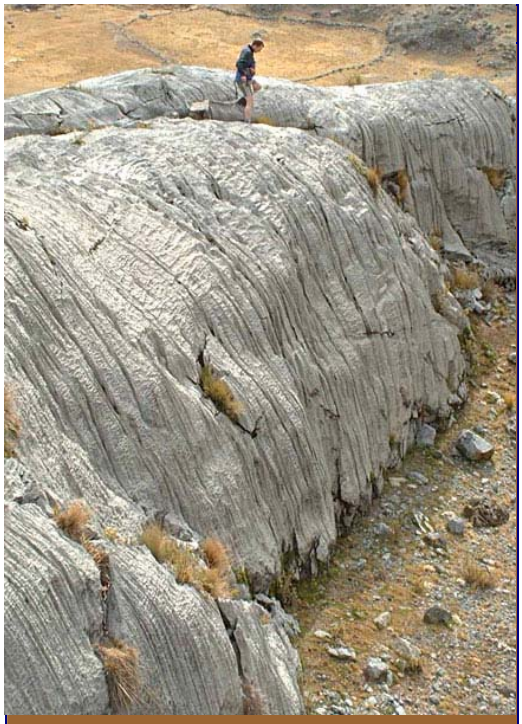


ΕΛΛΗΝΙΚΗ
ΕΠΙΣΤΗΜΟΝΙΚΗ
ΕΤΑΙΡΕΙΑ
ΕΔΑΦΟΜΗΧΑΝΙΚΗΣ
& ΓΕΩΤΕΧΝΙΚΗΣ
ΜΗΧΑΝΙΚΗΣ

Τα Νέα της Ε Ε Ε Ε Γ Μ

19

Αρ. 19 – ΔΕΚΕΜΒΡΙΟΣ 2008

SIMSG ISSMGE

Η Εκτελεστική Επιτροπή της ΕΕΕΕΓΜ σας στέλνει
τις Θερμότερες Ευχές της
για Ευτυχισμένο και Δημιουργικό Νέο Χρόνο

Φωτογραφία: Καρστικά φαινόμενα στο Peru

Π Ε Ρ Ι Ε Χ Ο Μ Ε Ν Α

Χωρίς Λόγια…

ΔΙΑΛΕΞΗ

"Χαρακτηρισμός και Αποκατάσταση Ρυπασμένων Χώρων στην Ελλάδα"

ΠΑΝΤΑΖΙΔΟΥ, Μαρίνα
Επίκουρη Καθηγήτρια Τομέα Γεωτεχνικής
Σχολής Πολιτικών Μηχανικών
Εθνικού Μετσοβίου Πολυτεχνείου

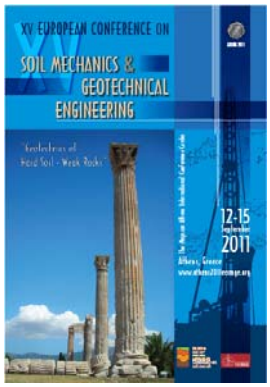
ΜΠΟΥΡΑ, Φωτεινή
Αναπληρώτρια Προϊσταμένου Τμήματος
Διαχείρισης Στερεών Αποβλήτων ΥΠΕΧΩΔΕ,
Υποψήφια Διδάκτορας Τομέα Γεωτεχνικής
Σχολής Πολιτικών Μηχανικών ΕΜΠ

Τετάρτη 14 Ιανουαρίου 2009, 19:00
Αίθουσα Εκδηλώσεων
Σχολής Πολιτικών Μηχανικών ΕΜΠ
Πολυτεχνειούπολη Ζωγράφου

6° Πανελλήνιο Συνέδριο ΓΕΩΤΕΧΝΙΚΗΣ ΚΑΙ ΓΕΩΠΕΡΙΒΑΛΛΟΝΤΙΚΗΣ ΜΗΧΑΝΙΚΗΣ

29, 30 Σεπτεμβρίου, 1 Οκτωβρίου 2010
Palaia ΠολυχώροςΤσαλαπάτα, Βόλος

portal.tee.gr/portal/page/portal/INTER_RELATIONS/INT_REL_P/SYNEDRIA_EKDHLWSEIS



XV European Conference on SOIL MECHANICS & GEOTECHNICAL ENGINEERING

12 – 15 Σεπτεβρίου 2011
Μέγαρο Μουσικής Αθηνών
www.athens2011ecsmge.org

ΠΡΟΓΡΑΜΜΑ ΕΚΔΗΛΩΣΕΩΝ ΓΕΩΤΕΧΝΙΚΟΥ ΕΝΔΙΑΦΕΡΟΝΤΟΣ ΠΕΡΙΟΔΟΥ ΙΑΝΟΥΑΡΙΟΥ – ΙΟΥΝΙΟΥ 2009

ΙΑΝΟΥΑΡΙΟΣ

Τετάρτη 14 Ιανουαρίου – Διάλεξη

"Χαρακτηρισμός και Αποκατάσταση Ρυπασμένων Χώρων στην Ελλάδα", Μαρίνα ΠΑΝΤΑΖΙΔΟΥ, Πολιτικός Μηχανικός – Εθνικό Μετσόβιο Πολυτεχνείο και Φωτεινή ΜΠΟΥΡΑ, Πολιτικός Μηχανικός, Τμήμα Διαχείρισης Στερεών Αποβλήτων Υ-ΠΕΧΩΔΕ, Υποψήφια Διδάκτορας Τομέα Γεωτεχνικής Σχολής Πολιτικών Μηχανικών ΕΜΠ

Δευτέρα 26 – Διάλεξη

"Νεότερες απόψεις για τις παραμέτρους μηχανικής συμπεριφοράς των πετρωμάτων", Γεώργιος ΤΣΙΑΜΠΑΟΣ, Τεχνικός Γεωλόγος – Εθνικό Μετσόβιο Πολυτεχνείο

ΦΕΒΡΟΥΑΡΙΟΣ

Τετάρτη 18 - Διάλεξη

«Η συμβολή της γεωλογίας στην μελέτη και κατασκευή φραγμάτων», Παύλος ΜΑΡΙΝΟΣ, Μεταλλειολόγος Μηχανικός / Τεχνικός Γεωλόγος – Εθνικό Μετσόβιο Πολυτεχνείο

Τετάρτη 25 - Διάλεξη

«Αντισεισμικός σχεδιασμός υπόγειων κατασκευών μεγάλων διαστάσεων σε μικρό βάθος. Οδικές σήραγγες, σταθμοί μετρό, υπόγειοι χώροι στάθμευσης», Κυριαζής ΠΙΤΙΛΑΚΗΣ, Πολιτικός Μηχανικός – Πολυτεχνική Σχολή Αριστοτελείου Πανεπιστημίου Θεσσαλονίκης

ΜΑΡΤΙΟΣ

Δευτέρα 2 - Διάλεξη

"The Implementation of EC7 on German DIN Standards", Norbert VOGT, Πολιτικός Μηχανικός – Technische Universität München

Τετάρτη 4 - Διαλέξεις Νέων Γεωτεχνικών Μηχανικών (εκδήλωση της ΕΕΕΕΘ)

ΑΠΡΙΛΙΟΣ

Τετάρτη 1 – Διάλεξη (σε συνεργασία με τον Σύλλογο Αποφοίτων Imperial College Ελλάδος)

"Seismic Slope Safety", Sarada SARMA, Πολιτικός Μηχανικός – Imperial College of Science, Technology and Medicine

Δευτέρα 13 Διάλεξη

«Νέες Μέθοδοι Υπολογισμού Μεγέθους και Κατανομής Ωθήσεων σε Κατασκευές Αντιστήριξης για Βαρυτικά και Σεισμικά Φορτία», Γεώργιος ΜΥΛΩΝΑΚΗΣ, Πολιτικός Μηχανικός – Πολυτεχνική Σχολή Πανεπιστημίου Πατρών

ΜΑΙΟΣ

Δευτέρα 4 – Διάλεξη (σε συνεργασία με τον Σύλλογο Αποφοίτων Imperial College Ελλάδος)

"The Nicoll Highway Collapse, Singapore", David HIGHT, Πολιτικός Μηχανικός – Imperial College of Science, Technology and Medicine / Geotechnical Consulting Group

Τρίτη 5 – Διάλεξη (στην Θεσσαλονίκη, (σε συνεργασία με τον Σύλλογο Αποφοίτων Imperial College Ελλάδος))

"The Nicoll Highway Collapse, Singapore", David HIGHT, Πολιτικός Μηχανικός – Imperial College of Science, Technologh and Medicine / Geotechnical Consulting Group

Δευτέρα 11 – Ημερίδα Γεωτεχνικών Οργάνων (σε συνεργασία με την ΕΕΕΕΘ)

ΙΟΥΝΙΟΣ

Τετάρτη 3 – Διάλεξη

"Μη γραμμική 3Δ προσομοίωση της σταδιακής κατασκευής, πλήρωσης, και σεισμικής απόκρισης φραγμάτων λιθορριπής (CFRDs) και αξιολόγη-ση της επίδρασης σημαντικών παραμέτρων", Πάνος ΝΤΑΚΟΥΛΑΣ, Πολιτικός Μηχανικός – Πολυτεχνική Σχολή Πανεπιστημίου Θεσσαλίας, Βόλος

Προβλέπεται, επίσης, διάλεξη του Jean LAUNAY, Vinci Construction καθώς και ανοικτή συνεδρίαση της Εκτελεστικής Επιτροπής της ΕΕΕΕΓΜ στη Θεσσαλονίκη, την οποία θα ακολουθήση διάλεξη του Γεώργιου ΝΤΟΥΝΙΑ. Οι ημερομηνίες των εκδηλώσεων αυτών θα σας γνωστοποιηθούν στο τεύχος του Δεκεμβρίου 2008.

ΑΝΑΣΚΟΠΗΣΗ ΓΕΓΟΝΟΤΩΝ ΓΕΩΤΕΧΝΙΚΟΥ ΕΝΔΙΑΦΕΡΟΝΤΟΣ

ARMS 5

ISRM International Symposium 2008
5th Asian Rock Mechanics Symposium
24-26 November 2008 Tehran, Iran
www.arms2088.org

Στην Τεχεράνη του Ιράν πραγματοποιήθηκε από τις 25 έως τις 28 Νοεμβρίου 2008 το 5ο Ασιατικό Συνέδριο Βραχομηχανικής (5th Asian Rock Mechanics Symposium, ARMS5). Το ARMS5 διοργανώθηκε από την Ιρανική Εταιρεία Βραχομηχανικής και ήταν το διεθνές συνέδριο της ISRM για το έτος 2008. Στο συνέδριο παρουσιάσθηκαν ενδιαφέρουσες εργασίες σε αντικείμενα όπως ο χαρακτηρισμός του πετρώματος, η προσομοίωση της μηχανικής συμπεριφοράς πετρώματος και ασυνεχειών, η ευστάθεια υπογείων εκσκαφών, η οργανομέτρηση και παρακολούθηση, κλπ.

