- **7am Central Time (13:00 UTC):** JP Giroud on 'Geosynthetics: The discipline beyond the products', with moderator Sam Allen
- **8am Central Time (14:00 UTC):** Ask the Officer: IGS President Sam Allen, with moderator John Kraus



JP Giroud



Sam Allen

Register for Day 5



JP Giroud's Keynote Lecture for IGS 40th Birthday Week Friday, 10 November 2023

Hear where it all started when the man who 'invented' geosynthetics gives the keynote lecture to mark 40 years of the IGS.

Geosynthetics pioneer J.P. Giroud will introduce his pre-recorded lecture, created exclusively for the anniversary celebrations, on Friday, November 10, taking place on the 40th anniversary of the Society's establishment in Paris on November 10, 1983.

Prof. Giroud's talk, 'Geosynthetics: The discipline beyond the products', will be the climax of a fascinating week of talks from experienced practitioners from around the world celebrating four decades of the IGS.

In his lecture, Dr. Giroud will revisit the first steps to the formation of the IGS, which he initiated in 1980, and analyse how and why the success of the IGS is linked to the success of geosynthetics. He will also discuss the future of the Society, including challenges the IGS and the geosynthetics discipline may have to face in the coming decades, and why the IGS is well placed to address them.

Join Dr. Giroud at 7am Central Time (1pm UTC), with moderator IGS President Sam Allen. Mr Allen will then take part in an 'Ask me anything' session as part of the daily '[Ask the Officer](#)' feature this week.

There is still time to submit your questions to Mr Allen. Send your questions to IGS Secretariat-Manager Elise Oatman at igssec@geosyntheticssociety.org, and these will be answered live at the session moderated by IGS Executive Director John Kraus.

News

Jorge Zornberg Speaks At Greece Conference For Ambassadors Program

Professor Jorge Zornberg joined delegates in Athens to give a lecture on behalf of the IGS Ambassadors Program. [Read More](#)

Double Bill Of Regional Insight For IGS 40th Birthday Week

November 1, 2023

Hear the fascinating journey of geosynthetics in two global regions at two talks for the IGS 40th Birthday Week Lectures. REGISTER HERE Dr. Huabei Liu, [Read More >](#)

'Japan And Geosynthetics' Explored For IGS 40th Birthday Week Lecture

November 2, 2023

Discover the impact of Japanese innovation on the development of geosynthetics when Dr. Fumio Tatsuoka gives his IGS 40th Birthday Week Lecture on Thursday, November [Read More >](#)

Book Now – JP Giroud's Keynote Lecture For IGS 40th Birthday Week

November 3, 2023

Hear where it all started when the man who 'invented' geosynthetics gives the keynote lecture to mark 40 years of the IGS. REGISTER HERE Geosynthetics [Read More >](#)

Could you be the LMNS Lecturer at EuroGeo8?

November 9, 2023

Nominations are invited to become the next LMNS Lecturer in the prestigious speaker series recognizing excellence in geosynthetics. The IGS European Regional Activities Committee (ERAC), [Read More >](#)

Geosynthetics International Reveals Best Papers For 2022

November 10, 2023

The IGS's official journal has announced its best papers for last year, featuring in Volume 29. Geosynthetics International's (GI) 'Best Geosynthetics International Paper for 2022' [Read More >](#)

Registration Launched For 5th GeoAmericas Conference

November 13, 2023

Enrolment is now open for flagship conference GeoAmericas 2024 in Toronto. The 5th Pan-American Conference on Geosynthetics will gather worldwide experts to discuss the appropriate [Read More >](#)

Focaccia, Friendships And Finals For IGS Young Members At 12th ICG

November 14, 2023

Coffee, collaboration and competition kept the next generation of engineers busy at the 12th International Conference on Geosynthetics in Rome. An active program for IGS [Read More >](#)

IGS Italy Delivers 'Unforgettable' 12th ICG

November 14, 2023

Attendees from 68 different countries descended on Rome for the 12th International Conference on Geosynthetics (12ICG) hosted by IGS Italy. The event welcomed some 1,000 [Read More >](#)

World Gathers For IGS 40th Birthday Week Lectures

November 16, 2023

IGS members and non-members from 54 countries toasted four decades of the Society in a celebratory week of virtual lectures. In a first to mark [Read More >](#)

'Hyper-specialized' expertise may be the way to go for the next generation of geosynthetic engineers, suggests Hamza Mridakh. Here, the chair of the IGS Young [Read More »](#)



BGA Fleming Award Event 2023

The Fleming Award is awarded annually by the BGA to commemorate the life and work of Dr Ken Fleming, who was chief engineer at Cementation Skanska Foundation.

The Fleming Award competition is held at an evening meeting of the BGA each December, with entries being invited during the autumn of each year. The award recognises excellence in the practical application of geotechnics in a project or a part of a project, and is awarded to project teams who have worked on geotechnical projects that have been substantially completed within the two years prior to the award date of December. Each Team is expected to comprise between 3 and 6 people, at least one of whom must be a member of the BGA.

05.12.2023, Telford Lecture Theatre, Institution of Civil Engineers, One Great George Street, London SW1P 3AA

The 2024 John Mitchell Lecture

The John Mitchell Award is presented annually by the ICE, based on a nomination from the BGA, for significant contributions in the field of geotechnical engineering. The award was instituted in 2008 in memory of the prominent geotechnical engineer John Mitchell of Arup, who was killed while observing piling works at a central London site in 1990.

The 2024 John Mitchell Lecture will be presented by Dr Barnali Ghosh on Creating added value through Adaptive Design – A Seismic Perspective

23.01.2024, Telford Lecture Theatre, Institution of Civil Engineers, One Great George Street, London SW1P 3AA

BGA Half-day Mini-Symposium on The Observational Method

The BGA Half-day Mini-Symposium on The Observational Method will include speakers Dr Tony O'Brien, Dr Ying Chen and Mr Danielle Fornelli.

The Observational Method (OM) in ground engineering is a continuous, managed, integrated process of design, construction control, monitoring and review that enables previously defined modifications to be incorporated during or after construction as appropriate (CIRIA R185, 1999). The OM has also been recognised by recent codes e.g. Eurocode. The OM process was introduced by Peck (1969) in his Rankine Lecture (Géotechnique, 19, No 2, 171 -187). The objective is to achieve greater overall economy without compromising safety. The method can be adopted from the inception of a project, or later if benefits are identified.

TC206 and TC220 are the Technical Committees of the Inter-

national Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) dedicated to the Observational Method and Field Monitoring in Geomechanics respectively.

This mini-symposium will present three areas that they are currently collaborating on:

- Conditions that enable use of OM (speaker Professor Tony O'Brien, Mott MacDonald).
- Real-time back analysis (speaker Dr Ying Chen, Typsa).
- Field monitoring to support the use of the OM (Daniele Fornelli, Geotechnical Observations).

A further objective of the mini-symposium is to allow those that have used the OM to share their experiences. Expressions of interest to do so, should be emailed to bga@ice.org.uk by 31st December 2023. Please include a title and a 200 word summary of what you will talk about. Those chosen to speak at the Symposium will be informed by 12th January 2024.

06.02.2024, Institution of Civil Engineers, One Great George Street, London SW1P 3AA



Λόγω της ομοιότητας του σήματος της New Zealand Geotechnical Society με το σήμα της ΕΕΕΕΓΜ και της αναφοράς μου στο Τεύχος 157, Δεκεμβρίου 2021 «Μήπως σας λέει κάτι το σήμα της New Zealand Geotechnical Society; Ποιος αντέγραψε; Εμείς ή αυτοί; Το δικό μας ισχύει από το 2010», η τέως Chair της New Zealand Geotechnical Society κα Ελένη Γκέλη έστειλε στον εκδότη τα ακόλουθα ηλεκτρονικά μηνύματα. Στη συνέχεια ακολουθεί η απάντηση του Εκδότη.

Κε Τσασσανίφο γεια σας.

Ελπίζω το email μου να σας βρίσκει καλά.

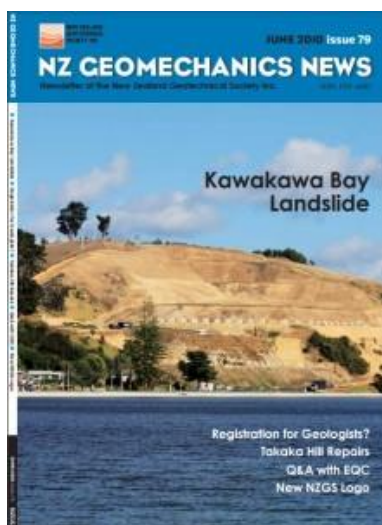
Γράφω για να σας παρακαλέσω να διορθώσετε μια παλιά δημοσίευση των νέων της ΕΕΕΕΓΜ, σχετική με εμένα, η οποία μόλις υπέπεσε στην αντίληψή μου και κατά τη γνώμη μου είναι ανοικτή σε παρερμηνεία και παρεξήγηση σχετική με εμένα και την επαγγελματική ηθική μου ακεραιότητα.

Στο τεύχος Νο 157 του Δεκεμβρίου 2021 (επισυναπτόμενο), στη σελ. 29 αναφέρεστε στο 21^ο συνέδριο του NZGS που έγινε τον Ιούνιο του 2021, ότι το οργάνωσα εγώ ως αντιπρόεδρος του NZGS και ότι το Δεκέμβριο του 2021 (ημερομηνία έκδοσης του τεύχους) ήμουν ήδη πρόεδρος του NZGS. Όλα αυτά είναι ακριβή και σας ευχαριστώ για τη αναφορά.

Στη συνέχεια όμως αναφέρεστε στην ομοιότητα του σήματος της ΕΕΕΕΓΜ με αυτό του NZGS και ότι το σήμα της ΕΕΕΕΓΜ χρονολογείται από το 2010. Όπως το διαβάζω το δημοσίευμα, κάνω εύκολα το συνειρμό ότι δεν αποκλείεται η καινούργια ελληνίδα πρόεδρος του NZGS να έχει ανάμιξη με πιθανή αντιγραφή του σήματος της ΕΕΕΕΓΜ, αφού παραλείψατε να εξετάσετε και να αναφέρετε από πότε το NZGS έχει αυτό το σήμα που μοιάζει με αυτό της ΕΕΕΕΓΜ.

Σας πληροφορώ ότι το σήμα του NZGS χρονολογείται επίσης από το 2010. Βρείτε επισυναπτόμενο το περιοδικό του NZGS, έκδοση Ιουνίου του 2010, που αναφέρεται στο τότε καινούργιο

γιο σήμα του NZGS και πως δημιουργήθηκε (με διαγωνισμό μεταξύ των μελών, κοιτάξε στις σελίδες 2 και 61. Το πλήρες τεύχος μπορείτε να το βρείτε εδώ <https://www.nzgs.org/libraries/nz-geomechanics-news-82>).



Το 2010 λοιπόν, που το NZGS υιοθέτησε το επίμαχο σήμα, εγώ ήμουν ακόμα στην Ελλάδα, εργαζόμουν για την Εγνατία Οδο Α.Ε. και δεν είχα καμία σχέση με το NZGS. Στη Νέα Ζηλανδία ήρθα το 2012 και στην επιτροπή του NZGS εξελέγη πρώτη φορά το 2016 ως απλό μέλος. Αντιπρόεδρος έγινα το 2019 και πρόεδρος το 2021.