Ιδιαίτερα ενδιαφέρουσες ήταν οι διαλέξεις των προσκεκλημένων ομιλητών. Ορισμένες έθεσαν προβληματισμούς και ορίζοντες για το μέλλον της Βραχομηχανικής αλλά και της ISRM, όπως των J. Hudson, Ö. Aydan, Z.T. Bieniawski. Ο Καθηγ. Bieniawski σημειωτέον δήλωσε ότι επρόκειτο για την τελευταία δημόσια διάλεξή του. Ενδιαφέρουσες ήταν επίσης οι διαλέξεις προσκεκλημένων ομιλητών σχετικά με την γεωμηχανική των πετρωμάτων των ταμιευτήρων πετρελαίου, όπως του N. Barton, του S. Fontoura κ.α. Ξεχώρισε επίσης η διάλεξη των H. Stille και M. Holmberg, από τη Σουηδία, για τη μέθοδο της παρατήρησης κατά την κατασκευή σηράγγων και τη στατιστική μείωση της αβεβαιότητας μέσω των οργανομετρήσεων. Η διάλεξη του P. Kulatilake σχετικά με την τραχύτητα των ασυνεχειών και τη σημασία της για την αντοχή της βραχομάζας επανέφερε το θέμα στην πιο ορθολογική του βάση. Τέλος, λοιπές διαλέξεις αφορούσαν τη χρήση τεχνικών τεχνητής νοημοσύνης, την πρόγνωση ζωνών ρηγμάτων μπρος από σήραγγες από τριδιάστατες μετρήσεις μετατόπισης, κ.α.

Το συνέδριο ήταν άριστα οργανωμένο σε όλα τα επίπεδα. Αξίζει να αναφερθεί η ευγένεια και η ιδιαίτερα θερμή φιλοξενία των διοργανωτών αλλά και κυρίως του απλού κόσμου. Ακολούθησε ημερήσια τεχνική επίσκεψη σε υπό κατασκευή υδροηλεκτρικό σταθμό νότια της Κασπίας και πενθήμερη πολιτισμική εκδρομή σε μνημεία της Περσικής ιστορίας και κουλτούρας.

Από ελληνικής πλευράς συμμετείχαν οι Α.Ι. Σοφιανός, Καθηγητής ΕΜΠ και Π. Π. Νομικός, Λέκτορας ΕΜΠ, που συμμετείχαν στο συνέδριο με επιστημονικές τους ανακοινώσεις. Στη φωτογραφία, ο κ. Νομικός παρουσιάζει την εργασία που αναφέρεται στη συμπεριφορά ρωγματωμένων επίπεδων στρωσιγενών οροφών υπογείων θαλάμων με τετραγωνική κάτοψη.

(Α. Σοφιανός)

Την Δευτέρα, 15 Δεκεμβρίου 2008, πραγματοποιήθηκε στην Αίθουσα Εκδηλώσεων της Σχολής Πολιτικών Μηχανικών ΕΜΠ στην Πολυτεχνειούπολη Ζωγράφου η πρώτη εκδήλωση του εφετεινού κύκλου των δραστηριοτήτων της ΕΕΕΕΓΜ με την διάλεξη του Δρ. Ευστάθιου Χιώτη «Νεότερες απόψεις για το Αδριάνειο υδραγωγείο και την τεχνολογική του σχέση με αρχαιότερα ελληνικά υδραυλικά έργα».

Την διάλεξη παρακουλούθησαν πολλά μέλη και φίλοι της ΕΕΕΕΓΜ, παρά τις δυσμενείς συνθήκες και την αναταραχή εκείνων των ημερών.

Στην ομιλία παρουσιάστηκε ο σχεδιασμός του έργου από τους αρχαίους μηχανικούς, τόσο κατασκευαστικά, όσο και από πλευράς αξιοποίησης υδατικών πόρων. Επισημάνθηκε η αξιοποίηση τεχνογνωσίας που αποκτήθηκε από προγενέστερα υδραυλικά έργα και συγκεκριμένα του Ευπαλίνειου υδραγωγείου, του Πεισιστράτειου και του Αχαρνικού οχετού.

Επιχειρήθηκε, επίσης, η διάλυση παρανοήσεων που έχουν επικρατήσει και που υποβαθμίζουν το έργο σε απλό υπόγειο αγωγό μεταφοράς πηγαίων υδάτων από τις παρυφές της Πάρνηθας και του Πεντελικού και αντιλήψεων που το συσχετίζουν με τα Ρωμαϊκά τόξα της Φιλοθέης και του Περισσού. Άλλοτε πάλι θεωρείται εσφαλμένα ως qanat.

Τέλος, επισημάνθηκαν τα γεωτεχνικά προβλήματα που σχετίζονται με τον Αθηναϊκό σχιστόλιθο, τονίσθηκε ο υδρομαστευστικός ρόλος της σήραγγας, που κατασκευάστηκε στο μεγαλύτερο μήκος της κάτω από τη στάθμη του υδροφόρου ορίζοντα και σχολιαάθηκαν τα προβλήματα που συνδέονται με την επιλογή αυτή.

Μετά την διάλεξη ακολούθησε ζωηρή και επί μακρόν συζήτηση.

Ο Ευστάθιος Χιώτης είναι Μηχανικός Μεταλλείων – Μεταλλουργός ΕΜΠ (1966), με M.Sc. – D.I.C. στην Έρευνα Ορυκτού Πλούτου (Imperial College, 1974-5) και M.Sc. – D.I.C. στη Μηχανική Πετρελαίων (Imperial College 1975-6). Είναι διδάκτωρ ΕΜΠ (Μελέτη της θερμομηχανικής συμπεριφοράς της λιθοσφαίρας στο Αιγαίο, 1990).

Εργάσθηκε ως μηχανικός στο ΙΓΜΕ (από το 1969 μέχρι το 2007, οπότε συνταξιοδοτήθηκε). Το διάστημα 1978-1988 ήταν αποσπασμένος στη Δημόσια Επιχείρηση Πετρελαίων. Υπηρέτησε σε διευθυντικές θέσεις στο ΙΓΜΕ και στη ΔΕΠ και δημοσίευσε εργασίες σε θέματα έρευνας ορυκτού πλούτου, γεωλογίας, γεωθερμίας, πετρελαίων και αρχαιομετρίας.

ΝΕΑ ΑΠΟ ΤΙΣ ΔΙΕΘΝΕΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΝΩΣΕΙΣ

ISSMGE International Society for Soil Mechanics and Geotechnical Engineering
Société Internationale de Mécanique des Sols et de la Géotechnique

I am sorry to report the sad news received from Luiz Guilherme de Mello <lgdmello@usp.br> that his father, Professor **Victor de Mello**, past President of the then ISSMFE, passed away on 1st January 2009.

An obituary will be posted on our website in due course.

Neil Taylor, General Secretary

ISRM International Society for Rock Mechanics

newsletter

ISRM Newsletter No. 4, December 2008

Υποβλήθηκαν τέσσερεις υποψηφιότητες για την Προεδρία της ISRM για την περίοδο 2011-2015

Η προθεσμία για την υποβολή υποψηφιοτήτων για την Προεδρία της ISRM για την περίοδο 2011-2015 έληξε στις 18 Νοεμβρίου. Οι υποψήφιοι είναι τέσσερεις (κατ᾽ αλφαβητική σειρά του ονόματος της χώρας τους):

- Phil Dight - Australia,
- Xia-Ting Feng - China,
- Claus Erichsen - Germany,
- Francois Heuze - USA.

Η εκλογή θα γίνη στην συνεδρίαση του Council που θα διεξαχθή στο Hong Kong τον Μάιο 2009. Περισσότερες πληροφορίες για τους υποψηφίου δίνονται στον ιστοχώρο της ISRM.

ΠΡΟΣΕΧΕΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΚΔΗΛΩΣΕΙΣ

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

International Conference on Rock Joints and Jointed Rock Masses, 4 – 11 January 2009, Tucson, Arizona, USA, www.jointedrock2009.org

RGMA-09 International Symposium on Rock Mechanics and Geoenvironment in Mining and Allied Industries, 12 - 14 February 2009, Varanasi, Uttar Pradesh, India, www.itbhu.ac.in/min/conferences

Geosynthetics 2009, 25 - 27 February 2009, Salt Lake City, Utah, USA, www.geoshow.info

International Foundation Congress & Equipment EXPO '09, 15 – 19 March 2009, Orlando, Florida, USA, www.ifcee09.org

Peter Vaughan Memorial Symposium
The Royal Geographical Society, London,
18 March 2009

To commemorate the life and work of our late colleague, Professor Peter Rolfe Vaughan, the Geotechnics Section at Imperial College and the Geotechnical Consulting Group are organising a Memorial Symposium to be held on the 18th March 2009. This event will take place at the Royal Geographical Society, 1 Kensington Gore, SW7 2AR, which is only a short distance from the College campus. The Symposium programme, given below, comprises five technical presentations on latest developments and topics that cover Peter's main research interests. They vary from the investigation of geological processes and mechanical behaviour of natural soils and fills, to the analysis of earth structures and their construction in the field. Two short reminiscences, reflecting on working with Peter in the field and in the design office, are also part of the programme. All presentations will be delivered by colleagues who worked closely with Peter during his long professional career.

Attendance at the Symposium is free of charge. However, due to space limitations and for catering purposes, registration is required in advance by 15th December 2008. Please note that the Symposium is on the day of the Rankine Lecture, given by Professor Tom O'Rourke from Cornell University, USA, and will close with sufficient time for delegates to change venues.

As part of the commemoration, a substantial (400 pages) volume of Peter's selected papers will be published through Thomas Telford Limited. It is intended to have volumes available on the day of the Symposium.

Programme

12:00 – 12:30 Registration and coffee

12:30 – 12:45 Introduction / obituary - Richard Jardine / David Potts

12:45 – 13:10 Engineering geology - Dick Chandler

13:10 – 13:20 Working with Peter - George Dounias

13:20 – 13:45 Behaviour and characterisation of natural soils and weak rocks - David Hight / Serge Leroueil

13:45 – 14:05 Discussion

14:05 – 14:30 Tea and coffee break

14:30 – 14:55 Engineering properties of fills - Antonio Gens / David Hight

14:55 – 15:20 Analysis of slopes and embankments - David Potts

15:20 – 15:30 Working with Peter - Nesha Kovacevic

15:30 – 15:55 Embankment dam engineering - Rodney Bridle

15:55 – 16:15 Discussion

16:15 – 16:30 Closure

Please register your attendance to Sue Feller at s.feller@imperial.ac.uk. Also please indicate your interest for the memorial volume (cost ~£40).

26-26 March 2009, Beijing, China
www.merisis-asia.com/tunnel

China owes most tunnels in the world. She has been a giant nation in tunnel construction. However, new tunneling technologies and changing requirements for tunnel construction are placing new challenges in all phases of the design, engineering, maintenance and services. Accessing to the latest findings and technology innovations has a vital influence in tunnel industry's advancement.

Merisis organizes this summit to gather valuable information and meet the demand of tunnel industry. The summit will bring together the people in every aspect of the tunnel industry and provide a platform for all parties to acquaint and negotiate in a very warm and professional atmosphere.

The overall theme for this summit is Safety Construction and Sustainable Development. The key issues of this summit will cover the leading topics in the industry today and be presented on several sub themes:

1. Current condition and future plan about tunnel construction
2. Senior experiences of construction in complicated geographical situation
3. Lessons and experiences learn from domestic and overseas projects
4. Advanced ventilation and disaster prevention systems in tunnels
5. Risk analysis and decision-making techniques for large tunnel projects
6. Operation and safety management

The program has been designed as wide-ranging as possible with the presentations from senior experts in the industry. Networking platform are also provided for you to find the potential partners. We believe it will be a good opportunity for all the participants to study together, share experiences and promote business.

Contact Details:
Tel: 86 21 6247 8898
Fax:86 21 6247 8838
Email: Marketing@merisis-asia.com
Address:
Suite A, 7th Floor, Gold Seat, Jiu'an Plaza No.258 Tongren Rd. Shanghai 200040, PRC

22nd Annual Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP 2009), March 29 - April 2, 2009, Fort Worth, TX www.eegs.org/sageep/index.html

7th International Conference on GROUND IMPROVEMENT TECHNIQUES, 20 - 22 April 2009, Macau, China, www.cipremier.com/ciframeset.htm?index2.htm

The first International Symposium on Computational Geomechanics
Juan-les-Pins, Cote d'Azur, France, April 29 – May 1st, 2009
www.comgeo.org

The main objective of the Symposium is to provide a forum for engineers, researchers and students to exchange views and present their most recent contributions in the area of computational geomechanics. The scope of the Symposium is broad and contributions on advances in numerical analysis of geotechnical structures such as earth and rock fill dams, slopes, tunnels and underground caverns, as well as foundations for wind and wave energy harvesting structures, are welcome. Papers on computational engineering geology and geophysics related to issues in petroleum, mining and offshore engineering are also welcome. Constitutive modelling of geomaterials such as soil, rock, concrete, as well as structured media such as masonry, under both monotonic and repeated loading is also of relevance.

The Symposium will include invited theme lectures presented by distinguished researchers and engineers from the field of computational geomechanics. These will be complemented by presentations given by the Symposium participants. Ample time will be provided for formal and informal discussions.

All enquiries regarding the Symposium should be addressed to:

Prof. Gyan N. Pande
Center for Civil and Computational Engineering,
Engineering Building, Swansea University,
Singleton Park. Swansea SA2 8PP, Wales, UK.
Tel: +44 (0) 1792295517 Fax: +44 (0) 1792295516
E-mail: g.n.pande@swan.ac.uk
or
Prof. Stan Pietruszczak
Department of Civil Engineering,
McMaster University, Hamilton,
Ontario, Canada L8S 4L7.
Tel: +1 905-525-9140 ext. 24007, Fax: +1 905-529-9688
E-mail: pietrusz@mcmaster.ca

ERES – Seventh International Conference on Earthquake Resistant Engineering Structures, 11 - 13 May 2009, Cyprus, www2.wessex.ac.uk/09-conferences/eres-2009.html

SINOROCK2009 International Symposium on Rock Mechanics "Rock Characterization, Modelling and Engineering Design Methods", 19 - 22 May 2009, Hong Kong, www.hku.hk/sinorock

SINOROCK2009 Extra-terrestrial rock mechanics.

"Safe Tunnelling for the City and Environment" ITA-AITES World Tunnel Congress 2009 and the 35th ITA-AITES General Assembly, Budapest Congress and Word Trade Center, Budapest, Hungary, 23 - 28 May 2009 - www.wtc2009.org

Géotechnique SYMPOSIUM IN PRINT 2009, May 2009, www. geotechnique-ice.com

3rd International Conference on New Development in Rock Mechanics and Engineering & Sanya Forum for the Plan of City and City Construction (NDRM'2009), 24 - 26 May 2009, Sanya, Hainan Island, China, www.ndrm2008.cn

International Symposium on Prediction and Simulation Methods for Geohazard Mitigation IS-Kyoto, 25 – 27 May 2009, Kyoto, Japan, nakisuna2.kuciv.kyoto-u.ac.jp/tc34/is-kyoto

Geo-Environmental Engineering
9th Canada-France-Japan-Korea Joint Conference on Geo-Environmental Engineering
(GEE 2009)
The University of British Columbia
Vancouver, British Columbia, Canada
June 10-12, 2009
gee2009.civil.ubc.ca

Conference Objectives

The Geotechnical and Environmental professions have long been contributing to the understanding of contaminated site issues. This 3-day conference will bring together industry, regulatory, and academic professionals from the disciplines of geotechnical, geological, hydro-geological, mining, chemical and environmental engineering, biology, and toxicology to seek new solutions to technical and regulatory issues regarding geo-environmental engineering and contaminated sites.

- Conference Themes
- Policy and Application
- Site Characterization and Investigation
- Investigation Techniques (e.g. soil, groundwater)
- Environmental Sustainability
- Environmental Risk Assessment and Management
- Remediation of Contaminated sites and Related Topics
- Waste Containment Systems/Landfill/Waste Management
- Case Studies in Mining & Industrial Contaminated Sites
- Solutions to Global Environmental Problems
- Fate and Transport of Contaminants
- Other Related Geo-Environmental Science and Engineering Topics

Who should attend GEE 2009

- Site investigation and remediation personnel
- Engineers, scientists, and students involved in developing and implementing technologies to address and resolve geo-environmental problems
- Environmental lawyers
- Health, safety, environmental, geotechnical and operating professionals

Conference Chair

Loretta Li, Ph.D., P.Eng.
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2009 RETC
Rapid Excavation & Tunneling Conference & Exhibit
June 14-17, 2009, Las Vegas, Nevada, USA
www.retc.org

Tunneling is both an art and a highly scientific endeavor, requiring a broad range of capabilities and experience and a willingness to try state-of-the-art materials, equipment, and techniques. The RETC present current practice in exploration, design, contracting, earth pressure balance technology, microtunneling, sequential excavation, drill and blast tunneling, tunnel boring matchines, and shaft and incline construction for a wide range of projects ranging from individual tunnels to mega-projects.

Program Committee

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IS-Tokyo 2009 "International Conference on Performance-Based Design in Earthquake Geotechnical Engineering - from case history to practice", 15 – 17 June 2009, Tokyo, Japan, www.comp.tmu.ac.jp/IS-Tokyo

WCCE – ECCE – TCCE Joint Conference "EARTHQUAKE & TSUNAMI", 22 – 24 June 2009, Istanbul, Turkey - www.imo.org.tr/eqt2009

5th SYMPOSIUM ON STRAIT CROSSINGS
22-25 June 2009, Trondheim, Norway
www.straitcrossings.com

The first symposium on Strait Crossings took place in Stavanger, Norway in 1986. The second one was in Trondheim in 1990, the third one in Elesund in 1994 and the fourth in Bergen in 2001. This illustrates that it is just about time for the fifth one which will be held in Trondheim in 2009.

Strait Crossings 09 will address topics of interest for researchers, road administrations, planners, designers, contractors, operators and finance institutions engaged in the field of transport and communications. Together we will make it an interesting meeting place for professionals with an expectation of several hundred participants.

The background for the Norwegian interest in Strait Crossings is the presence of the numerous fjords and inhabited islands all along the coast. This has led to a demand for efficient and permanent crossings. As of today there are 26 sub sea road tunnels, about 60 bridges longer than 500 m and about 100 ferry connections along the coast.

A global view on transportation projects including strait crossings reveals an impressive activity. A large number of projects have recently been built or entered into service. Further large scale constructions are at the planning stage. Among these are projects that obviously will have to break new ground being dependent on research, new technology and experience for a successful accomplishment.

Further progress in the field of strait crossings depends on international cooperation. The Symposium on Strait Crossings is an important tool in this respect serving as an arena to share knowledge and experience. We will aim at fulfilling these goals and wish you welcome to the Fifth Symposium on Strait Crossings in Trondheim.

THEMES AND STRUCTURE OF THE SYMPOSIUM

Straits and sounds as well as inlets and fjords constitute restrictions on land transport and communications. The demand for more efficient connections is a challenge to the technological and engineering profession. Attention should also be given to cost estimation and financing of the projects.

The symposium aims at presenting existing as well as planned strait crossings. Large, complex projects and new technology for construction and maintenance are of special interest. Important aspects are the socio- economic, environmental and transport benefits from strait crossing projects.

The main themes for the symposium and tentative sessions within the themes are preliminary organized as follows:

GENERAL ASPECTS OF STRAIT CROSSINGS

- Financing
- Socio-economic effects
- Environmental challenges
- Transportation benefits
- Maintenance and operation
- Effects of climate factors and climate change

Symposium Secretariat
Strait Crossings 2009
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TCLEE 2009 – Lifeline Earthquake Engineering in a Multihazard Environment, June 28 – July 1, 2009, Oakland, California, USA, content.asce.org/conferences/tclee2009

The 3rd International Geotechnical Symposium (IGS2009) on Geotechnical Engineering for Disaster Prevention and Reduction, 22 - 25 July 2009, Harbin, China, igs2009.hit.edu.cn

GeoHunan International Conference: Challenges and Recent Advances in Pavement Technologies and Transportation Geotechnics, 3 – 6 August 2009, dchen@dot.state.tx.us

GeoAfrica 2009 "Geosynthetics For Africa", 2 – 4 September 2009, Cape Town, South Africa, www.gigsa.org

9-11 September 2009, Bochum, Germany
www.eurotun.rub.de

EURO:TUN 2009 will be held at Ruhr University Bochum, Germany, on September 9-11, 2009. The conference aims to provide a forum for scientists, developers and engineers to review and discuss novel research findings and to assess the suitability and robustness of advanced computational methods and models for the design and construction of tunnels.

Conference Objectives

Computational Methods have experienced increasing application in the design, construction and maintenance of underground infrastructure. Tunnelling is characterized by continuously changing environmental conditions, a relatively high degree of uncertainty of the underlying parameters and complex interactions between the tunnelling process and its environment. In addition, new tunnelling technologies and changing requirements for the construction of tunnels (e.g. larger diameters, tunnelling in difficult ground conditions, safety concerns, life time prognoses) are placing new challenges for adequate computational methods to be used for prognoses and decisions in all phases of the design, construction, service and maintenance of tunnels. To meet these challenges new solutions in the field of computational methods in tunnelling are required. Methods of computational mechanics are concerned, for example with the simulation of the excavation process, the realistic description of the soil/rock mass and the materials used for support, using advanced constitutive models. More recently, hybrid concepts aiming at an integration of advanced methods of computational intelligence and computational mechanics are being developed and applied to the optimisation of the design and the construction of underground structures.

Conference Objectives

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meet these challenges new solutions in the field of computational methods in tunnelling are required. Methods of computational mechanics are concerned, for example with the simulation of the excavation process, the realistic description of the soil/rock mass and the materials used for support, using advanced constitutive models. More recently, hybrid concepts aiming at an integration of advanced methods of computational intelligence and computational mechanics are being developed and applied to the optimisation of the design and the construction of underground structures.

Conference Topics

The conference will be concerned with innovative computational concepts and strategies for optimised design and construction of tunnels.

Topics to be addressed are:

- Spatial and temporal discretization strategies for realistic and efficient numerical analyses of tunnel excavations at various scales,
- Advanced inviscid as well as time-dependent, multi-phase and multi-scale constitutive models for support materials, soils and rocks,
- Methods for the prediction of tunnel face stability,
- New developments in boundary and hybrid methods,
- Procedures for parameter identification,
- Soft computing, visualisation, data mining, and expert systems in tunnelling,
- Sensitivity analysis, back analysis,
- Stochastic methods and methods based on fuzzy logic,
- Computational methods for life cycle analysis and maintenance,
- Risk analysis and
- Other related topics.