Κατά συνέπεια, θα σας παρακαλούσα θερμά να ανασκευάσετε ή να ξεκαθαρίσετε την οποιαδήποτε σύνδεση αυτής της ομοιότητας των σημάτων με το όνομά μου. Το τεύχος της ΕΕΕΕΓΜ αποστέλλεται σε όλους τους Έλληνες γεωτεχνικούς μηχανικούς στην Ελλάδα και το εξωτερικό και δεν θα ήθελα να υπάρχει καμία περίπτωση το όνομά μου να συνδεθεί με οποιαδήποτε ενέργεια που να μπορούσε να χαρακτηριστεί ως μικροπρεπής ή αμφιλεγόμενης επαγγελματικής ηθικής. Θα σας παρακαλούσα πολύ να με ενημερώσετε όταν προβείτε στη διορθωτική δημοσίευση.

Κλείνω το μακρύ μήνυμά μου με την πεποίθηση ότι θα βρείτε το αίτημά μου λογικό και αναγκαίο και θα διορθώσετε την όποια περίπτωση παρανόησης στο αμέσως επόμενο τεύχος.

Σας ευχαριστώ πολύ.

Eleni Gkeli
Immediate Past Chair



Αγαπητή συνάδελφε,



Ουδμία πρόθεση είχα να σας θίξω με την αναφορά μου στην ομοιότητα του σήματος της NZGS με αυτό της ΕΕΕΕΓΜ, ούτε διανοήθηκα να κάνω τον συνειρμό «ότι δεν αποκλείεται η καινούργια ελληνίδα πρόεδρος του NZGS να έχει ανάμιξη με πιθανή αντιγραφή του σήματος της ΕΕΕΕΓΜ, αφού παραλείψατε να εξετάσετε και να αναφέρετε από πότε το NZGS έχει αυτό το σήμα που μοιάζει με αυτό της ΕΕΕΕΓΜ». Συναφώς, δεν γνώριζα πότε επελέγη το σήμα της NZGS,

δεδομένου ότι οι επαφές μου με την NZGS άρχισαν με την εκλογή σας στην επιτροπή της NZGS το 2016.

Μου έκανε εντύπωση, όμως, η ομοιότητα των δύο σημάτων. Και η αναφορά μου, την οποία επικαλείσθε «(σ.ε. *Μήπως σας λέει κάτι το σήμα της New Zealand Geotechnical Society; Ποιος αντέγραψε; Εμείς ή αυτοί; Το δικό μας ισχύει από το 2010*)» είναι ερωτηματική για το ποιος αντέγραψε (το 2010 ήταν λάθος αντί του ορθού 2007) και όχι ρητή ότι η NZGS μας αντέγραψε.

Σας ενημερώνω ότι το σήμα της ΕΕΕΕΓΜ χρησιμοποιήθηκε για πρώτη φορά στο περιοδικό μας 15 χρόνια πριν από την αναφορά μου τον Δεκέμβριο 2021 (στο Τεύχος Αρ. 8, Απριλίου 2007) και σχεδιάστηκε από την διαφημιστική εταιρεία της συζύγου του μακαρίτη Πάνου Παπακυριακόπουλου 4 περίπου χρόνια πριν από το σήμα της NZGS. Συνεπώς, η υπόθεση ότι η NZGS εμπνεύστηκε το δικό της από το δικό μας σήμα θα ήταν εύλογη, δεδομένου ότι η κυκλοφορία του περιοδικού της ΕΕΕΕΓΜ είναι διεθνής. Ίσως η κα Jane Bennett, η οποία σχεδίασε το σήμα της NZGS, να είχε δει το σήμα της ΕΕΕΕΓΜ και να εμπνεύστηκε από αυτό για την δική της πρόταση.

Δεν έχω καμία αντίρρηση να δημοσιεύσω το μήνυμά σας στο επόμενο τεύχος του περιοδικού της ΕΕΕΕΓΜ (Νοεμβρίου 2023), ακολουθούμενο από την δική μου απάντηση. Παρακαλώ να με ενημερώσετε.

Με συναδελφικούς χαιρετισμούς,

Χρήστος Τσατσανίφος

Αγαπητέ Κε Τσατσανίφο

Σας ευχαριστώ για την απάντηση και τη διευκρίνιση.

Είμαι σίγουρη ότι οι προθέσεις σας ήταν και είναι καλές. Αλλά υπάρχουν και πολλοί κακοπροαίρετοι και για αυτούς δεν θα ήθελα να υπάρχει καμία σκιά.

Επίσης δεν αμφισβητώ την ομοιότητα των σημάτων ούτε την πιθανότητα το νεοζηλανδικό να εμπνεύστηκε από το ελληνικό εκείνη την εποχή που υιοθετήθηκε (τι τιμή για το ελληνικό!). Απλά ήθελα να είναι απολύτως ξεκάθαρο ότι εγώ δεν έχω καμία σχέση με αυτό. Δεσμεύομαι ότι θα ενημερώσω την επιτροπή του NZGS για τη συζήτησή μας.

Συμφωνώ να δημοσιεύσετε τη συνομιλία μας

Με εκτίμηση

Eleni Gkeli
Immediate Past Chair



Το θέμα θεωρείται λήξαν και από τις δύο πλευρές.



Access the RIC2023 Proceedings now!



The [Rocscience International Conference 2023 proceedings](#) are now published and can be accessed by all.

Rocscience hosted RIC2023 to celebrate the industry's evolution, emphasizing the integration of various technologies and innovations. This synergy was a focal point, showcasing how these advancements address geotechnical engineering challenges. The conference buzzed with meaningful discussions from 4 keynotes, valuable insights from 68 live presentations and networking sessions.

Explore the wealth of knowledge and diverse perspectives shared at RIC2023 from the open-access link to the proceedings below.

[Access Conference Proceedings](#)

ΔΙΑΚΡΙΣΕΙΣ ΕΛΛΗΝΩΝ ΓΕΩΤΕΧΝΙΚΩΝ ΜΗΧΑΝΙΚΩΝ

Ο Γεώργιος Γκαζέτας στην Ωκεανία

Ο πρώην Πρόεδρος της ΕΕΕΕΓΜ και Ομότιμος Καθηγητής ΕΜΠ Γιώργος Γκαζέτας προσεκλήθη από τις Australian και New Zealand Geotechnical Societies να παρουσιάσει τις ακόλουθες διαλέξεις και short courses στην Αυστραλία και στην Νέα Ζηλανδία:



Benefits of Unconventional Seismic Foundation Design SPEAKER: Professor George Gazetas



Seismic geotechnical practice influenced from “pseudo-static” way of thinking, has extended to soil–foundation systems the “capacity design” principle, demanding that failure mechanisms (“plastic hinging”) should occur only in the above-ground structural members, with over-designed foundations limiting the (below ground surface) soil and footing response to quasi-linear levels. The lecture explains how “pseudo-static” analyses may grossly underestimate the true dynamic seismic behaviour, and presents the benefits of drastically changing this established seismic philosophy. Emphasis is given to “foundation rocking and soil failure” of tall slender structures, the foundations of which are deliberately under-designed to ensure that, during strong shaking, substantially nonlinear and inelastic soil–foundation interaction takes place: uplifting and sliding of footings from the supporting soil, along with mobilization of bearing-capacity failure mechanisms in the soil. Thanks to the kinematic nature of seismic shaking, such unconventional response limits the accelerations transmitted up into the superstructure, while its cyclic nature generates a significant amount of damping in the soil; exceedance of the ultimate capacity acts (only) momentarily and alternately. These phenomena contribute towards decreased response intensity and acceptable levels of residual deformations (displacements and rotations). Deformations are further diminished by the beneficial contribution of gravity to re-centering the foundation.

ABOUT THE SPEAKER

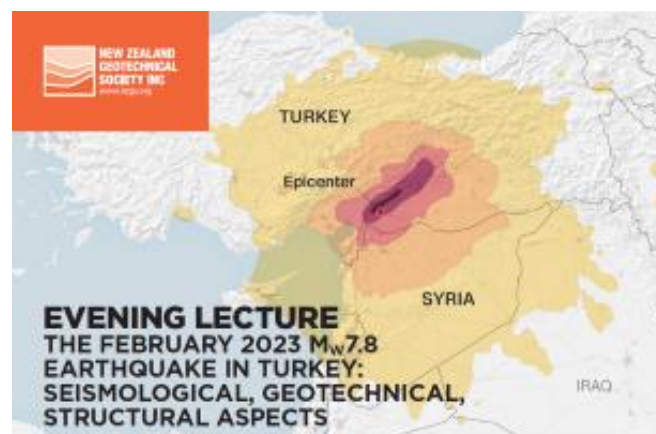
George Gazetas served as Professor of Geotechnical Engineering at the National Technical University of Athens (Greece) for more than 30 years, following an academic career in the US, where he taught at a number of Universities. His research interests have focused on Soil Dynamics and Soil-Structure Interaction. Much of his research has been inspired by observations after destructive earthquakes. An active writer and teacher, he has been a consultant on a variety of geotechnical (mainly seismic) problems. He received a number of awards for his research (from the American Society of Civil Engineers, the Institution of Civil Engineers, the International Society of Soil Mechanics and Geotechnical Engineering, as well as from Institutions in Greece, India, and Japan). He has delivered the prestigious “Coulomb”, “Ishihara”, “Kenneth Lee”, and “Maugeri” Lectures. In 2015 he received the Excellence in University Teaching in Greece Award. He was honored as the 59th Rankine Lecturer, 2019, in London, and as a GeoLegend by ASCE’s Geotechnical Institute in the GeoStrata magazine, 2022.

WHEN Thursday 16 November 2023

TIME 5:30 pm – 7:30 pm

WHERE: University of Sydney, Farrell Lecture Theatre, Building J02, Faculty of Engineering, Camperdown NSW

EVENT CONTACT: For more information, please contact Prof. David Airey via david.airey@sydney.edu.au.



SUMMARY

NZGS is excited to share the news that Professor George Gazetas from the National Technical University of Athens will be giving an evening lecture in Wellington and online in November 2023. This lecture will cover seismological, geotechnical, structural aspects of the February 2023 Mw7.8 Earthquake in Turkey. Every major earthquake offers important lessons in engineering and seismology. Some derive from new findings; most only reinforce already known facts and validate or refute existing methods. The February Earthquakes of the Eastern Anatolian Fault in Turkey offer an unprecedented number of quality ground motions recorded essentially on top of a major (Mw7.8) fault rupture. The Lecture begins with the seismological aspects of the event, and illustrates the potential role of “supershear” rupture on the intensity and key characteristics of the ground motions. The recorded acceleration and velocity time histories are analysed to see how they reconcile with the nonuniform distribution of damage in the cities of Kahramanmaraş and Antakya (former Antioch). The role of “soil amplification” in causing such a nonuniformity is investigated. Then soil induced failures in the town of Golbasi are portrayed: they include settling, tilting and toppling of buildings due to bearing capacity failures in the foundation, and extensive liquefaction-induced lateral spreading towards the lake. The liquefaction-triggered subsidence in the port city of Iskenderun is highlighted and explained, while the emergence of fault rupture on the ground

surface along the 300m-long fault is shown briefly. Finally, structural failures are examined photographically, and key pathologies of buildings are demonstrated.

THE LECTURE WILL BE OF INTEREST TO:

- Geotechnical engineers involved in the design of foundations
- Structural engineers designing low, mid and high rise buildings
- Graduate civil engineering students (geotechnical and structural)
- University researchers
- Officials dealing with enforcing application of codes.