EURO:TUN 2009 is a follow-up conference after the first successful conference EURO:TUN 2007 held in Vienna, August 27-29th 2007. EURO:TUN 2009 is one of the Thematic Conferences of the European Community in Computational Methods in Applied Science (ECCOMAS).

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9th International Symposium on Tunnel Construction and Underground Structures
16-18 September 2009, Ljubljana, Slovenia
www.drustvo-dpgk.si

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ISRM 1st annual technical and cultural field trip
Florence, Italy, 21-22 September 2009

September 21st - Carrara marble quarries
September 22nd - Etruscan and last century mines

Organisation is through the University of Florence: Prof. Geol. Massimo Coli, Dept. Earth Sciences, and Prof. Geol. Carlo Alberto Garzonio, Dept. of Restoration and Conservation of Architectural Heritage.

The first annual ISRM technical field trip will be held in September 2009 in Italy and will be devoted to the Carrara marble quarries and the historical quarrying and mining activities which have taken place in Tuscany since Etruscan times (about 700 B.C.).

The excursion will start from Florence. On the first day, we will visit the Carrara Marble quarries from which Michelangelo took the marble for his masterpieces; we will be both in large open pit and underground quarries. In the evening, there will be time for a technical talk-around-the-table. Overnight will be spent in Versilia.

The second day will be devoted to visiting the XXth century disused mine of Gavorrano, and the Etruscan and medieval mine of the San Silvestro site of the Metalliferous Hills National Park. We will be back in Florence for dinner.

For accompanying persons, a rich tourist package in and around Florence will be provided.

The number of participants will be fixed at a minimum of 25 and a maximum of 50. The fee for the Field Trip, all inclusive from Monday morning to Tuesday evening will be €300 for ISRM Members and €400 for non-Members.

Further details concerning registration will be announced nearer the event.

17th International Conference on Soil Mechanics and Geotechnical Engineering "Future of Academia & Practice of Geotechnical Engineering", 5 – 9 October 2009, Alexandria, Egypt - www.2009icsmge-egypt.org

Sardinia 2009
Twelfth International Waste Management and Landfill Symposium
5 - 9 October 2009
S. Margherita di Pula (Cagliari), Sardinia, Italy
www.sardiniasymposium.it

Waste management strategies and technologies are currently under-going rapid development. The Sardinia Symposia were established in order to make knowledge and experiences in this field readily available. The Symposia have become the Reference Forum, where leading experts meet and present their research activities and experiences and discuss new concepts and technologies. The Symposia have witnessed and contributed world-wide to the development of modern waste management strategies such as the integrated waste management hierarchy, recovery of energy and sustainable landfilling. The Symposium will focus on innovative aspects of Sustainable Waste Management, presenting new technologies, describing the state of the art and related case studies, discussing controversial subjects, sharing experiences among different countries, and evaluating social and economical balances. The Symposium will include oral presentations, poster sessions, specialized sessions and specific workshops. Training courses will be offered by the IWWG under the supervision of international leading experts before the start of the Symposium.

The Symposium will be organised by IWWG - International Waste Working Group and CISA - Environmental Sanitary Engineering Center (IT) under the auspices of the IGS.

SYMPOSIUM THEMES

The Symposium will last five days and will deal with municipal and commercial solid waste, hazardous waste and special waste including the following topics:

- Waste policy and legislation
- Waste management strategies
- Public participation and education
- Waste management assessment and decision tools
- Waste characterisation as a tool for waste management strategies
- New concepts for waste collection
- Waste minimisation and recycling
- Biological treatment
- Thermal treatment and advanced conversion technologies
- Mechanical biological treatment prior to landfilling
- Sanitary landfilling
- Integrated wastewater and solid waste management
- Waste management and climate change
- Waste management in developing and low income countries
- Special sessions

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AMIREG 2009 - 3rd International Conference Advances in Resources & Hazardous Waste Management Towards Sustainable Development, 7 – 9 September 2009, heliotopos.conferences.gr/amireg2009

EURO:TUN 2009 Computational Methods in Tunnelling, 9 – 11 September 2009, Bochum, Germany, www.eurotun.rub.de/index.html

Geological Engineering Problems
in Major Construction Pojects
Chengdu, China, September 9th - 11th, 2009
www.iaeg2009.com

The China National Group of IAEG and Chengdu University of Technology will organize the International Symposium: "Geological Engineering Problems in Major Construction Projects" in Combination with the 7th Asian Regional Conference of IAEG in Chengdu, China from September 9th to September 11th in 2009.

The purpose of the conference is to provide a platform for exchanging and discussing the typical engineering-geological problems in major construction projects in different countries and to share the experience in order to promote the Engineering Geology self-development as well as to offer recommendations during the engineering construction process. The schedule of the symposium also includes planned visits to some typical projects for onsite discussion, and an engineering technology and equipment exhibition.

In addition, the IAEG council and executive meeting will be held during this occasion.

KEY THEMES

- Evaluation of the terrain stability and geo-hazards in geologically active regions
- Engineering Geological and Environmental Geological problems in basin-crossing water transfer projects
- Assessment of geological risks in large-scale construction projects
- Stability analysis of high rock slopes
- Mechanism and control of large-scale landslides
- Risk control of the geological environment and geohazards in mountainous cities
- Prediction of key engineering geological problems and geohazards in the construction of long, wide and deep tunnels
- Stability research on the foundations of high dams
- Use of underground space in complex geological conditions

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Progress - Potential – Plans
Lyon, France, 26-28 October 2009
www.hydropower-dams.com

Progress in refining planning methods for dams and hydro plants, in financing approaches, and in the technology at the heart of powerplants (to achieve efficiency, economy and safety) has led to a resurgence of activity worldwide. Public acceptance of hydro has also progressed considerably in recent years, with more widespread recognition of the inherent benefits of hydro.

Potential still remains, on a vast scale in many parts of the world, for new hydro development – in the regions where more capacity is most urgently needed. The potential for refurbishment and upgrading is also considerable worldwide, including in the HYDRO 2009 host country, France, where a major upgrading programme is now going ahead.

Plans to accelerate new hydro, pumped-storage and marine energy schemes, as well as to maximize the benefits of existing schemes by refurbishment, are clearly defined in many countries, and have recently been developing in others. Another vital aspect of planning to be discussed will be environmental protection, and safeguarding the interests of local stakeholders.

HYDRO 2009 will bring together planners, developers, owners and operators, environmental specialists, financiers, researchers, manufacturers and equipment suppliers for an exchange of expertise which will be constructive in furthering well planned hydropower development worldwide. As always, much emphasis will be placed on meeting the needs of the less developed countries; this will be reflected strongly throughout the programme.

HYDRO 2009 will be the 16th annual Hydro Conference to be organized by Aqua~Media International, in partnership with NetWork Events. The events have progressively increased in size and scope, and typically bring together delegations from more than 70 countries. The majority of delegates represent owners and operators; others are consulting engineers, financial institutions, contractors, researchers, equipment suppliers, and various specialists involved in the planning process. There is thus a constructive exchange of experience between countries at various stages in their hydropower development programmes.

Previous Conferences in this series have taken place in: Budapest, Hungary (1994); Barcelona, Spain (1995); Lausanne, Switzerland (1996); Portoroz, Slovenia (1997); Aix en Provence, France (1998); Gmunden, Austria (1999); Berne, Switzerland (2000); Riva del Garda, Italy (2001); Kiris, Turkey (2002); Dubrovnik, Croatia (2003); Porto, Portugal (2004); Villach, Austria (2005); Porto Carras, Greece (2006); Granada, Spain (2007); and Ljubljana, Slovenia (2008).

High level delegations from developing countries report on their needs and priorities; international finance institutes and development agencies set out their policies, and all those with a role to play in furthering well planned schemes join the debate. Plenary sessions feature keynote addresses and country reports; there are then several parallel tracks of sessions - generally covering: planning, project finance and economics; environmental and social aspects; and technology (civil engineering issues, innovations and developments in electromechanical equipment). In addition, there are workshops, inter-active debates, and regular side events hosted by national and international professional associations. The Exhibition provides an opportunity to review recent developments in technology and design techniques.

A full cultural and social programme, including receptions, music, a conference dinner, and lunches served in the Exhibition area, will provide extra networking opportunities over the three days in Lyon.

A number of special workshops, receptions and other side events are being planned.

THEMES FOR HYDRO 2009

World hydro potential and development

Sessions will be arranged to focus on regional issues, so that topics common to neighbouring countries can be addressed. Suggested subjects for submission are:

ASIA:

Review of current major schemes; Priorities for development over the next 5-10 years; Power trading; Large construction sites; Extreme climates; Challenges of complex sites; Flood mitigation and management; Rural electrification and small hydro.

AFRICA:

Capacity building and training needs; Potential and priorities for development; International collaboration; Regional initiatives; Review of current projects; Priorities in future planning.

LATIN AMERICA:

Potential and plans; Review of progress at current schemes; Regional initiatives; Experience with BOTs; Carbon trading; Large construction sites; Recent case studies.

EUROPE, NORTH AMERICA, AUSTRALASIA:

Refurbishment to enhance safety; Upgrading; Small and micro hydro; Pumped-storage development; EU Directives and impacts on hydro; Plans for new projects

Responsible planning: social and environmental issues and mitigation measures

Building trust among developers and affected people; Avoiding conflict through timely communication; Stakeholder involvement – policy or practice? Comparative analysis of mitigation measures (case studies); Innovative project design for environmental protection; Long-term environmental management strategies – measuring success.

Collaboration and partnerships

Regional studies and initiatives; Shared waterways; Power trading.

Efficient project implementation

Cost-effective design; Planning and scheduling to reduce construction time (innovative tools, review of experience); Complex logistics; Challenging sites.

Commercial aspects of hydro development

Financing: expectations of the private and public sectors; Innovative approaches and review of experience; Effects of global financial problems on hydro financing; Identifying, allocating and managing financial risk; Legal and contractual issues; Concessions; Procurement issues; Power sales and tariffs; Carbon trading experience.

Technical excellence

Research and development to enhance performance; Innovation in hydraulic and electrical machinery design; Manufacturing techniques; Quality control; Environmental protection; Operational issues; Condition monitoring and diagnostics; Repair and maintenance techniques; Challenging cases.

Innovation in the hydro business

Strategic planning; Innovative system management; New tools/approaches for planning, design, construction and operation.

Energy from the oceans

Potential and development plans; Barrage tidal schemes; Lagoon tidal schemes; Innovations in technology (civil works or equipment); In-stream systems; Wave power (R&D, operating experience and future prospects)

Global concerns

Water infrastructure for extreme climates; Climate change research; Transferring hydro expertise to young people (needs, incentives and innovative ideas); Keeping hydro competitive; Public awareness and communications; World financial situation

Contact details for **HYDRO 2009:**
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Email: mb@hydropower-dams.com

EUROCK'2009 Rock Engineering in Difficult Ground Conditions - Soft Rocks and Karst, 29 - 31 October 2009, Dubrovnik-Cavtat, Croatia, www.eurock2009.hr

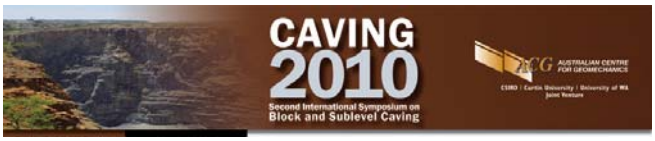
Submarine Mass Movements and Their Consequences, 4th International Symposium, Austin, Texas, November 8 – 11, 2009,
www.beg.utexas.edu/indassoc/dm2/Conference2009

5th Colloquium
"Rock Mechanics - Theory and Practice"
with "Vienna-Leopold-Müller Lecture"
November 26th and 27th , 2009

Themes:

- Mechanics of rock slopes and mass movements
- Mechanics of foundations in and on rock
- Mechanics of underground excavations in rock

Abstracts (with authors and preferred theme) to christine.cerny@tuwien.ac.at by January 31, 2009.



Second International Symposium on Block and Sublevel Caving
20 – 22 April 2010, Perth, Australia
www.caving2010.com

Initiated by the Australian Centre for Geomechanics, the Universidad of de los Andes, Chile and the University of the Witwatersrand, South Africa, the ACG looks forward to hosting the Second International Symposium on Block and Sublevel Caving for the first time in Australia. It is intended to run this seminar every four years, in between the MassMin Symposia (Lulea 2008, Sudbury 2012).

The growing popularity of caving methods around the world is largely due to the very low production cost and the intrinsic safety associated with this mining approach. It is often the only viable mining method for some of the lower grade massive orebodies that are becoming too deep for open pit mining.

Strategically, most medium and large mining companies are operating or planning to operate a caving mine. Codelco El Teniente mines in Chile and the LKAB Kiruna mine in Sweden are amongst the largest and most famous caving operations in the world. Australia's leading caving operations include Rio Tinto Northparkes mines, BHP Billiton Nickel West Perseverance mine and Newcrest's Telfer and Ridgeway gold mines.

Themes

- Open pit to underground mining transition
- Caving mechanics
- Fragmentation
- Ground support
- Rockburst and seismic risk
- Block and sublevel caving design and layouts
- Undercutting
- Closure and rehabilitation
- Case histories

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CPT'10 2nd International Symposium on Cone Penetration Testing, May 9-11, 2010, Huntington Beach, California, USA.

ITA – AITES 1010 World Tunnel Congress and 36th General Assembly "TUNNEL VISION TOWARDS 2020", Vancouver, Canada, May 14-20, 2010.

12ο Διεθνές Συνέδριο της Ελληνικής Γεωλογικής Εταιρείας

Πάτρα, 19-22 Μαΐου 2010
www.synedra.gr

Ο σκοπός του 12ου Συνεδρίου της ΕΓΕ είναι η ανάδειξη και η συζήτηση θεμάτων που αφορούν τομείς των Γεωεπιστημών όπως: Γεωλογικές Διεργασίες, Αλληλεπίδραση Ανθρώπου και Περιβάλλοντος, Φυσικοί Πόροι, Ενέργεια, Υδάτινοι Πόροι, Εκπαίδευση στις Γεωεπιστήμες, Βιώσιμη Ανάπτυξη κ.λπ. Στο πλαίσιο αυτών των θεματικών ενοτήτων θα συμπεριλαμβάνονται στο πρόγραμμα του συνεδρίου ειδικές ομιλίες, επιστημονικές εργασίες και ειδικές συνεδρίες από τις Επιτροπές της Ελληνικής Γεωλογικής Εταιρείας. Έμφαση θα δοθεί στο ρόλο των Γεωλογικών Διεργασιών στη Βιώσιμη Ανάπτυξη στην Ελλάδα και στην ευρύτερη περιοχή της Ανατολικής Μεσογείου.

Θεματολογία

1. GIS στις Γεωεπιστήμες
2. Αστική Γεωλογία
3. Βιομηχανικά Ορυκτά και Πετρώματα
4. Βιώσιμη Ανάπτυξη και Περιβάλλον
5. Γεωαρχαιολογία
6. Γεωεπιστήμες και Εκπαίδευση
7. Γεωθερμία
8. Γεωμορφολογία
9. Γεωτεκτονική
10. Γεώτοποι και Γεωδιατήρηση
11. Γεωφυσική
12. Γεωχημεία
13. Ενεργειακές Πηγές
14. Θαλάσσια Γεωλογία
15. Ιζηματολογία
16. Κοιτασματολογία
17. Κοιτασματολογικές Έρευνες
18. Νεοτεκτονική
19. Ορυκτολογία
20. Παλαιοντολογία
21. Παλαιοσεισμολογία
22. Περιβαλλοντική Γεωλογία
23. Πετρολογία
24. Σεισμολογία
25. Στρωματογραφία
26. Τεκτονική Γεωλογία
27. Τεχνική Γεωλογία και Γεωτεχνική Μηχανική
28. Υδρογεωλογία
29. Υδρολογία
30. Φυσικές Καταστροφές
31. Φυσική Γεωγραφία
32. Φωτογεωλογία
33. Ωκεανογραφία

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IX International Conference on Geosynthetics, Guarujá, Brazil, 23 – 27 May 2010 - www.igsbrasil.org.br/icg2010

May 24-29, 2010, San Diego, California, USA
5geoegconf2010.mst.edu

The Fifth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dyanmics will be held in San Diego, California, May 24-29, 2010, at the Marriott Mission Valley.

We anticipate participation of professionals from 40 or more countries from around the world to present their recent research findings. The exchange of information during the conference will advance the state of the art and practice in several areas and will give definitive direction to future work.

Earthquake, civil, structural and geotechnical engineers, geologists, scientist, teachers builders, contractors and other professionals worldwide are invited to contribute original and unpublished papers for publication in the proceedings and discussion at this conference.

Recent Developments and State of Practice on the Themes:

1a. "Dynamic Properties of Soils and Soil-Like Materials, Engineering Soil Parameters and Constitutive Relations"
1b. "New Field and Laboratory Methods and Results, Data Base, Large Scale Field Tests, Centrifuge Tests"
2. "Wave Propagation, Engineering Vibrations and Solutions, Vibrations of Machine Foundations, Blast, Traffic and Construction Vibrations, Vibration Absorption"
3a. "Engineering Seismology: Near Fault and Directivity Effects, Geologic Indicators of Rupture Direction, Geometric Effects on Ground Motions, Motion Parameters for Design, Borehole Arrays, Interpretation of Field Array Data, Site Amplification"
3b. "Local Site Effects: One Dimensional Wave Propagation Predictions and Measurements, Nonlinear versus Equivalent Linear Analysis, Effective Stress versus Total Stress Analysis"
4a. "Liquefaction and Seismically-Induced Settlement, Ground Failures, Seismic Studies of Kobe, Lima Peru, Chile, Pakistan, China, U.S. and other Recent Earthquakes, Spatial Liquefaction"
4b. "Stability and Displacement Performance of Slopes, Landfills and Earth Dams Under Earthquakes"
5a. "Soil-Structure Interaction under Dynamic Loading, for both Shallow and Deep Foundations"
5b. "Soil-Foundation Interaction Triggered by Seismic Faulting"
6a. "Seismic Analysis and Design of Retaining and Marine Structures, Field Studies on Retaining Walls in California, Japan and around the World"
6b. "Seismic Zonation: Earthquake Risk Assessment with Earthquake Risk Management, Microzonation Projects in California and Worldwide, Use of Building Codes to Reduce Earthquake Hazards"
7a. "Seismic Analysis and Retrofit of Foundations of Bridges and Other Sub-Structures, Seismic Retrofit Projects and Procedures in California"
7b. "Case Histories of Geotechnical Earthquake Engineering, Failures and Geotechnical Analysis of Recent Earthquakes"
7c. "Geotechnical Earthquake Engineering Issues in San Diego Region: Seismic Hazard, Onshore and Offshore Faulting, Near Fault and Directivity Effects, Liquefaction and Lateral Spread, Seismic Retrofit Projects, Seismic Design of Large Projects, Deep Canyon Fills, Landslides, Tsunamis."
8. "Model and Full-Scale Tests of Geotechnical Structures Including Centrifuge Tests, Recent Advances from Earthquake Simulation Facilities such as NEES, E-Defense, NCREE"
9. "Performance Based Design in Geotechnical Earthquake Engineering"

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International Conference Underground Construction Prague 2010 Transport and City Tunnels
14-16 June 2010, Prague, Czech Republic
www.ita-aites.cz

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ISRM Regional Symposium on Rock Mechanics, Lausane, Switzerland, 23-25 June 2010

Geologically Active
11th IAEG Congress
5-10 September 2010, Auckland, New Zealand
www.iaeg2010.com

Objectives

Our key objective in selecting a theme is that it will be relevant and encompass the full range of engineering geological practice to encourage participation from, and provide value to, practitioners from around the world.

We are watching with interest development of the discussion on Core Values and see the Congress as an opportunity to review progress in this area.

Engineering geology and geotechnical engineering go hand-in-hand in Australasia, and the New Zealand Geotechnical Society supports a close relationship between the sister societies (IAEG, ISRM and ISSMGE). 2010 is the 10th anniversary of a very successful conference held in Australia that celebrated this intrinsic inter-relationship, GeoEng 2000. We would like to bring to the 11th IAEG Congress a 'flavour' of GeoEng, while maintaining a core engineering geological 'taste'. We expect this Congress to attract a range of practitioners from both geological and engineering backgrounds.

Geologically Active

New Zealand sits astride the leading edge of the Australian Plate, where it converges with the Pacific basin in a mobile margin of subduction, shearing, volcanism and uplift.

A land of mountains, faults, earthquakes, volcanoes, weak rock, landslides, rivers and coastlines – this is Aotearoa; this land is *Geologically Active*. This environment poses special challenges for all engineering geologists and geotechnical specialists who practice here and in mobile margins of the Pacific and Southeast Asia.

The theme also has relevance to a wider international audience. As worldwide we begin to populate steeper and more marginal terrain, the demand for specialist skills and judgement that is a true mix of engineering and geology is growing. We in the IAEG are uniquely placed to meet this challenge. The 11th IAEG Congress in Auckland, Aotearoa New Zealand, will examine the contribution we make as a profession, to safe and sustainable communities in Geologically Active areas around the globe.

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Seville (Spain) 13th - 15th October 2010
www.2010pavimentosdehormigon.org

The Spanish Cement Association (OFICEMEN), the Spanish Institute of Cement and its Applications (IECA), the European Concrete Paving Association (EUPAVE) and the World Road Association (PIARC) are pleased to invite you to take part in the eleventh edition of the **11th INTERNATIONAL SYMPOSIUM ON CONCRETE ROADS** where the emphasis lies on the exchange of knowledge and experience.

"The answer to new challenges": climate change, economical constraints, skills shortages, rising oil prices – no matter what obstacles our fast-changing world presents, concrete roads can meet the challenge. Careful planning, cost efficient designs, sustainable construction and focused maintenance are key issues when discussing concrete roads. Past experience has given us a wealth of knowledge to build on – modern day alternatives and innovative special applications provide direction for the future.

The technical sessions of this symposium will assist the participants to find the answers to new challenges. Be an informed part of a quality roads infrastructure future in concrete!