PRESENTER

George Gazetas has served as Professor of Geotechnical Engineering at the National Technical University of Athens (Greece) for more than 30 years, following an academic career in USA. His interests have focused on Soil Dynamics, Earthquake Geotechnical Engineering, and Soil-Foundation Interaction. Much of his research was inspired by observations after destructive earthquakes. An active writer and teacher, he has been a geotechnical consultant and has participated in seismic code drafting committees. Recipient of several international awards, he has delivered prestigious lectures, including the "Coulomb", "Ishihara", "Kenneth Lee", and "Michele Maugeri" Lectures, and received the "Excellence in University Teaching in Greece Award". He was honored by BGA as the 59th Rankine Lecturer, 2019, in London, and as a GeoLegend by ASCE's Geo Institute in 2022.

WHERE AND WHEN

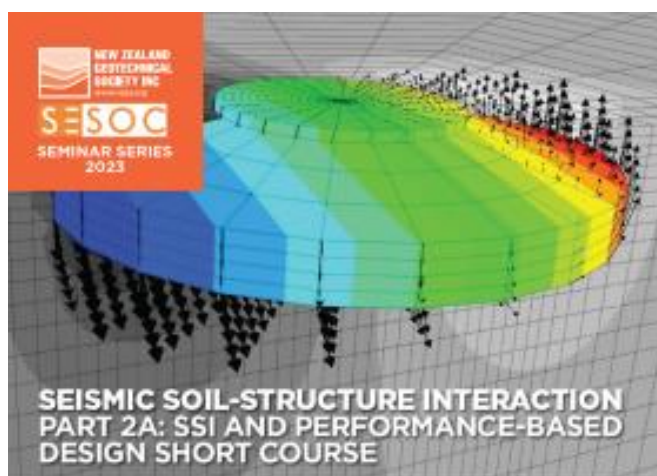
WELLINGTON

Thursday, 23rd November 2023
Refreshments will start at 4.45pm
Presentation will start at 5.15pm
Engineering New Zealand
Te Ao Rangahau,
Level 6/40 Taranaki Street,
Wellington 6011
and online

TO REGISTER

The event is free for all. It will be held **online** and **in person** in Wellington.

Click on the link to register <https://www.nzgs.org/events/>



SUMMARY

NZGS, with support from SESOC, is excited to share the news that Professor George Gazetas from the National Technical

University of Athens will be giving earthquake engineering courses in New Zealand in November 2023. This course will cover fundamental aspects of geotechnical earthquake engineering with an emphasis on foundation performance. It will highlight methods of analysis and post-seismic observations in the field.

AIM OF THE COURSE

The primary objective of these courses is to provide a comprehensive overview of fundamental concepts and solutions within the field of geotechnical earthquake engineering. The course will also spotlight recent advancements that have emerged from experiments and observations. Notably, the course will focus on essential aspects of geotechnical earthquake engineering, placing special emphasis on foundation performance. To underline the importance of collaboration between structural and geotechnical engineers in this context, it's crucial to emphasize how a strong partnership between these two disciplines is the linchpin of earthquake-resistant building design. Structural engineers rely heavily on geotechnical data and insights to design foundations and structural systems that can withstand seismic forces. Geotechnical engineers, on the other hand, need a deep understanding of the expected building loads and structural requirements to assess the site's soil conditions accurately.

Throughout these courses, participants will gain insights into various methods of analysis and post-seismic field observations. These experiences will equip them with the skills needed to collaborate effectively across disciplines.

THE COURSE WILL BE OF INTEREST TO:

- Geotechnical engineers involved in the design of foundations
- Structural engineers designing low, mid and high rise buildings
- Graduate civil engineering students (geotechnical and structural)
- University researchers
- Officials dealing with enforcing application of codes.

WHERE AND WHEN

AUCKLAND 20th November 2023 **University of Auckland, 20 Symonds St, Level 4, Rooms: 405-430**

WELLINGTON 24th November 2023 **Engineering New Zealand Te Ao Rangahau, Level 6/40 Taranaki Street, Wellington 6011**

CHRISTCHURCH 27th November 2023 **University of Canterbury, School of Engineering, 69 Croyke Road, Room E14, Christchurch**

QUEENSTOWN 30th November 2023 **ENGEO Ltd, 24 Rees Street, Queenstown 9300**

SHORT COURSE: EARTHQUAKE GEOTECHNICS AND SEISMIC SOIL-FOUNDATION-STRUCTURE INTERACTION

COURSE OUTLINE

1. Introduction to geotechnical earthquake engineering
2. NZ perspective (presented by local engineers)
3. Recent trends in Soil-Structure Interaction
4. Design and assessment of embedded structures
5. Seismic loading on piles: analysis and observations
6. Conclusion

ΠΡΟΣΕΧΕΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΚΔΗΛΩΣΕΙΣ

Για τις παλαιότερες καταχωρήσεις περισσότερες πληροφορίες μπορούν να αναζητηθούν στα προηγούμενα τεύχη του «περιοδικού» και στις παρατιθέμενες ιστοσελίδες.

1st SLRMES Conference on Rock Mechanics for Infrastructure and Geo-Resources Development - an ISRM Specialized Conference, Colombo, Sri Lanka, December 2-7, 2023, www.slrmes.org

9th International Symposium on Roller Compacted Concrete Dams and Cemented Material Dams, 4th-8th December, 2023, Guangzhou, China, www.chincold-smart.com/meetings/rcc2023/index.html

GEOTEC HANOI 2023 The 5th International Conference on Geotechnics for Sustainable Infrastructure Development, December 14-15, 2023 - Hanoi, Vietnam, <https://geotechn.vn>

9th International Symposium on RCC Dams and CMDs December, 2023, Guangzhou, China, www.chincold-smart.com/meetings/rcc2023

ICSGE 16th International Conference on Structural and Geotechnical Engineering, 27 – 28 December 2023, New Cairo, Egypt, <https://eng.asu.edu.eg/icsge>

ISGHS 2024 International Symposium on Geotechnical Aspects of Heritage Structures, 14-16 Feb 2024, Tiruchirappalli, India, www.isghs2024.in, www.igstrichy.org

IEMTA Southeast Asian Conference and Exhibition on Tunneling and Underground Space 2024 (SEACETUS2024), 05 - 07 March 2024, Kuala Lumpur, Malaysia, <https://submit.confday.com/conf/seacetus2024>



7th International Conference Series on Geotechnics, Civil Engineering and Structures (CIGOS) April 4-5, 2024, Ho Chi Minh City, Vietnam

Organiser: Association of Vietnamese Scientists and Experts (AVSE Global) and University of Architecture Ho Chi Minh City (UAH)

Contact person: cigos2024@sciencesconf.org
Email: cigos2024@sciencesconf.org



Session NH9.6 Natural hazards' impact on natural and built heritage and infrastructure in urban and rural zones

14–19 April 2024, Vienna, Austria & Online

<https://meetingorganizer.copernicus.org/EGU24/session/48709>

The session aims to gather views on disaster risk management affecting built and natural heritage as a consequence of natural and human-made hazards. The whole disaster risk management cycle is covered in a sustainability and resilience approach, from preparedness and mitigation to emergency and rebuild. Both contributions addressing methods and contributions describing lessons learned from case studies are welcome. Particularly welcome are contributions addressing digital methods to map the impact of these hazards on heritage, at both object scale and also at the larger neighbourhood, urban and regional scale, including the interaction between these levels. As such, possible approaches include on how the civil protection and urban planners use this knowledge for decisions. Apart of addressing decision stakeholders per se, the development of decision systems with the integrated scope of addressing (landscape) architectural and archaeological heritage using digital methods are particularly welcome.

We would like to invite potential abstract authors to submit a full paper to the special issue: NHESS – Special issue – Natural hazards' impact on natural and built heritage and infrastructure in urban and rural zones (https://nhess.copernicus.org/articles/special_issue1252.html).



World Tunnel Congress 2024 19 to 25, April, 2024, Shenzhen China, www.wtc2024.cn

ICGE'24 International Conference of Geotechnical Engineering, April 25-27, 2024, Hammamet, Tunisia www.icge24.com

GEO AMERICAS 2024 5th Pan-American Conference on Geosynthetics Connecting State of the Art to State of Practice April 28 – May 1, 2024, Toronto, Canada, www.geoamericas2024.org

IFCEE 2024 International Foundation Congress and Equipment Expo, May 7 –10, 2024, Dallas, USA <https://web.cvent.com/event/c42dd622-dd91-409f-b249-2738e31c9ef5/summary>

8th International Conference on Earthquake Geotechnical Engineering (8ICEGE), 7-10 May, 2024 Osaka, Japan, <https://confit.atlas.jp/guide/event/icege8/top?lang=en>

GeoShanghai 2024 International Conference on Geotechnical Engineering, May 26 – 29, 2024, Shanghai, China, www.geo-shanghai.org

2nd annual Conference on Foundation Decarbonization and Re-use, May 28-30 2024, Amsterdam, The Netherlands, <https://foundationreuse.com>

IS-Macau 2024 11th International Symposium of Geotechnical Aspects of Underground Construction in Soft Ground, June

14-17, 2024, Macao SAR, China, <https://is-macau2024.skli-otsc.um.edu.mo>

ISC'7 7th International Conference on Geotechnical and Geophysical Site Characterization "Ground models, from big data to engineering judgement", June 18-21, 2024, Barcelona, Spain, <https://isc7.cimne.com>



28th European Young Geotechnical Engineers Conference 2024

25 to 29 June 2024, Demir Kapija, North Macedonia
<https://eygec2024.net>

The Macedonian Association for Geotechnics (MAG) is organizing the 28th European Young Geotechnical Engineers Conference (EYGEC 2024) on 25-29.6.2024 in the town of Demir Kapija. The format of the event is such that all member societies of the ISSMGE from the European continent are invited to nominate prospective MSc and PhD study candidates, as well as young engineers, to present their work and gather valuable knowledge by close interaction with their peers from throughout Europe. Most of the participants of past EYGECs are now leading force in geotechnical engineering, not only in Europe. MAG is looking forward to welcoming all participants for a memorable EYGEC 2024.

Contact

Contact person: Ms. Elena Angelova
Address: Blvd. Partizanski odredi No.24, Skopje
Email: maq@gf.ukim.edu.mk



WCEE2024 18th World Conference on Earthquake Engineering, June 30 - July 5, 2024, Milan, Italy, www.wcee2024.it

WCEE2024 18th World Conference on Earthquake Engineering, June 30 - July 5, 2024, Milan, Italy, www.wcee2024.it / Session SHR-7: When science meets industry: advances in engineering seismology stemming from engineering practice, olga.ktenidou@gmail.com

3rd ICPE 2024 Third International Conference on Press-in Engineering, 3-5 July 2024, Singapore, <https://2024.icpe-ipa.org>

ICEC2024 SECOND INTERNATIONAL CONFERENCE ON EARTHEN CONSTRUCTION, 8-10 July 2024, Edinburgh, United Kingdom, <https://icec2024.eng.ed.ac.uk>, <https://icec2024.sciencesconf.org>

IS Landslides 2024 International Symposium on Landslides "Landslides across the scales: from the fundamentals to engineering applications" & IS Rock Slope Stability 2024, July 7-12th, 2024, Chambéry, France, www.isl2024.com

EUROCK 2024 ISRM European Rock Mechanics Symposium New challenges in rock mechanics and rock engineering July 15-19, 2024, Alicante, Spain, www.eurock2024.com

ECSMGE 24 XVIII European Conference on Soil Mechanics and Geotechnical Engineering, 26-30 August 2024, Lisbon, Portugal, www.ecsmge-2024.com



3ο Διεθνές Συνέδριο Αρχαίας Ελληνικής και Βυζαντινής Τεχνολογίας Αθήνα 2024 www.edabyt.gr

Μετά το ουσιαστικό πέρας της πανδημίας, το Δ.Σ. της Εταιρείας Διερεύνησης της Αρχαιοελληνικής και Βυζαντινής Τεχνολογίας (ΕΔΑΒuT) ανακοινώνει την διοργάνωση του **3ου Διεθνούς Συνεδρίου Αρχαίας Ελληνικής Τεχνολογίας** στην Αθήνα, τον Νοέμβριο 2024, από κοινού με το Κέντρο Διάδοσης Επιστημών και Μουσείο Τεχνολογίας ΝΟΗΣΙΣ της Θεσσαλονίκης.