Themes of the Symposium

Theme 1: Pavement design-planningevaluation

- Decision support systems
- Life cycle cost
- Evaluation techniques
- Long-life pavements
- Standards & specifications

Theme 2: Sustainable construction

- Environmental-friendly pavements
- Low CO2
- Fuel consumption
- Recycling
- Heat island effect – Albedo
- Safety – skid resistance
- Low noise
- Reduction hindrance to users
- Energy considerations
- Composite pavements
- Permeable pavements
- Climate change
- Pollution reductions

Theme 3: Techniques for good maintenance, repair & rehabilitation

- Fast-track, early opening
- (Ultra)(Thin) white topping
- Overlays-inlays
- Precast slabs

Theme 4: Alternative & special applications

- Tunnel & bridge pavements
- Bus & tram
- Airports
- Industrial pavements
- Aesthetical concrete
- Concrete safety barriers
- Ports-harbors
- Cycle tracks
- New materials (Ultra high performance concrete (UHPC))
- Innovative pavements.

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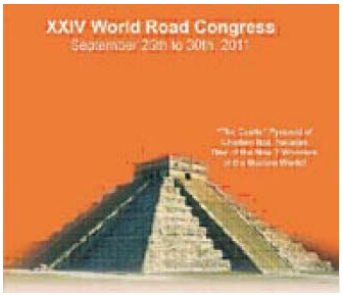
ARMS - 6

2010 Asian Rock Mechanics Symposium
New Delhi, India, 23-27 October 2010
www.cbip.org

The Indian National Group of the ISRM and the Central Board for Irrigation an Power, will host the International Symposium on Advances in Rock Engineering, which will be the 2010 Asian Rock Mechanics Symposium, ARMS-6. The conference will take place in New Delhi, 23-27 October 2010. The ISRM Council approved this conference as the 2010 ISRM International Symposium.

XV African Regional Conference on Soil Mechanics and Geotechnical Engineering Maputo, Mozambique, 13 - 16 June 2011.

XV European Conference on Soil Mechanics and Geotechnical Engineering, 12 – 15 September 2011, Athens, Greece.



24th WORLD ROAD CONGRESS
25-30 September 2011, Mexico City, Mexico

Beijing 2011, 12th International Congress on Rock Mechanics, 16 – 21 October 2011, Beijing, China, www.isrm2011.com

ΕΝΔΙΑΦΕΡΟΝΤΑ

«Βομβάρδισαν» με ζωή τη Γη

Οι μετεωρίτες έδωσαν πρωταρχικά συστατικά στοιχεία της ζωής

Μετά την πρόσκρουσή τους στους αρχέγονους ωκεανούς, δημιουργήθηκαν βασικά συστατικά στοιχεία, όπως τα αμινοξέα, που με το πέρασμα του χρόνου οδήγησαν στην εμφάνιση των πρώτων έμβιων οργανισμών

«Ταξιδιώτης από το Διάστημα» φαίνεται πως ήταν η ζωή που εμφανίστηκε στη Γη πριν από περίπου 3,8 δισεκατομμύρια χρόνια. Ιάπωνες επιστήμονες υποστηρίζουν ότι από την πρόσκρουση μετεωριτών στους αρχέγονους ωκεανούς, δημιουργήθηκαν βασικά συστατικά στοιχεία, όπως τα αμινοξέα, που με το πέρασμα του χρόνου οδήγησαν στην εμφάνιση των πρώτων έμβιων οργανισμών.

Μέχρι σήμερα παραμένουν αδιευκρίνιστες οι συνθήκες που επικρατούσαν στην πρώιμη Γη, όταν έκαναν την εμφάνισή τους οργανικά μόρια τα οποία αποτέλεσαν τους πρώτους θύλακες ζωής. Ανάμεσα στις θεωρίες, που έχουν κατά καιρούς διατυπωθεί αναφορικά με τα αίτια που πυροδότησαν την ανάπτυξη ζωής στον πλανήτη μας, είναι και ο βομβαρδισμός από μετεωρίτες. Εκείνη την εποχή άλλωστε, οι μετεωρίτες βομβάρδιζαν τη Γη με συχνότητα έως και 1.000 φορές μεγαλύτερη από σήμερα. Στο Πανεπιστήμιο Τοχούκου στο Σεντάϊ της Ιαπωνίας, μια ομάδα ερευνητών επιχείρησε να προσομοιώσει την πρόσκρουση ενός μετεωρίτη πάνω σε έναν αρχέγονο ωκεανό και να διαπιστώσει αν θα δημιουργούνταν πρωταρχικά συστατικά στοιχεία της ζωής.

Το πείραμα. Στο πείραμά τους, τα αποτελέσματα του οποίου δημοσιεύονται στην επιθεώρηση Nature Geoscience, χρησιμοποίησαν το ορυκτό χονδρίτη αλλά και ποσότητες άνθρακα, που είναι δύο υλικά από τα οποία αποτελούνται ως επί το πλείστον οι μετεωρίτες. Για να πραγματοποιήσουν την εικονική πρόσκρουση, προώθησαν τα χημικά αυτά στοιχεία σε μεγάλη ταχύτητα, αφού προηγουμένως τα είχαν θερμάνει στους 450 βαθμούς Κελσίου για έξι ώρες, ώστε να εξαλείψουν κάθε οργανικό ίχνος. Όταν στη συνέχεια προσομοίωσαν την πρόσκρουση στο υδάτινο περιβάλλον του ωκεανού, διαπίστωσαν ότι δημιουργήθηκαν μια σειρά από οργανικά μόρια, όπως λιπαρά οξέα και αμινοξέα. Τόνισαν μάλιστα ότι αν διαφοροποιούσαν τις συνθήκες πρόσκρουσης, είναι πολύ πιθανό να δημιουργούνταν και άλλα είδη οργανικών μορίων.

Σύμφωνα με τον επικεφαλής της έρευνας δρ. Γιοσιχίρο Φουρουκάβα, «η μεγάλη πλειονότητα των οργανικών μορίων που είναι απαραίτητα για την αρχή της ζωής, δημιουργήθηκε κατά την πτώση στον ωκεανό εξωγήινων αντικειμένων που περιείχαν στερεό άνθρακα. Η παρουσία ενός ωκεανού ήταν απαραίτητη προϋπόθεση για την επαρκή υδρογόνωση του άνθρακα και την επακόλουθη δημιουργία των βιομορίων».

Τα νέφη υδρογόνου. Τον τελευταίο καιρό υπάρχουν ολοένα και περισσότερα στοιχεία, που ενδυναμώνουν τη θεωρία της προέλευσης της ζωής από το Διάστημα. Ο καθηγητής Αστροφυσικής στο Πανεπιστήμιο Πατρών και διευθυντής του Ινστιτούτου Αστρονομίας και Αστροφυσικής του Εθνικού Αστεροσκοπείου, Χρήστος Γούδης, λέει στα «ΝΕΑ» ότι «έχουμε παρατηρήσει πως μέσα σε νέφη υδρογόνου που υπάρχουν στο Διάστημα, περιλαμβάνονται μόρια όπως τα αμινοξέα και ίσως κάποιες άλλες χημικές ενώσεις, οι οποίες ταξιδεύουν από άστρο σε άστρο και από πλανήτη σε πλανήτη με τη βοήθεια μετεωριτών ή κομητών».

Ο κ. Χ. Γούδης προσθέτει ότι είναι πολύ πιθανό αυτά τα πρωτογενή δομικά στοιχεία της ζωής να διασκορπίστηκαν στην πρώιμη Γη και μέσα από ένα πλέγμα φυσικών διεργασιών να ξεπήδησαν οι πρώτες απλές μορφές ζωής. Άλλωστε, η ζωή στον πλανήτη μας φαίνεται πως έχει αρχίσει πολύ νωρίς, όταν η Γη είχε ηλικία περί τα 700 εκατομμύρια χρόνια. Πολύ πρόσφατα όμως, οι προσκρούσεις μετεωριτών έχουν συνδεθεί και με την εξέλιξη της ζωής. Η θεωρία αυτή, όπως λέει ο κ. Γούδης, αναφέρεται στο φαινόμενο των λεγόμενων γενετικών καταιγίδων. Σύμφωνα με τη θεωρία, έμβιοι οργανισμοί που εμφυτεύονται στη Γη από τις συνεχείς πτώσεις μετεωριτών, αλληλεπιδρούν με τους οργανισμούς που υπάρχουν στον πλανήτη μας και οδηγούν είτε στον αφανισμό ειδών, είτε στη δημιουργία νέων μορφών ζωής που εμφανίζονται ξαφνικά.

Τα υλικά των μετεωριτών αποτελούν τον φλοιό της Γης

Οι μετεωρίτες μπορεί να είναι κομμάτια αστεροειδών που συγκρούσθηκαν μεταξύ τους. Η εξέταση των θραυσμάτων τους έχει δείξει ότι υπάρχουν κυρίως δύο είδη μετεωριτών: οι σιδηρούχοι και οι πετρώδεις. Στην πρώτη περίπτωση αποτελούνται συνήθως κατά 90% από σίδηρο, 8,5% από νικέλιο και 0,6% από κοβάλτιο. Στη δεύτερη περίπτωση αποτελούνται από οξυγόνο (36%), από σίδηρο (26%), από πυρίτιο(18%), από μαγνήσιο (14%), από αλουμίνιο (1,5%) κ.λπ. Όλα αυτά τα υλικά, βεβαίως, δεν διαφέρουν από εκείνα που αποτελούν τον φλοιό της Γης, τα οποία είναι το οξυγόνο, το πυρίτιο, το αλουμίνιο, το σίδηρο, το ασβέστιο, το νάτριο, το κάλιο και το μαγνήσιο. Όπως λέει στα «ΝΕΑ» ο διευθυντής του Πλανηταρίου του Ιδρύματος Ευγενίδου Διονύσης Σιμόπουλος, «όταν οι μετεωρίτες εισέρχονται στη γήινη ατμόσφαιρα, οι ταχύτητές τους κυμαίνονται από 36.000 έως και 250.000 χιλιόμετρα την ώρα. Στη συνέχεια επιβραδύνονται και η ταχύτητά τους μειώνεται σε μερικές εκατοντάδες χιλιόμετρα την ώρα, για να καταλήξουν στην επιφάνεια της Γης με ένα χαρακτηριστικό σάλπισμα. Εν τούτοις, τα πολύ μεγάλα κομμάτια επιβραδύνονται ελάχιστα και γι' αυτό δημιουργούν κρατήρες». Τα πετρώδη, φυσικά, μετεωροειδή, με διάμετρο μέχρι 10 μέτρα, εκρήγνυνται στη διάρκεια της πτώσης τους μέσα στη γήινη ατμόσφαιρα πριν φτάσουν στην επιφάνεια της Γης, αν και η ενέργεια που εκλύεται είναι ίση με την έκρηξη πέντε ατομικών βομβών τύπου Χιροσίμα. Τα κομμάτια, όμως, των σιδηρούχων μετεωριτών, πολλές φορές φθάνουν μέχρι τη Γη.

Χιλιάδες αστεροειδείς «παραμονεύουν» ανάμεσα στον Άρη και τον Δία

Οι αστεροειδείς είναι υπολείμματα από την εποχή της δημιουργίας του ηλιακού μας συστήματος, πριν από 5 έως 4 δισεκατομμύρια χρόνια. Χιλιάδες αστεροειδείς βρίσκονται στη λεγόμενη Ζώνη των Αστεροειδών ανάμεσα στον Άρη και τον Δία. Η Ζώνη απέχει από τον πλανήτη μας περίπου 2,7 φορές περισσότερο από την απόσταση Γης- Ηλίου. Το μήκος των αστεροειδών ποικίλλει από 30- 40 μέτρα μέχρι και 50 χιλιόμετρα. Ένας τόσο μεγάλος αστεροειδής είναι η Ίδα, η οποία ανακαλύφθηκε το 1993 από τη διαστημοσυσκευή «Γαλιλαίος». Σύμφωνα με κάποιες εκτιμήσεις, υπάρχουν περίπου 100.000 αστεροειδείς, οι οποίοι είναι αρκετά φωτεινοί ώστε να μπορούν να φωτογραφηθούν από τη Γη με τη βοήθεια επίγειων τηλεσκοπίων. Όπως λέει στα «ΝΕΑ» ο διευθυντής του Πλανηταρίου του Ιδρύματος Ευγενίδου Διονύσης Σιμόπουλος, «οι μικροί αστεροειδείς, με μέγεθος από 100 έως 1.000 μέτρα, συγκρούονται με τη Γη μία φορά κάθε 250.000 χρόνια.

Η στατιστική μάς λέει, επίσης, ότι η Γη συγκρούεται με έναν αστεροειδή μεγαλύτερο από ένα χιλιόμετρο, μία ή δύο φορές κάθε ένα εκατομμύριο χρόνια, ενώ πτώσεις αστεροειδών με μέγεθος σαν αυτόν, που ίσως να αφάνισε τους δεινόσαυρους, αναμένονται μία φορά κάθε 100 εκατομμύρια χρόνια».

(ΤΑ ΝΕΑ online, Στέφανος Κρίκκης - skrik@dolnet.gr, Εύη Ελευθεριάδου - elefthe@dolnet.gr, Σάββατο 13 Δεκεμβρίου 2008)

ΝΕΑ ΑΠΟ ΤΟΝ ΚΟΣΜΟ

Debris from Crossrail, Europe's largest construction project, is to be used to create one of the continent's biggest new reserves for wild birds.

The 73-mile London Crossrail project will link Heathrow in the west to Shenfield in the east in Europe's largest civil engineering project. However the project, which is due to start in 2010, was struggling to find a way to reuse the material excavated from building tunnels.

Meanwhile the RSPB were looking for help in building 2.5 square miles of habitat for birds in Wallasea Island near the Thames Gateway.

Now the two projects have come together.

Clay, chalk, sand and gravel taken from the construction of Crossrail will be transferred by ship to Wallasea Island to build the reserve.

Graham Wynne, chief executive of the RSPB, said the agreement will help make building the £12 million reserve possible.

"Wallasea will be the RSPB's most ambitious and innovative habitat recreation scheme. It will create a huge new area for birds and other wildlife whose existing habitats are being damaged and lost because of climate change.

"This is a ground-breaking deal between one of the UK's leading enterprises and an environmental charity. It is absolutely wonderful news for wildlife."

The RSPB will next week submit a planning application to Essex County Council to transform Wallasea Island with Crossrail material over five to ten years. Public consultation will start in December and Essex County Council is expected to reach a decision in the spring.

Crossrail material will be used to raise land on Wallasea, creating hillocks and dips into which seawater will ebb and flow.

Calorie-rich salt marsh, mudflats and other coastal habitats should attract rare and exotic birds such as spoonbills and black-winged stilts.

Simon Phillips, Crossrail Construction Liaison Manager, said the company was glad to give the debris to the RSPB.

He said: "We have been looking for a good way to reuse the excavated material from Crossrail for some time and we believe that we could not have found a better home for it than the RSPB scheme at Wallasea Island."

(TELEGRAPH (LONDON), Louise Gray, Environment Correspondent, Saturday 22 November 2008)

Η οικονομική κρίση κτυπά και τους πολύ πλούσιους... Trump Tower put on hold

Dubai, UAE-based property developer Nakheel has suspended work on its Trump Tower project. The AED 2.9 billion (US$ 790 million), 62 storey, 270 m high structure is intended as the centrepiece of the company's Palm Jumeirah artificial island scheme off the coast of Dubai.

The contractor for the project is a consortium comprising the Al Habtoor-Leighton joint venture and Murray & Roberts. Both report that the suspension is a temporary measure by Nakheel until the current turmoil in the global economic system stabilises. Nakheel itself has made no comment on the suspension.

The contractors also report that Nakheel will cover all the contractors' expenses to date on the project. Neither expects the suspension of the scheme to have a material impact on its financial results this year.

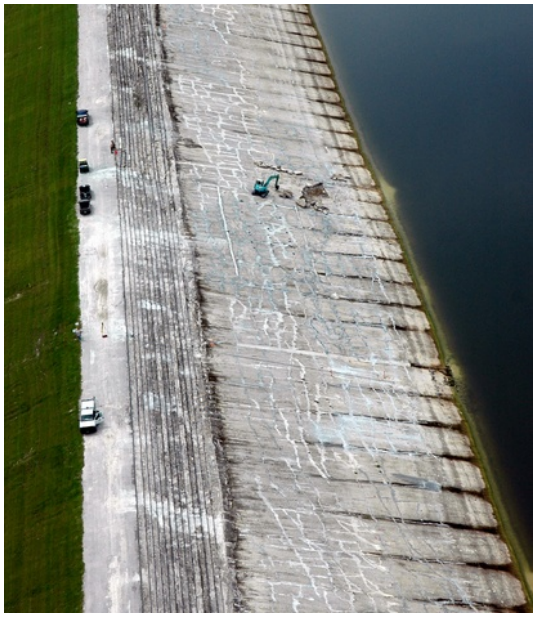
(KHL's WORLD CONSTRUCTION WEEK, Chris Sleight, 3 December 2008)

Tampa Bay Water Sues Over Reservoir Cracks

Tampa Bay Water filed a lawsuit today against three companies seeking compensation for cracks that have damaged the walls of the C.W. "Bill" Young Regional Reservoir in south Hillsborough County.

The lawsuit alleges the cracks are the result of a faulty design by HDR Engineering Inc., that Barnard Construction Co. failed to build the reservoir according to the design, and cites poor construction maintenance by Construction Dynamics Group.

Crews work near cracks at the Bill Young Reservoir in east Tampa. News Channel 8 photo by PAUL LAMISON



"We didn't get what we paid for, and we plan to hold the companies responsible for design and construction accountable for their work," said Gerald Seeber, general manager of Tampa Bay Water. "We don't expect the ratepayers to bail out the contractors."

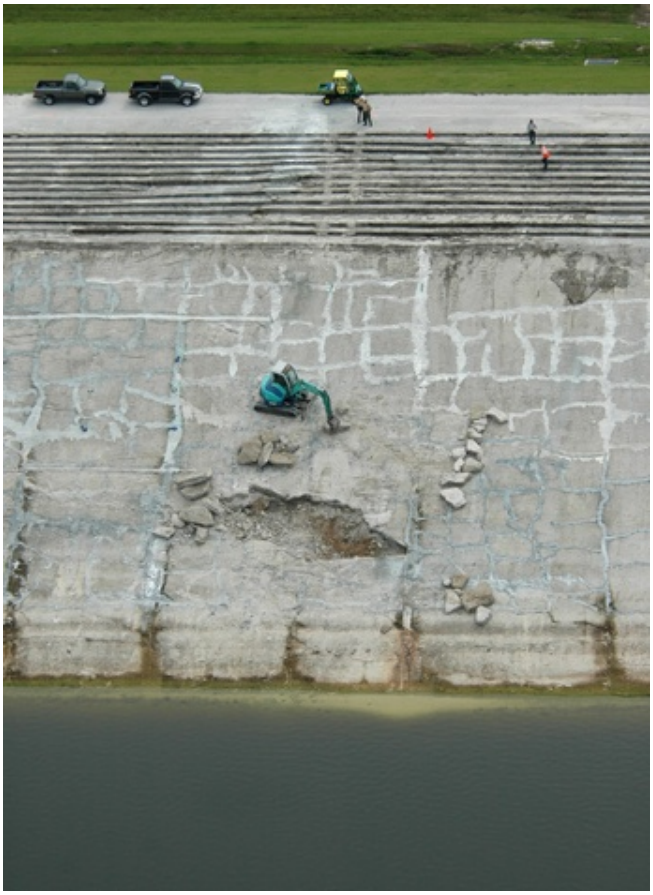
Cracks, some larger than those found last year, have been found in soil cement that covers the inside embankments of Bill Young Reservoir. Tribune photo by ROBERT BURKE

Ed Davis, who's with Tampa Bay Water, looks into a crack found in soil cement that covers the inside embankments of the Bill Young Reservoir. This is the largest crack at about 6in wide and 18 inches deep. Tribune photo by ROBERT BURKE

The lawsuit does not ask for specific monetary damages. The utility has spent about $1 million so far investigating and filling the cracks. Seeber said the costs could rise to $2 million by May. All of that, he said, is considered a temporary fix.

The cracks have had engineers puzzled since they first appeared in December 2006. The latest theory is that water underneath the soil-cement inner wall is not draining adequately.

"The water that saturates that soil wedge isn't leaving and falling through the soil as quickly as it should," he said. "That differential in water pressure is what we're addressing, and that is what we believe is causing the cracking."



Seeber said Tampa Bay Water engineers should be able to pinpoint the exact cause of the cracks and have a preliminary plan to repair them by June. Constructing a permanent fix may not be completed until 2013.

"That process of designing and constructing a fix will take us about four-and-a-half to five years," Seeber said.

The $146 million reservoir went into operation in June 2005. Larger-than-expected cracks first appeared in December 2006. Some measured 4 inches wide and up to 300 feet long. Tampa Bay Water poured a grout mixture into the cracks. In many cases, the repairs did not hold.

After the holidays, Black & Veatch, the agency's system engineer, plans to conduct ground-penetrating radar tests around the perimeter of the reservoir. Engineers want to know if the dirt lying beneath the soil cement has eroded away. If so, they need to repair any voids. The tests will cost the agency $191,000.

Reporter Mike Salinero contributed to this report. Steve Andrews can be reached at (813) 221-5779.

(Steve Andrews, News Channel 8, December 10, 2008 / ASCE SmartBrief December 10 2008)

Geothermal energy is clean, but requires high startup costs, experts say

Geothermal energy captures heat below the surface of the Earth to generate electricity, and 8,000 megawatts of geo-thermal electricity now are produced around the world. California currently has more geothermal power online than any other state, with geothermal energy accounting for about 5% of its electricity. Experts note that geothermal energy is very clean and abundant, but requires high startup costs. LiveScience.com

The Facts

An extraordinary amount of heat is trapped below Earth's surface, as erupting volcanoes show with their violence. Geothermal energy seeks to use this heat to generate electricity and warm up buildings and roads.

Roughly 8,000 megawatts of geothermal electricity are currently produced around the world, including about 2,800 megawatts in the United States, or less than one-half of 1 percent of the electricity the nation produces. There are three kinds of geothermal plants, which all rely on hot vapors to help drive electric turbines.