Στόχος του Συνεδρίου είναι η παρουσίαση επιστημονικών εργασιών που αφορούν την Αρχαία Ελληνική Τεχνολογία, από τις απαρχές μέχρι και τους Βυζαντινούς χρόνους, και η ανάδειξη των πρόσφατων πορισμάτων της διεθνούς επιστημονικής έρευνας σ' αυτόν τον τομέα.

Το Συνέδριο φιλοδοξεί να προσελκύσει τη συμμετοχή Αρχαιολόγων, Ιστορικών, Μηχανικών, Χημικών, Τεχνολόγων και άλλων επιστημόνων και εκπαιδευτικών, από ελληνικά και ξένα Πανεπιστήμια, Ερευνητικά Κέντρα και Υπηρεσίες, που ασχολούνται με την έρευνα και την μελέτη της Αρχαίας Ελληνικής και Βυζαντινής Τεχνολογίας.

Οργάνωση

- Εταιρεία Διερεύνησης Αρχαιοελληνικής και Βυζαντινής Τεχνολογίας (ΕΔΑΒuT)
- Κέντρο Διάδοσης Επιστημών και Μουσείο Τεχνολογίας ΝΟΗΣΙΣ, Θεσσαλονίκη

Διαδικτυακή μετάδοση του Συνεδρίου στην έδρα του ΝΟΗΣΙΣ.

Παράλληλες εκδηλώσεις

Συνεχής προβολή των σχετικών ταινιών της ΕΔΑΒuT και του ΝΟΗΣΙΣ, σε κατάλληλο χώρο, βάσει προγράμματος.

Συμμετοχή

Αιτήσεις συμμετοχής στέλνονται στην Γραμματεία του Συνεδρίου συμπληρώνοντας το δελτίο συμμετοχής το οποίο επισυνάπτεται σ' αυτήν την ανακοίνωση. Παράκληση οι αιτήσεις να σταλούν μέχρι τις 20 Ιανουαρίου 2024, μαζί με το αποδεικτικό καταβολής της συνδρομής στο Συνέδριο. Η συνδρομή συμμετοχής ορίζεται σε 50 Ευρώ.

Οι πληρωμές κατατίθενται στον Τραπεζικό Λογαριασμό, IBAN: GR62 0160 0660 0000 0008 5153 846, στην Τράπεζα Αττικής, Δικαιούχος Αστική Εταιρεία ΕΔΑΒuT. Ο καταθέτης βαρύνεται με τα έξοδα της τράπεζάς του. Η αναγραφή αιτιολογίας είναι απαραίτητη και πρέπει να περιλαμβάνει με κεφαλαία γράμματα το ονοματεπώνυμο του καταθέτη και την ένδειξη ΣΥΝΕΔΡΙΟ ΑΕΒΤ. Το κόστος της εγγραφής περιλαμβάνει παρακολούθηση των εργασιών του Συνεδρίου, καθώς και το δικαίωμα παρουσίασης εργασίας που θα έχει υποβληθεί και εγκριθεί όπως προβλέπεται πιο κάτω. Περιλαμβάνει επίσης προσφορά καφέ στα διαλείμματα, καθώς και παραλαβή τεύχους των περιλήψεων πριν την έναρξη του Συνεδρίου και Πρακτικά των άρθρων μετά την λήξη, και τα δύο σε ηλεκτρονική μορφή.

Σημαντικές ημερομηνίες

- Αποστολή αίτησης συμμετοχής έως 20 Ιανουαρίου 2024
- Αποστολή περίληψης (μιας σελίδας περίπου) έως 29 Φεβρουαρίου 2024
- Έγκριση περιλήψεων έως 30 Μαρτίου 2024
- Αποστολή πλήρους κειμένου και οριστικής περίληψης έως 20 Ιουνίου 2024
- Τελική έγκριση άρθρων έως 20 Ιουλίου 2024

Πρακτικά

Θα εκδοθούν σε ψηφιακή μορφή πλήρη Πρακτικά των άρθρων που παρουσιάστηκαν στο Συνέδριο.

Σε επόμενη ανακοίνωση, πριν το τέλος Μαρτίου 2024, θα δοθούν σχετικές προδιαγραφές και υποδείγματα.

ΕΝΟΤΗΤΕΣ 1-3: Τεχνολογίες

- Λατομική
- Ξυλουργική
- Κεραμουργία
- Μεταλλευτική, Μεταλλουργία, Μεταλλοτεχνία
- Οικοδομική, Γεωτεχνική, Γεφυροποιία
- Υδραυλική, Λιμενικά, Διώρυγες
- Μηχανολογία (ανυψωτικά, αντλίες, πιεστήρια, άμαξες)
- Ναυπηγική
- Τηλεπικοινωνίες
- Αγροτική τεχνολογία, οινοποιία, έπιπλα, κλπ
- Υφαντική
- Τεχνολογία και Αθλητισμός
- Τεχνολογία και Τέχνη (μουσική, θέατρο, κλπ)
- Στρατιωτική Τεχνολογία
- Μετρητικά Όργανα, Μετρολογία
- Ιατρική Τεχνολογία
- Χημεία και Υαλουργία
- Αυτοματοποιητική
- Πηγές ενέργειας
- Τυποποίηση, έλεγχος ποιότητας

ΕΝΟΤΗΤΑ 4: Τεχνολογία και κοινωνία

- Τεχνολογία και οικονομία (νόμισμα, γραφή, δουλκοκτησία)
- Περιβαλλοντικός προβληματισμός στην Αρχαία Ελλάδα
- Η τεχνολογία στον μύθο και την θρησκεία
- Βιογραφίες Αρχαίων Μηχανικών

- Κινητικότητα και πολιτισμική διάδραση
- Το Βυζάντιο και ο Αραβικός κόσμος

Γραμματεία του Συνεδρίου

Οι αιτήσεις συμμετοχής, οι περιλήψεις και τα κείμενα των ανακοινώσεων, καθώς και κάθε άλλο έντυπο υλικό θα αποστέλλεται ηλεκτρονικά μέσω e-mail στη Γραμματεία του 3ου Διεθνούς Συνεδρίου, στις διευθύνσεις:

edabyt.tee@gmail.com και edabyt.tee.1@gmail.com
Ιστοσελίδα ΕΔΑΒuT: www.edabyt.gr



ISIC 2024 4th International Conference of International Society for Intelligent Construction, 10 – 12 September 2024, Orlando, United States, www.is-ic.org/conferences/2024-isic-international-conference

NGM 2024 19th Nordic Geotechnical Meeting, 18th - 20th of September 2024, Göteborg, Sweden, www.ngm2024.se

ISRM International Symposium 2024 and 13th Asian Rock Mechanics Symposium (ARMS13), 22 to 27 September 2024, New Delhi, India, <https://arms2024.org>

IS-Grenoble 2024 Geomechanics from Micro to Macro, September 23-27, 2024, Grenoble, France, <https://is-grenoble2024.sciencesconf.org>



September 25-27, 2024, Athens
www.eemf.gr

The International Symposium on Dams and Earthquakes will take place in Athens on September 25th-27th, 2024 and is co-organized by the European Working Group on Dams and earthquakes of the ICOLD European Club (EURCOLD) with the GCOLD - Greek Committee on Large Dams.

Themes

- Earthquake hazard parameters (e.g., ground motion, surface fault movements) for dam safety evaluation
- Measurement of seismic and post-seismic response of concrete and embankment/tailings dams
- Experimental behavior and modeling of dam materials under cyclic loading
- Seismic performance of concrete dams and their impacted area. Case histories, analysis & validation, design
- Seismic performance of embankment/tailings dams and their impacted area. Case histories, analysis & validation, design
- Earthquake safety evaluation of safety-critical dam elements (e.g. spillways, low-level outlets)

The deadline for abstract submission is the 15th of December, 2023.



5th European Conference on Physical Modelling In Geotechnics

02 to 04 October 2024, Delft, Netherlands
<https://tc104-issmge.com/ecpmg-2024>

Deltares and TU Delft are delighted to welcome you to the 5th European Conference on Physical Modelling in Geotechnics (ECPMG 2024) in the historic city of Delft, Netherlands, from 2nd to 4th October 2024

The conference aims to provide an up-to-date overview of the latest developments in multi-scale modelling within the following themes:

- **Scaling principles and fundamentals**
- **New facilities, new equipment, and measuring techniques**
- **Onshore and offshore foundation systems**
- **Geotechnical infrastructure**
- **Energy geo-structures and climate effects**

The three-day conference will take place on the Deltares campus, which is a mere 10-minutes drive from the Delft city centre and within walking distance from TU Delft.

Technician's workshop

The technician's workshop will happen in combination to the conference themed sessions, expecting contributions to the session on new facilities, new equipment, and measuring techniques. Moreover, there will be tours and forums for exchanging experiences with measuring techniques and preparation methods. These forums are open to contributions from the participants, welcoming proposals on discussion topics.

Please, contact the organisation committee here
dr. Suzanne van Eekelen & dr. Miguel Cabrera
organisation.ecpmg24@gmail.com



XVIII African Regional Conference on Soil Mechanics and Geotechnical Engineering, 06 ÷ 09 October 2024, Algiers, Algeria, <https://algeos-dz.com/18ARC.html>

RMCC2023 1st International Rock Mass Classification Conference "Rock Mass Classification meets the Challenges of the 21st Century", 30-31 October 2024, Oslo, Norway, www.rmcc2024.com

PANAMGEO CHILE 2024 17th Pan-American Conference on Soil Mechanics and Geotechnical Engineering, 12-17 November 2024, La Serena, Chile, <https://panamge-ochile2024.cl>

ICTG 2024 5th International Conference on Transportation Geotechnics 2024 "Sustainable and Evolving Technologies for Urban Transport Infrastructure", 20 – 22 November 2024, Sydney, Australia www.ictg2024.com.au

World Tunnel Congress 2025 "Tunnelling into a sustainable future – methods and technologies", 9-15 May 2025, Stockholm, Sweden, www.wtc2025.se



Eurock 2025 ISRM European Rock Mechanics Symposium Expanding the underground space - future development of the subsurface - an ISRM Regional Symposium 16–20 June 2025, Trondheim, Norway

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Telephone +47 22 94 75 00
Address C/O Fredrik Stray, TEKNA, PO box 2312 Solli, Oslo, Norway



21st International Conference on Soil Mechanics and Geotechnical Engineering 14 – 19 June 2026, Vienna, Austria

Organisers:

Austrian Geotechnical Society and Austrian Society for Geomechanics

Contact person: Prof. Helmut F. Schweiger

Email: helmut.schweiger@tugraz.at



ISFMG 2026

**12th International Symposium on
Field Monitoring in Geomechanics
August 2026, Indian Institute of Technology Indore,
India**
<https://sites.google.com/view/isfm2026/home>

We are thrilled to announce the upcoming symposium, which will be held in 2026 and will bring together leading experts in the field of geomechanics from around the world. The ISFMG symposium provides a unique platform for sharing knowledge, experience, and new research findings in the area

of geomechanics field monitoring.

The main theme of the symposium is "Advances in Field Monitoring for Geomechanics". The symposium will cover various aspects of geomechanics, including new developments in instrumentation, data acquisition and processing, and the application of monitoring techniques in geotechnical and geo-environmental engineering.

The symposium will also include keynote lectures, technical sessions, and poster presentations, providing ample opportunity for participants to learn from and engage with leading researchers and practitioners in the field.

The International Symposium on Field Monitoring in Geomechanics (ISFMG) 2026 is a highly anticipated event that brings together experts in the field of geomechanics from all over the world. This symposium aims to provide a platform for the exchange of knowledge and ideas related to geomechanics field monitoring.

The symposium will consist of keynote lectures, technical sessions, and poster presentations, allowing participants to learn from and engage with leading researchers and practitioners in the field. The technical sessions will cover a wide range of topics, including field instrumentation and monitoring techniques, geomechanics modeling, and case studies in geotechnical and geo-environmental engineering.

ISFMG 2026 is an excellent opportunity for researchers, academics, and practitioners to network, exchange knowledge, and showcase their research findings. Participants will gain insight into the latest advancements in the field of geomechanics and have the opportunity to present their own work to an international audience.

Why attend?

There are several reasons why attending the International Symposium on Field Monitoring in Geomechanics (ISFMG) 2026 can be a valuable experience for researchers, academics, and practitioners:

1. Stay up to date on the latest advancements: The symposium provides an opportunity to learn about the latest advancements and research in the field of geomechanics, including new developments in instrumentation, data acquisition and processing, and the application of monitoring techniques in geotechnical and geo-environmental engineering.
2. Network with peers and experts: The symposium provides a unique platform for participants to network and engage with leading researchers, practitioners, and peers in the field of geomechanics. It allows attendees to share knowledge, experiences, and best practices, as well as to establish new collaborations and partnerships.
3. Present and showcase your work: ISFMG 2026 offers participants the opportunity to present their research findings, case studies, and best practices in the field of geomechanics. This allows attendees to gain valuable feedback and insights from experts in the field and to showcase their work to an international audience.
4. Expand your knowledge and skills: The symposium provides a comprehensive program of technical sessions, keynote lectures, and poster presentations, covering a wide range of topics related to geomechanics. This allows participants to expand their knowledge and skills in the field and to gain insights into the latest research and best practices.
5. Gain recognition and visibility: Attending and presenting at ISFMG 2026 can increase visibility and recognition for participants' work and institutions. It also provides an opportunity to publish research findings in peer-reviewed

publications, which can contribute to participants' career and professional development.

Overall, attending the International Symposium on Field Monitoring in Geomechanics (ISFMG) 2026 can be an excellent opportunity to stay up to date on the latest advancements, network with peers and experts, present and showcase your work, expand your knowledge and skills, and gain recognition and visibility in the field of geomechanics.

Who should attend?

The International Symposium on Field Monitoring in Geomechanics (ISFMG) 2026 is an interdisciplinary event that is relevant to a wide range of professionals, including researchers, academics, engineers, consultants, and practitioners.

Specifically, the symposium is designed for professionals who are interested in the field of geomechanics and related areas, such as geotechnical and geo-environmental engineering. This includes professionals working in industries such as civil engineering, mining, petroleum, and environmental engineering, among others.

In particular, the symposium is relevant for those who are interested in monitoring and instrumentation techniques for geomechanics, as well as those who are interested in the application of these techniques in real-world scenarios. This includes professionals working in areas such as:

- Field instrumentation and monitoring
- Geomechanics modelling and simulation
- Geotechnical and geo-environmental engineering
- Geohazards assessment and management
- Mining and tunnel engineering
- Petroleum engineering
- Environmental engineering

In addition, the symposium is relevant for researchers and academics who are interested in presenting their research findings and engaging with leading experts in the field of geomechanics.

Overall, the International Symposium on Field Monitoring in Geomechanics (ISFMG) 2026 is designed for a diverse audience of professionals who are interested in advancing their knowledge and skills in the field of geomechanics and related areas.

Symposium themes

- Tunnels and Underground Spaces
- Bridges and Transport Infrastructure
- Dams and Embankments
- Slopes and Earthworks
- Buildings and Foundations
- Mining and Landfill
- Environmental Monitoring
- The Observational Method
- Specifications and Standards
- Excavation and Retaining Structure
- Inverse Modelling
- Advanced Design Technology



**16th International Congress on Rock Mechanics
Rock Mechanics and Rock Engineering
Across the Borders
17-23 October 2027, Seoul, Korea**

Scope

The scope of the Congress will cover both conventional and emerging topics in broadly-defined rock mechanics and rock engineering. The themes of the Congress include but not be limited to the following areas:

- Fundamental rock mechanics
- Laboratory and field testing and physical modeling of rock mass
- Analytical and numerical methods in rock mechanics and rock engineering
- Underground excavations in civil and mining engineering
- Slope stability for rock engineering
- Rock mechanics for environmental impact
- Sustainable development for energy and mineral resources
- Petroleum geomechanics
- Rock dynamics
- Coupled processes in rock mass
- Underground storage for petroleum, gas, CO₂ and radioactive waste
- Rock mechanics for renewable energy resources
- Geomechanics for sustainable development of energy and mineral resources
- New frontiers & innovations of rock mechanics
- Artificial Intelligence, IoT, Big data and Mobile (AICBM) applications in rock mechanics
- Smart Mining and Digital Oil field for rock mechanics
- Rock Engineering as an appropriate technology
- Geomechanics and Rock Engineering for Official Development Assistance (ODA) program
- Rock mechanics as an interdisciplinary science and engineering
- Future of rock mechanics and geomechanics

Our motto for the congress is "Rock Mechanics and Rock Engineering Across the Borders". This logo embodies the interdisciplinary nature of rock mechanics and challenges of ISRM across all countries and generations.

ΕΝΔΙΑΦΕΡΟΝΤΑ ΓΕΩΤΕΧΝΙΚΑ ΝΕΑ

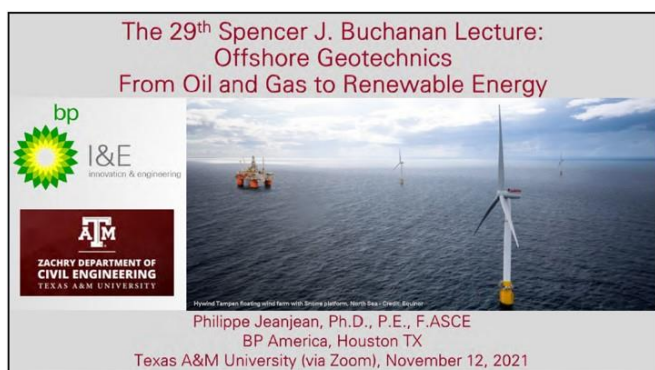
Πλημμυρικά φαινόμενα Θεσσαλίας

Τρεις μήνες μετά τα πλημμυρικά φαινόμενα στη Θεσσαλία, αναδημοσιεύουμε την εξαιρετικά ενδιαφέρουσα παρουσίαση της επιτόπιας αυτοψίας που έκαναν οι GeoEngineers Without Borders ([Evangelia Garini](#), [George Gazetas](#), et al.)

https://media.licdn.com/dms/document/media/D4D1FAQEk1SewDGJliA/feedshare-document-pdf-analyzed/0/1697226506188?e=1700092800&v=beta&t=qKi2_j9iU7EQw7iMpwa18It9H9IqxI1kfG7h6rRy_e4



Buchanan Lecture 2021: video available



The following material has been provided by ASCE President and Distinguished Professor and Buchanan Chair Holder [Jean-Louis Briaud](#) of Texas A&M University.

The 2021 Buchanan Lecture, held on November 12, 2021, is now available online!

The 2021 Buchanan Lecturer is Dr. Philippe Jeanjean who is the Senior Advisor for Geotechnical Engineering at BP America in Houston, Texas. Dr. Jeanjean's lecture is entitled "Offshore Geotechnics: From Oil & Gas to Renewable Energy."

Also on the agenda is Professor Edward J. Cording, who presented his 2020 Terzaghi Lecture "Observing and Controlling Ground Behavior with Tunnel Boring Machines." Professor Cording is Professor Emeritus in the Department of Civil and Environmental Engineering at the University of Illinois at Urbana Champaign.

The full event can be watched through the Youtube video below.



<https://www.youtube.com/watch?v=CWCxf1x7w4E>

Also, in *Education Resources* section below you can find the 29th Buchanan lecture Booklet which contains information on the Spencer J. Buchanan Lecture Series, biographies of the 2021 speakers, as well as the associated presentation slides.

Educational Resources

[2021 Buchanan Lecture Booklet](#)

(geoengineer, 13 November 2023, <https://www.geoengineer.org/education/offshore-geotechnics/buchanan-lecture-2021-video-available>)



Geoengineer Selected Topics

[Photos of Dredging at the New Port of Patras](#)

[Geotechnical Engineering Photo Album: A collection of photographs for educational instruction by Ross W. Boulanger and J. Michael Duncan](#)

[Offshore Geotechnics](#)

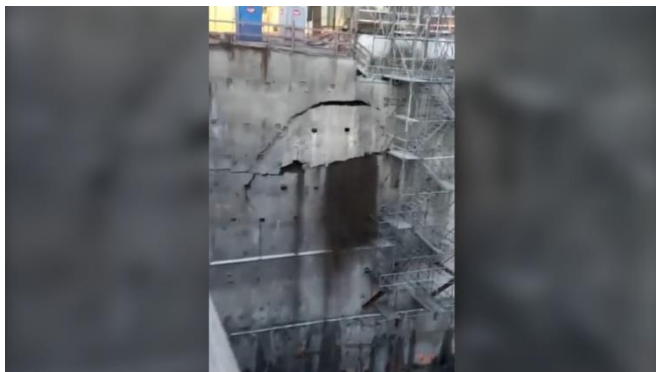
[What is Geotechnical Engineering?](#)

(geoengineer, 13 November 2023, <https://www.geoengineer.org/education/offshore-geotechnics/buchanan-lecture-2021-video-available>)



Video shows the moment soil nail wall collapses in Coquitlam, Canada

The collapse of what appears to be a soil nail wall, used to retain a vertical excavation in Coquitlam, British Columbia, was caught on video on Wednesday, November 29.



Screenshot of the video (image from CTV News)

Furthermore, the failure occurred on a site located at 500 Foster Avenue, where a 44-story tower is to be developed.

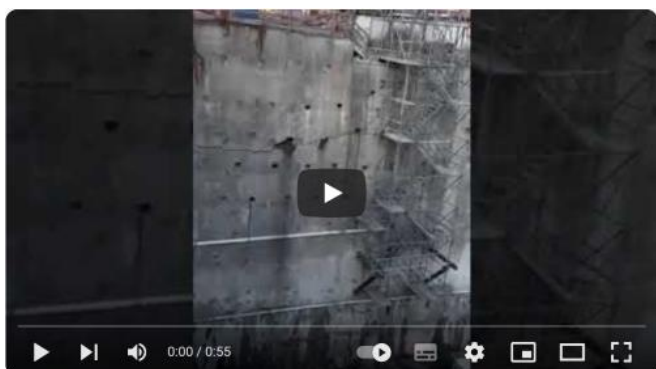
It has been reported that nobody was injured in the event, while repair work is expected to start immediately to ensure no further failures, according to Coquitlam's general manager of planning and development, Andrew Merrill.

A spokesperson for the developing company stated that all the required permits for the project had been attained, while work was being monitored by engineers.

It can be deduced from the video that cohesionless soil is present on site.

A vertical crack can originally be seen forming in the shotcrete wall, which is then followed by broader collapse on the wall and soil caving in.

Sources: www.vancouverislandfreedaily.com, dailyhive.com, www.vancouverisawesome.com, bc.ctvnews.ca



<https://www.youtube.com/watch?v=Y1F7xI7RELw>

(Geoengineer.org, Nov, 29, 2023, <https://www.geoengineer.org/news/video-shows-the-moment-soil-nail-wall-collapse-in-coquitlam-canada>)



TabLogs - now available on iOS devices Featured

TabLogs - the world's fastest growing software for geotechnical and environmental engineers - has just released a massive update to enhance their field collection capabilities!

TabLogs has released two new field logging apps to enhance the way borehole logs are captured out on site. The new An-

droid app replaces their pre-existing field logging app for Android devices, and features an array of game-changing enhancements to make life even better for engineers out in the field.



In addition, TabLogs has also released this revamped app on the Apple Store, meaning TabLogs is now available for engineers using iOS devices for the first time ever!

Some new app features include:

Android App Revamp

- **Lightning-Fast Logging:** Effortlessly record borehole data in seconds, with a streamlined interface for maximum efficiency.
- **Feature-Rich Functionality:** Unleash the full potential of the app with an array of new features, ensuring comprehensive and accurate data collection.
- **Field-Optimized Performance:** Count on seamless performance, even in remote environments, for uninterrupted logging.
- **Capture images while logging,** and let the app do the rest. Automatic tagging ensures that each image is labeled with precise information, streamlining organization and retrieval.
- **Live maps and 3D modelling in the field.** Visualize proposed drilling locations on a map and overlay critical geological data for a comprehensive understanding of the site

iOS Debut

The new iOS app has all of the features and benefits as the Android App, with the bonus of:

- **Seamless Logging on Apple Devices:** Log boreholes with ease on your iPhone or iPad.
- **Familiar Interface:** Featuring all of the functions you know and love from the Android app
- **A user-friendly interface** ensures a smooth transition for those Android users making the switch to iOS.

If you'd like to try out these new apps for free, chat to one of the geotechnical specialists at TabLogs via - <https://tablogs.com/home>

(David Adcock / Geoengineer, Nov, 30, 2023, https://www.geoengineer.org/news/tablogs-now-available-on-ios-devices?utm_source=twitter&utm_medium=social&utm_campaign=page_post)

ΕΝΔΙΑΦΕΡΟΝΤΑ - ΣΕΙΣΜΟΙ & ΑΝΤΙΣΕΙΣΜΙΚΗ ΜΗΧΑΝΙΚΗ



Τεχνική Έκθεση του Σεισμού του Αρκαλοχωρίου Κρήτης

Η τεχνική έκθεση του ETAM για το σεισμό του Αρκαλοχωρίου Κρήτης, τμήματα της οποίας είχαν παρουσιασθεί σε εκδηλώσεις του ETAM, είναι διαθέσιμη στον [σύνδεσμο](#)



ΕΝΔΙΑΦΕΡΟΝΤΑ - ΔΙΑΦΟΡΑ

New York 2023 Project of the Year: Saint Nicholas Greek Orthodox Church

[Tom Stabile](#)

Nine years after its groundbreaking—and 21 years after its predecessor was destroyed in the Sept. 11 attacks—the 12,000-sq-ft Saint Nicholas Greek Orthodox Church and National Shrine opened in 2022 in Manhattan as a compact marvel of design and craft quality, topped by an intricate structural steel dome with a translucent marble exterior.

The captivating structure at the rebuilt World Trade Center won high praise from ENR New York Best Projects judges, earning top recognition among many submissions for its key team members—Skanska USA Building as general contractor, Santiago Calatrava Architects & Engineers as design architect and Thornton Tomasetti as structural engineer—along with others working for the Greek Orthodox Archdiocese of America and Friends of Saint Nicholas group.



The church, which features religious iconography sourced from the center of Eastern Orthodoxy in Greece, has also become a place of remembrance for Sept. 11 victims.

Photo courtesy Bernstein Associates

Completing the \$85-million project was a long journey, with a delay in choosing its site and a long construction suspension due to funding issues. Yet the team ultimately delivered a structure with symbolic and architectural significance. Most of its walls, ceilings, floors and exterior are crafted from the vein of Pentelic marble used for Greece's historic Parthenon, and its signature dome supports a rainscreen with 40 interior skylights and 40 custom-rolled and radiused ribs.

"It's a stunning little project," one judge said, terming the craft quality "just incredible." She added: "There's curves and domes and arches in three directions, and the shop drawings are just incredible."

But the ambitious project also faced major setbacks. Design changes and cost rises over the original \$20-million budget eventually intersected with the church's internal financial lapses and budget shortfalls, resulting in missed payments to Skanska. Work halted in 2017, sparking investigations and audits, and leaving the dome's steel frame covered in white plastic for several years.

But a negotiated resolution, with intervention from the Port Authority of New York and New Jersey and then-Gov. Andrew Cuomo, created the Friends of Saint Nicholas, which raised

\$60 million toward completing the project. That enabled work to resume in 2020, said Michael Psaros, the new group's chairman. The leadership "was able to work with all parties to establish a fair and reasonable timeline and budget for completion, and with that mutual trust established, everyone got back to work," said Theodora Diamantis, account manager and vice president at Skanska USA Building.



The 60-ft-wide church dome features a "rainscreen" design with thinly milled Greek marble sandwiched between two layers of glass to increase sunlight and create a nighttime glow from interior lighting.

Photo courtesy Bernstein Associates

The original budget, calculated before Skanska was on board, did not fully account for the design's complexity, Diamantis added, underestimating challenges around the facade, interior finishes, blast resistance requirements and overall project duration.

A clear added cost was the 60-ft-span dome's "rainscreen" design, with the thinly milled Pentelic marble sandwiched between two layers of glass to let sunlight in by day and enable interior lights to illuminate the structure at night, creating a "glow," said Psaros, also chairman of the church board of trustees. The rainscreen has no mullions and over 3,000 individual pieces. "That feature of the shrine cost approximately \$18 million," he said. "It was worth every dollar."



The 12,000-sq-ft church rebuild was completed in December after design changes, a major cost hike and funding shortfalls that halted completion of construction for several years.

Photo courtesy Skanska USA Building

Costs also escalated due to a desire for the church to have high-end finishes, exacting tolerances and craft quality that exemplify its importance to the Greek-American community, the Orthodox faith and its role as a monument of remembrance for the thousands killed on Sept. 11, Psaros said.

"And we did it, we spared no expense," he said. "We could have built a structure at half the cost, but it would have been pedestrian. Instead ... we built a Calatrava masterpiece."

On High Ground

A decade passed from Sept. 11 to the new structure's start, in part because massive cleanup and years of new construction at the World Trade Center for office towers, memorials, transit hubs and infrastructure left little work space. A tussle with the Port Authority over the old church site caused other delays, until a deal gave the church a long-term \$1-per-year lease for its current space within Liberty Park.

Completing a below-grade vehicle security facility for the entire 16-acre World Trade complex was another challenge, with part of it under the church. Thornton Tomasetti designed a 4-ft-thick concrete mat—an \$18-million Port Authority project—over the facility as the Saint Nicholas foundation. The church's main floor is 25 ft above street level, overlooking the National September 11 Memorial and Museum.

"A thick concrete transfer slab under the church's structure distributes the loads down to the column grid, leaving the [below-grade] service areas undisturbed," said Francesca Brando, associate principal at Thornton Tomasetti. Calatrava began design work in 2012, while Skanska broke ground in 2013 and topped out the dome in 2016. The construction halt nixed the original 2018 completion, so when work restarted in 2020, the team jumped on challenging exterior cladding, interior finishes and MEP work, racing to finish last year for church events, including an official Dec. 6 opening on the feast day of Saint Nicholas, Psaros said.

In addition to a sanctuary and liturgical spaces, the church has ecumenical bereavement and community rooms for Sept. 11 survivors, families and the public. One judge lauded its positive "community impact."



Architect Santiago Calatrava based Saint Nicholas design elements on the historic Hagia Sophia Byzantine church in Istanbul that opened in 537 A.D. before later being turned into a mosque.

Photo courtesy Skanska USA Building

Modern Sophia

The Calatrava design's orienting principle pays homage to the historic Hagia Sophia Byzantine church in Istanbul that later became a mosque. "The completed project rose to the occasion," Psaros said, calling the new Saint Nicholas the "American Saint Sophia."

Calatrava aimed to sustain the traditional Greek Orthodox liturgy while shaping a "spatially varied architectural procession," with four round stone-clad towers squared around the central drum and dome, the firm says. The 40 illuminated

marble panels harken to the Hagia Sophia dome's 40 windows.

The design resulted in few "square" corners, a flowing geometry of circles, radiuses and arcs requiring custom fabrication and novel material applications, Diamantis said. "There was a lot of work done by the design team to get Calatrava's vision onto paper, which incurred ... obstacles that had to be navigated by the construction team [for it to] be fabricated and installed," she added. "The dome was all custom bent, rolled and fabricated shapes."

Meanwhile, blast resistance design required advanced computational modeling and vault panelization, Brando said. "The blast-resistant vaulted west facade is made up of glass, forming the building envelope," she noted.

Intensive Logistics

Restarting in 2020 compounded the difficulty, not only due to pandemic constraints but also to the global supply chain crisis—a massive obstacle for a project with materials, prefabricated pieces, iconography and other components crafted or imported from nine countries and three continents on a tight schedule.

The 10,000 sq ft of white marble quarried in Greece was a prime example of the extensive coordination, oversight and logistical management.



Most of the church walls, ceilings, floors and exterior are crafted from the vein of Pentelic marble used for Greece's historic Parthenon. Local crafters created many prefabricated components.

Photo courtesy Bernstein Associates

Much of that material went into prefabricated segments—such as dome panels, paving stones and interior walls—that were created by local artisans in Greece, test assembled, dry-lay reviewed, vetted and shipped over eight-week spans at a time when global shipping routes were overloaded.

Another logistical challenge was in creating the iconography that graces interior surfaces. It drew on the expertise of respected scholars and iconographers in Greece, with many pieces completed on Mt. Athos itself, a revered Eastern Orthodox site, before being carefully shipped to New York. Some were finished by hand in the church after major construction finished, Psaros said.

Added hurdles came from heightened World Trade Center security requirements, with the entire complex gated, all deliveries prescheduled and intensive vehicle checks that took one to two hours to complete.

Puzzle Completed

The last step of putting the pieces together captured the judges' attention. "The construction method was really

unique,” one said. “The level of coordination and the quality was just amazing.”

While most core and shell work finished in 2015, huge tasks remained to install MEP equipment, assemble interior and roof pieces, shepherd iconographic art and administer finishes. Skanska widely deployed its building information modeling and virtual design and construction capabilities in coordination with designers and subcontractors.

The interiors, with almost no drywall but rather combinations of stone and glass-reinforced gypsum, house HVAC equipment, radiant floor heating and theatrical lighting under slabs or in walls—all customized to the rounded contours.

Installing interior and exterior elements also demanded high technical proficiency, such as picking dome panels into place in 2020, laying nave stone flooring in 2021 or setting the last facade stone in April 2022. On the dome, specially trained crews had to rappel from the top to reach needed sections of the curved exterior because lifts could not offer proper access and scaffolding would have obstructed rigging work.

The completed effort has pleased not only the Greek Orthodox community and construction professionals, but it has also become a prime stop for Sept. 11 memorial visitors, according to Psaros. “We are tracking in our first year with no marketing, no promotion, no professional staff yet, but we’re going to attract over 140,000 visitors,” he said.

Saint Nicholas Greek Orthodox Church
New York City

BEST PROJECT, CULTURAL/WORSHIP

KEY PLAYERS

Submitted by: Skanska USA Building

Owner: Friends of Saint Nicholas

General Contractor: Skanska USA Building

Civil Engineer/Lighting Designer: DLR Group - New York

Structural Engineer: Thornton Tomasetti

MEP Engineer: MG Engineering

Architect of Record: Koutsomitris Architects PC

Design Architect: Festina Lente (Santiago Calatrava)

Subcontractors: ARC Electrical & Mechanical Corp.; Commodore Construction Corp.; Cooper Electric; Cord Contracting Co.; Current Fire Protection; Fromkin Brothers Inc.; MG McGrath; Miller Druck Specialty Contracting Inc.; Par Plumbing Co.; Workspace 11

(ENRNewYork, November 13, 2023,
<https://www.enr.com/articles/57520-new-york-2023-project-of-the-year-saint-nicholas-greek-orthodox-church>)



Balfour Beatty Vinci adopts digital concrete testing to cut carbon on HS2

Balfour Beatty Vinci have completed a successful trial of a digital measuring system for concrete across the HS2 project. Its success has led to a roll-out of the product across multiple HS2 sites, in a bid to carbon and driving efficiencies on the construction project.

The digital measuring system, Verifi, enables real-time monitoring, measurement, and management of fresh concrete properties during transportation.

Verifi optimises planning and coordination through GPS

tracking of vehicles equipped with the technology. The real-time tracking capability is said to improve the management of concrete delivery, in addition to enhancing logistical processes on-site.



A full-scale site trial involving over 20,000m3 of concrete demonstrated accuracy and confidence in the technology (Photo: AdobeStock)

Over the last two years, Balfour Beatty Vinci has worked with supply chain partners Saint Gobain Construction Chemicals who developed Verifi, and their concrete supply partners Tarmac and Aggregate Industries to test and validate the system.

The company said that the full-scale site trial involving over 20,000m3 of concrete, demonstrated “accuracy and confidence in the technology”. HS2 Ltd has now approved the roll-out across further sites.

One of the key benefits of the system, says Balfour Beatty Vinci, is the elimination of concrete waste which would have been produced from manual sampling and testing.

In addition, the company added that it enhances productivity and efficiency by delivering clear digital readouts, eliminating delays associated with sampling and testing processes, which allows for better scheduling and reduces potential bottlenecks in the construction timeline.

Steve Phipps, Head of Materials Engineering at Balfour Beatty Vinci said, “The initial concept of using this technology to reduce manual testing has been developed into a fully integrated digital monitoring and reporting system between producer and customer.

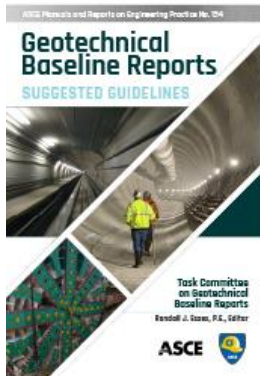
“It’s very rewarding to have finally implemented this digital solution after a process of trials, validation and approvals, made possible by great teamwork. Now that implementation is underway across our HS2 sites in the Midlands, we will start to see the significant benefits.”

Frederic Guimbal, EVP at Saint Gobain Construction Chemicals, added, “We’re delighted that the adoption of VERIFI represents a significant step forward for the HS2 project, bringing tangible benefits in terms of quality control, productivity, safety, sustainability, planning, reliability, and digitisation.

“This innovative solution demonstrates the power of collaboration and paves the way for the integration of digital methods in future concrete standards across the construction industry.”

(Catrin Jones Deputy Editor / International Construction & Construction Europe, 17 November 2023, <https://www.constructiontechnology.media/news/balfour-beatty-vinci-adopts-digital-concrete-testing-to-cut-carbon-on-hs2/8033099.article>)

ΝΕΕΣ ΕΚΔΟΣΕΙΣ ΣΤΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΠΙΣΤΗΜΕΣ



Geotechnical Baseline Reports: Suggested Guidelines

**Task Committee on
Geotechnical Baseline Reports;
edited by Randall J. Essex**

Prepared by the Task Committee
on Geotechnical Baseline Reports
of the Construction Institute of ASCE

Geotechnical Baseline Reports: Suggested Guidelines, MOP 154, explains the role of the geotechnical baseline report (GBR) in allocating and managing risks associated with subsurface construction. MOP 154 contains recommendations for what should and should not be included in the GBR, provides a chapter outline and a checklist of topics to consider, provides suggested page lengths, makes suggestions that will improve clarity and understanding, and presents examples of problematic and improved practices in creating baselines.

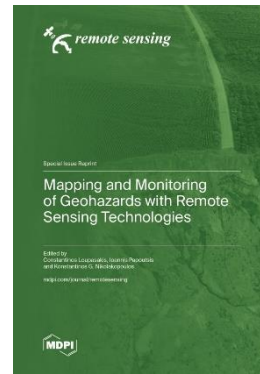
Expanding on earlier titles, MOP 154 provides new perspectives in the following areas:

- Improvement of GBRs through more concise organization and better presentation and wording of baselines;
- For Design-Build (DB) delivery, guidance on collaboration between the owner's team and the DB team during GBR development;
- Importance of having experienced professionals engaged in the GBR writing, review, and integration with other contract documents;
- Discussion of conditions and obstructions that have led to claims on past projects;
- Broadened discussion of applications of GBRs to geotechnical construction other than tunnels and shafts;
- Discussion of legal and contractual perspectives that address trends in contractor claims and lawsuits by owners or contractors;
- Practices and lessons learned based on experience over the last 15 years; and
- Case histories that illustrate how baselines were utilized to resolve disputes.

MOP 154 is intended to serve as a reference for preparers and users of GBRs, and to inform owners of the importance of using GBRs to allocate financial risk fairly between parties.

<https://sp360.asce.org/PersonifyEbusiness/Merchandise/Product-Details/productId/283139092>

(ASCE 2022)



Mapping and Monitoring of Geohazards with Remote Sensing Technologies

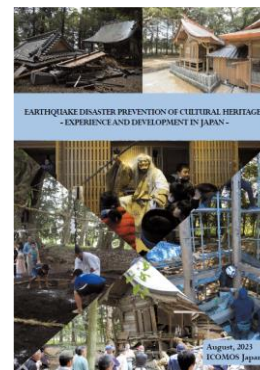
**Constantinos Loupasakis,
Ioannis Papoutsis and
Konstantinos G.
Nikolakopoulos, Eds.**

This book is a reprint of the Special Issue [Mapping and Monitoring of Geohazards with Remote Sensing Technologies](#) that was published in [Remote Sensing](#)

Earth observation (EO) techniques have proven to be reliable and accurate for monitoring land-surface deformations that occur naturally (landslides, earthquakes, and volcanoes) or due to anthropogenic activities (ground-water overexploitation, extraction of oil and gas). In cases where mitigation methods have to be put into practice, the detailed mapping, characterization, monitoring and simulation of the geocatastrophic phenomena have to precede their design and implementation. EO techniques possess high potential and suitability as alternative, cost-efficient methods for the management of geohazards, and have been proven to be a valuable tool for verifying and validating the spatial extent and evolution of the deformations. To this extent, the current reprint covers innovative applications and case studies on the mapping and monitoring of all kinds of geohazards with remote-sensing technologies. Submissions that make use of new tools and methodologies, including the use of data-driven machine learning methods, were encouraged.

[Download Book PDF](#)

(Published: October 2023)



Earthquake Disaster Prevention of Cultural Heritages - Experience and Development in Japan

ICOMOS Japan

**Background and purpose of this
report**

There is a saying overseas: "Disaster is the mother of disaster prevention." It means that disaster experiences lead to disaster prevention. Disaster prevention techniques and systems have been developed through disaster experiences.

While Japan is a place where vast and diverse cultural heritage has been cultivated through a long history, it is also a country prone to natural disasters. There is a growing social interest in protecting cultural heritage from natural disasters, and in recent years not only major earthquakes, but also large-scale typhoons and local torrential rainfalls have caused major wind and flood damage to cultural heritage, as has often been reported in the media. Under these socially relevant circumstances, ICOMOS Japan published preliminary reports in English and Japanese on the damage, recovery, and subsequent progress of cultural heritage affected by the Great East Japan Earthquake in 2011 and the Kumamoto

Earthquake in 2016. Now, 12 years after the Great East Japan Earthquake and 7 years after the Kumamoto Earthquake, the disaster recovery of cultural heritage is wrapping up, with some exceptions. This is the final report on the earthquake damage and subsequent recovery of this cultural heritage.

From an international point of view, in the 1980s, many seismic studies on historic buildings were being conducted in Western Europe, and international conferences on the structural field were held every other year. However, in Japan the catalyst was the Great Hanshin-Awaji Earthquake in 1995, which struck the metropolis, damaging many designated and undesignated cultural property buildings. This tragic event triggered many researchers and practitioners to develop seismic studies and seismic resistance measures for cultural heritage. Currently, these studies are progressing while countermeasures are being developed.

Seismic resistance measures for cultural heritage have been widely discussed at various levels, from national and local governments to researchers and practitioners of seismic design and construction. Predisaster measures started with the establishment of seismic resistance assessment guidelines and the creation of a system called the heritage manager system, intended to expand the number of people involved with historic buildings. Post-disaster measures included the establishment of the Cultural Property Doctor Dispatch Program, which was created to help assess damage conditions and provide technical support for recovery. Additionally, various reconstruction and rehabilitation subsidy systems were established. These measures have helped lead the way internationally in disaster management.

Under these circumstances, we experienced the Great East Japan Earthquake, and subsequently the Kumamoto Earthquake. A quarter of a century after the Great Hanshin-Awaji Earthquake, we would like to review how the developed earthquake disaster management measures for cultural properties were used in preparation and response to these earthquakes while identifying remaining issues. In addition, we will introduce the results of the rapid development of earthquake-resistant technology for cultural property buildings in Japan.

Toshikazu Hanazato

The report is 212 pages long. I hope it will be useful for you to understand the present state of earthquake countermeasures of cultural properties in our seismic country, Japan. Please download free it from the URL below:

https://icomosjapan.org/media/ICOMOS_Japan_August_2023EARTHQUAKE_DISASTER_PREVENTION_OF_CULTURAL_HERITAGES.pdf or shortened URL is <https://x.qd/wI5jL>

(ICOMOS Japan, August 2023)

ΗΛΕΚΤΡΟΝΙΚΑ ΠΕΡΙΟΔΙΚΑ

GeoWorld Geo-Trends Review

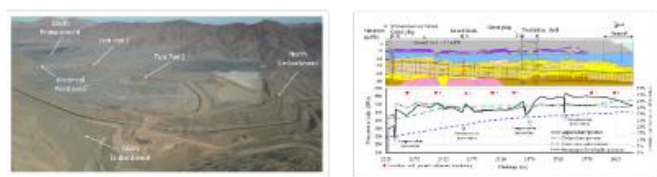
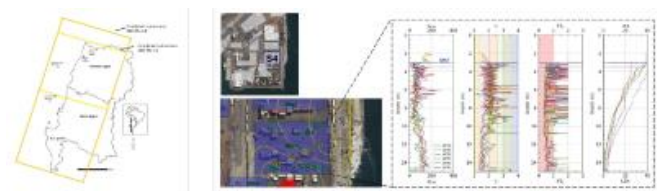
www.mygeoworld.com/geotrends/issues/25-november-2023

Κυκλοφόρησε το Τεύχος 25 του GeoWorld / Geo-Trend Review Νοεμβρίου 2023 με τα ακόλουθα περιεχόμενα:

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[International Journal of Geoengineering Case Histories](#) 16 Nov 2023



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News and Information Circular - November 2023



[ISGGE](#) 09 Nov 2023

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[UC Berkeley Center for Smart Infrastructure](#) news 15 Nov 2023

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Prof. J. G. Zornberg's lecture "Geosynthetic Applications in Railways and Roadways"



[Geoengineer.org](#) news 17 Oct 2023

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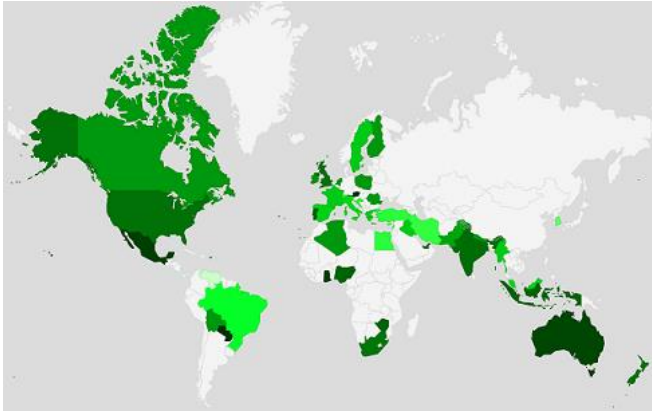
Jorge G. Zornberg, Ph.D., P.E.
The University of Texas at Austin, USA
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Proceedings from the NUMGE2023 available in open access



[ISSMGE](#) 22 Sep 2023



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GeoTalk-005: Keynote Speaker: Prof Harry Poulos, Hosting: Dr. Marwan Alzaylaie & Hamzah Al-Hashemi



[Hamzah M. B. Al-Hashemi](#) news 21 Sep 2023

Our GeoTalk-005 concluded More than 500 #engineers registered, and more than 250 engineers attended, I can say only #THANK YOU ALL for making this possible. Please find the recording here: #GEG #GCC #Piled Rafts #Micropiles #Piles

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Probability-Based Design of Reinforced Rock Slopes Using Coupled FORM and Monte Carlo Methods



[Bak Kong Low](#) Research 06 Nov 2023

Free PDF at <https://link.springer.com/content/pdf/10.1007/s00603-023-03607-6.pdf> (Open Access funding provided by the MIT Libraries) Journal: Rock Mechanics and Rock Engineering...

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Announcing the 7th McClelland Lecturer – Dr Philippe Jean-jean



[ISSMGE](#) TC209 23 Oct 2023

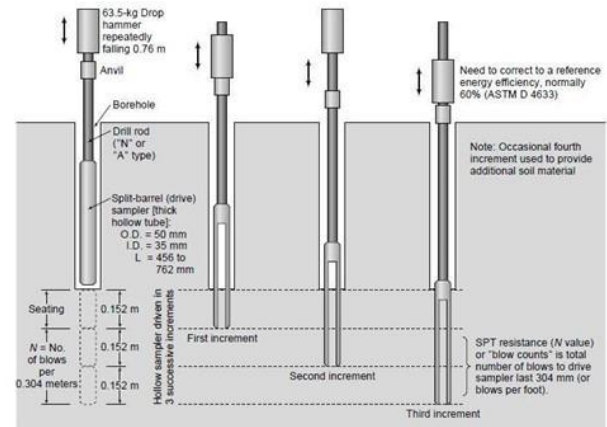
The McClelland Lecture is the honour lecture of ISSMGE TC209, with the recipient selected by a panel of peers from across the offshore geotechnical profession. The 7th McClelland...

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Standard Penetration Testing (SPT)



[Geoengineer.org](#) education 07 Nov 2023



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Announcing the Publication of the 2023 Geotechnical Business Directory



[GeoWorld](#)



The directory is published with the support of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). This is the 9th year for the Geotechnical Business Directory, the most comprehensive directory in the geotechnical engineering field ...

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2023 Going Digital Awards in Infrastructure Winners



[Bentley Systems](#) YII2023 13 Oct 2023

Winners Announced



Bentley

SINGAPORE Oct. 12, 2023 Bentley Systems, Incorporated (Nasdaq: BSY), the infrastructure engineering software company, today announced the winners of the 2023 Going Digital Awards in...

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How the Past 30 Years of PLAXIS History Pave the Way for a Promising Future



[Sequent, The Bentley Subsurface Company](#) PLAXIS
06 Oct 2023



Over the last 30 years, PLAXIS innovation has driven the geotechnical analysis industry, enabling engineers to design much of the global infrastructure we use today. However, we don't want to write onl...

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Best Project Specialty Construction: Martin Marietta Texas Quarry Highwall Stabilization



[GeoStabilization International](#) resource 14 Nov 2023



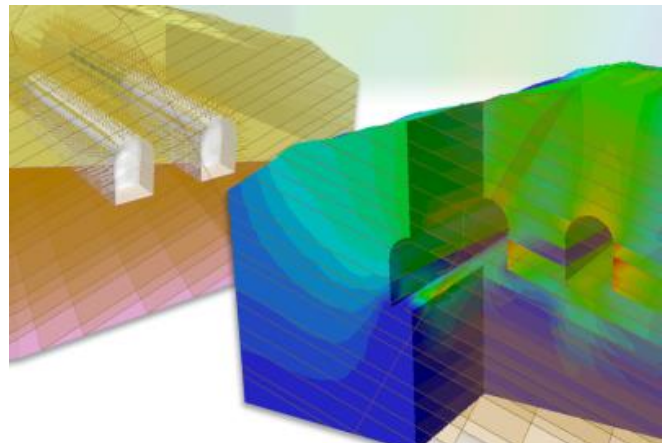
This innovative project, by GeoStabilization International, required stabilizing two areas of a quarry that were experiencing frequent rockfalls and that posed a risk to critical infrastructure u...

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Advancing the Frontiers of Blocky Rock Mass Modelling with Discrete Fracture Networks



[Rocscience](#) DFN RocSlope RS3 14 Nov 2023



This article describes the importance of Discrete Fracture Networks (DFNs) in rock mechanics modelling. It outlines capabilities in Rocscience programs RS3 (and RocSlope) to analyze discontinuous...

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ISSMGE Interactive Technical Talk Episode 10: Field Monitoring in Geomechanics (TC220)



[ISSMGE](#) TC220 21 Sep 2023

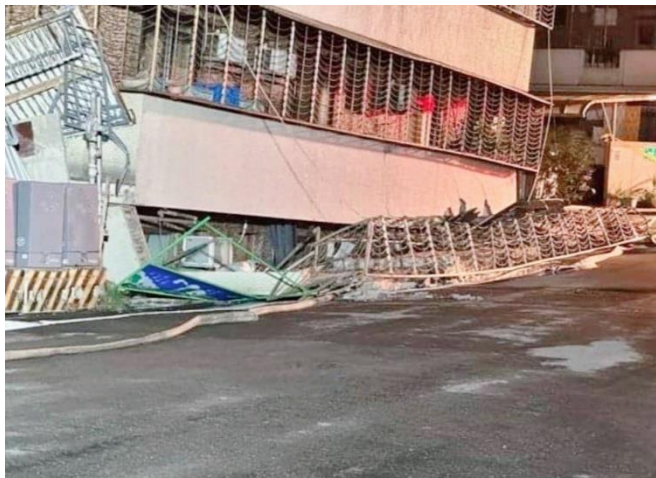
The tenth episode of International Interactive Technical Talk has just been launched and is supported by TC220. Dr.-Ing. Giorgio Pezzetti, Dr. Neelima Satyam D. and Emma McConnell ar...

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Video shows the moment apartment building sinks by one floor in Taipei



[Geoengineer.org](https://www.geoengineer.org) news 13 Sep 2023



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Characterization and numerical analysis of the utilization of iron mill scale in soil improvement: a case study from the Kingdom of Bahrain



[Hamzah M. B. Al-Hashemi](#) Research 27 Oct 2023

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ISSMGE Interactive Technical Talk Episode 9: Machine Learning and Big Data (TC309)



[ISSMGE](#) TC309 07 Sep 2023

The ninth episode of International Interactive Technical Talk has just been launched and is supported by TC309. Dr. Zhongqiang Liu, Dr. Kok-Kwang Phoon, Dr. Tatiana Richa and Dr. Sar...

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Bulletin Vol. 17, Issue 5 - October 2023



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Karl von Terzaghi was born on this day in 1883 and you can read all about him on [Geoengineer.org](#)



[Geoengineer.org](#) news 03 Oct 2023



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[ISSMGE](#) TC206 23 Oct 2023

The eleventh episode of International Interactive Technical Talk has just been launched and is supported by TC206. Duncan Nicholson, Tony O'Brien, Ying Chen and Anyang Yaw Michael ar...

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[ISSMGE](#) TC213 22 Sep 2023

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Experimental Validation of the Cementation Mechanism of Wood Pellet Fly Ash Blended Binder in Weathered Granite Soil



[Jebie Balagosa](#) Research 03 Oct 2023

Abstract In response to climate change, wood pellets have been increasingly utilized as a sustainable energy source. However, their growing utilization increases the production of wood pellet fly a...

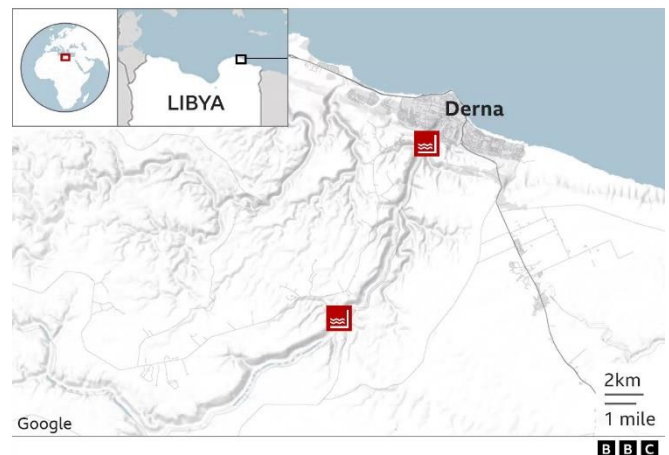
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The failure of Libya's Wadi Derna dams and its role in the catastrophic aftermath



[Geoengineer.org](#) news 15 Sep 2023

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3rd episode of International Interactive Technical Talk



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Advanced Research Workshop on Emerging and Disrupting Technologies for Disaster Resilience



[Dimitrios Zekkos](#) news 26 Oct 2023



Just returned from #Adana, #Turkey where I had the pleasure to participate in an Advanced Research Workshop on Emerging and Disrupting Technologies for Disaster Resilience that was funded by the NATO Science for Peace and Security Program. I also presented ...

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ISSMGE Interactive Technical Talk Episode 11: Observational Method (TC206)

IGS NEWSLETTER – November 2023

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Helping the world understand the appropriate value and use of geosynthetics

www.geosyntheticssociety.org/newsletters

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- Calendar of Events



www.nxtbook.com/dfi/DEEP-FOUNDATIONS/november-december-2023/index.php#/p/Intro

Highlights of the Nov/Dec Issue

The Nov/Dec issue of Deep Foundations celebrates more than a decade of accomplishments for the **Committee Project Fund**.

[Cover Story: The Power of Committee Research: The DFI Rock Socket Project](#)

[Design of Pile Foundations in Liquefiable, Laterally Spreading Grounds](#)

[Active Engagement: An Overview of ACIP/DD Pile CPF Projects](#)

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[Guest Editorial: DFI Committee Project Fund, Retrospective](#)

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