First, dry steam plants use steam from underground, which arises when water seeps into the Earth's crust and gets heated up. This is the oldest type of geothermal plant, first used in Larderello, Italy, in 1904 and still effective today. Nowadays, dry steam plants at The Geysers in Northern California represent the largest single generator of geothermal power in the world, according to the U.S. Department of Energy, with a net capacity of roughly 725 megawatts, enough to power 725,000 homes.

Next, flash steam plants draw up super-hot high-pressure water. When depressurized, this water then rapidly vaporizes or "flashes" into steam.

Last, binary cycle plants flows moderately hot geothermal water past another fluid such as isobutane, which boils at temperatures much lower than water. This fluid absorbs the heat, flashing to vapor used to drive turbines. Such moderately hot water is by far the most common resource, and most geothermal plants in the future will be binary cycle, according to the U.S. Department of Energy.

In California, the state with the largest amount of geothermal power online, geothermal energy accounts for roughly 5 percent of its electricity, while Iceland and El Salvador each use geothermal plants to supply roughly a quarter of their electricity, according to the Union of Concerned Scientists.

In addition to geothermal plants, geothermal heat pumps can be used to heat or even cool residential and commercial buildings. By the end of 2005, more than 600,000 geothermal heat pumps were installed in the United States, with new installations happening at a rate of 50,000 to 60,000 a year, according to the Geothermal Energy Association. "That's a lot of usage there, but it's still small compared with the overall U.S. heating and cooling market," said Cliff Chen, senior energy analyst for the Union of Concerned Scientists, a science advocacy group.

The principle of geothermal heat pumps is simple. Nearly everywhere, the upper 10 feet of the Earth's surface maintains a nearly constant temperature between 50 and 60 degrees Fahrenheit (10 and 16 degrees Celsius), making it warmer than the air above it during the winter and cooler in the summer. Geothermal heat pumps use pipes filled with water or a water-antifreeze mixture to absorb or release warmth.

A number of cities also pipe hot spring water under roads and sidewalks to melt snow and ice.

Pros

Geothermal energy is very clean. Geothermal fields produce just one-sixth of the carbon dioxide that a relatively clean natural-gas-fueled power plant generates, and very little if any of the nitrogen oxides or sulfur-bearing gases spewed out by coal plants that result in acid rain and smog, according to the U.S. Department of Energy. Binary cycle plants are closed loops, essentially releasing no emissions.

Also, geothermal energy is abundant and constantly available 24 hours a day, unlike wind energy, which depends on fickle breezes, or solar energy, which does not work well in the dark. And it is homegrown, making nations less dependent on foreign oil.

Geothermal energy is also well-proven. "The Geysers unit in California has been operating for more than 40 years," Chen said. "We have a lot of experience with this technology. It's not some pie-in-the-sky technical concept that's decades away from coming to fruition — it's being used right now."

Since geothermal energy comes from underground, geothermal plants also do not take up much space. "This minimizes the visual impact these can have in scenic areas," Chen noted.

Cons

Geothermal energy requires a lot of money up front before energy starts getting produced, roughly $2,500 per installed kilowatt in the United States, according to the U.S. Department of Energy. "It also requires relatively long lead times — we're talking three years minimum, often more like five," Chen said. "That's because you need to do some prospecting first, drill tests to look for the best places.

Geothermal plants do rely on hot steam or water from underground, which can deplete over time. To recharge The Geysers, wastewater from the city of Santa Rosa, Calif., is now getting piped into the geothermal field. "Injecting water into geothermal facilities can keep production up if that's the economically feasible thing to do," Chen said. "At The Geysers, it was — at others, it may not make sense. You might have to retire facilities if production declines past a certain level."

The best geothermal reservoirs are located in volcanically or seismically active places, such as the western United States, Alaska and Hawaii. It may be of limited use elsewhere, meaning it might just account for 20,000 to 30,000 megawatts at most in the United States, or roughly 4 percent of its existing capacity. "That's much less than the hundreds of thousands of megawatts or even millions that solar and wind potentially can generate," Chen said.

Still, advances in geothermal energy could make it more widely available. Enhanced geothermal systems, which drill miles down to access hot dry rock or magma, could lead to a 40-fold increase over present geothermal power generating capacity, or more than 100,000 megawatts, according to the U.S. Department of Energy.

However, such enhanced geothermal systems are not without risk. One site triggered four earthquakes in Basel, Switzerland, ranging from 3.1 to 3.4 on the Richter scale. Experts insist that site was not picked correctly, and that quakes should not be a concern in properly chosen locations.

(Charles Q. Choi, LiveScience, 10 December 2008 / ASCE SmartBrief December 10 2008)

Chinese city to shorten skyscrapers around lake

Many Chinese cities have raced to the top, vying with each other to build the tallest and shiniest skyscrapers. Hangzhou is going in a radically different direction - down. It plans to lop floors off exclusive hotels, a television tower and other lakeside buildings in an attempt to win coveted Unesco world heritage status.

The 2,000-year-old city in Zhejiang, east China, is famed as one of the country's most beautiful. But urban development has blighted its scenery, leading officials to prune some of the latest additions to its landscape.

Hangzhou. Photograph: Alamy

China applied 12 years ago for the area around West Lake to be named as a heritage site to boost tourism. It is often packed with domestic visitors at peak season, but is less well-known to foreign travellers. Unesco requires historic sites to be kept intact, and the 40m yuan (£4m) resizing plan is the latest element in Hangzhou's attempts to beautify the site.

The China Daily newspaper said all buildings more than 24 metres (79ft) tall on the lake's eastern shore would be shortened. A notice posted on the city government's website said it would require taking floors off lakeside complexes, including the seven-storey east wing of the Shangri-La hotel, where suites cost thousands of pounds a night.

Wang Shuifa, who will head the redevelopment project, told the official China News Service news agency: "We have hired foreign firms to draft detailed plans of how to reduce the height of the Shangri-La, whose owners will be compensated."

A spokeswoman for the 382-room hotel told Associated Press: "We haven't received any order or notice about it. We're also very concerned and will pay close attention to this." Other structures named in the notice include the Huabei hotel and a television tower.

Hangzhou is fabled throughout China for its beauty. One saying observes that in the heavens there is paradise, while on earth there are Suzhou and Hangzhou. Another urges people to be "born in Suzhou, live in Hangzhou, eat in Guangzhou and die in Liuzhou".

Wang Chuanyue, a professor of architecture at Peking University, said increasingly numerous tall buildings were making the lake look smaller, detracting from its beauty. Planners also intend to remove some smaller commercial buildings around the lake.

Only Italy and Spain boast more world heritage sites than China. It has 37, including the Forbidden City and the Great Wall.

(Tania Branigan, The Guardian, Friday 12 December 2008 / ASCE SmartBrief December 12, 2008)

Hydropower reemerges as a viable alternative to fossil fuels

The growing emphasis on clean energy and the high cost of coal has renewed interest in hydropower. Pennsylvania Power and Light is among the utilities investing in hydropower, and it will spend $350 million on what will be the first new hydroelectric plant in the East in 20 years. delawareonline/USA Today.

HOLTWOOD, Pa. -- The Holtwood Hydroelectric Dam on the Susquehanna River here hasn't changed much since it cranked up in 1910.

Outside, gulls perch on the crest of the dam wall above a picturesque waterfall as a lone boater skims across a serene lake.

Inside the long, narrow powerhouse lined with neoclassic arches and peeling green-and-white walls, 10 hulking, steel-encased generators emit a shrill hum. From below comes a steady, subway-train-like rumble -- the cascade of water down the plant's sloping walls before it hurtles into turbines at 240,000 gallons per second.

Workhorses like the 109-megawatt Holtwood, which powers 90,000 homes, have been criticized by environmentalists for the hazard they present to fish. They've been nearly forgotten amid the rush to trendier forms of renewable energy, such as wind and solar.

But hydropower, the oldest and by far most widely used alternative energy, is quietly making a comeback spurred by a scramble for clean energy and the high costs of fossil fuels such as coal and natural gas.

Pennsylvania Power and Light is spending $350 million to build a sleek new powerhouse at Holtwood, the first new hydroelectric plant in the East in two decades. It will house just two sets of larger turbines and generators but boast a capacity of 125 megawatts, enough to light 100,000 homes, thanks to new, more efficient technology.

The addition is part of the biggest hydropower expansion since the 1980s. Utilities are proposing more than 70 projects that would boost hydroelectric capacity at least 11,000 megawatts, or 11 percent, over the next decade, according to MWH, a hydro engineering firm, and Hydro Review magazine.

"You're getting good, clean energy," says Linda Church Ciocci, head of the National Hydropower Association. "It's domestic, it's affordable, it's reliable."

In the early 1900s, hydropower was the dominant source of the country's electricity, a status solidified by massive federal projects such as Hoover Dam in the Southwest and Grand Coulee Dam in Washington state.

As recently as the 1940s, hydropower accounted for 42 percent of electricity production. But by the latter part of the century, developers had tapped the most mountainous regions -- many in the Northwest -- whose steep inclines supply the strongest river flows. Hydropower works when falling water spins turbines, which turn generators. Of the 80,000 U.S. dams, only 2,400 have hydro plants. Hydropower today provides 10 percent of U.S. electricity generation.

But with coal prices doubling since last year, big hydropower additions "are now economically viable," says MWH Vice President Donald Erpenbeck. Rather than building new dams -- which are expensive and time-consuming -- developers are adding generators to dams that have none and expanding hydroelectric plants at others.

While construction expenses can be nearly twice those of wind, overall expenses are lower. "You have no fuel costs," Erpenbeck says.

Another impetus is the growing number of states with renewable energy mandates, such as Delaware. Most states don't let existing hydroelectric plants qualify, but they recognize new capacity. And since 2005, utilities can get a tax credit for the new power, though it's half the benefit afforded wind and other renewables.

"We saw Holtwood as an opportunity to meet [Pennsylvania's] renewable" energy requirement, says Holtwood manager Chris Porse.

The Holtwood expansion will also lend a helping hand to migrating fish. Now, shad swimming upstream to spawn often can't find the dam's fish lift -- a sort of elevator that hoists them above the dam -- because of strong currents.

By siphoning some water to the new turbines and widening the river channel, the project will ease the flow, letting more fish pass, Porse says.

Environmental groups have opposed new dams because they trap sediment and often impede migrating fish such as salmon. But "if you have a dam that's clearly not going away, it makes a lot of sense to look at putting hydropower on" it, says John Seebach, head of American Rivers' Hydropower Reform Campaign.

Some developers have moved to install hydropower on existing dams. Power wholesaler AMP Ohio is adding 344 megawatts of hydropower to five locks and dams along the Ohio River. The $500 million project is slated to be done by 2014.

AMP CEO Mark Gerken says hydro generation is more reliable than wind, which stops when the air is calm. And, he says, hydro equipment can generate for 75 years or longer.

The Grant County Public Utility District in Washington is replacing all 10 turbines and upgrading generators at its Wanapum dam on the Columbia River. The $350 million project will boost capacity 20 percent, partly because the angles of the new turbine blades can be adjusted to maximize power. That will help meet electricity demand that's growing 9 percent a year as giants like Yahoo and Microsoft build big server farms in the region.

Besides boosting capacity at its Iowa Hill hydroelectric dam, Sacramento Utility District is installing a pump. Excess grid power at night will be used to pump water that's already flowed through the turbines back to the top of the dam for storage. Then, when wind turbines shut off because the air is calm, the district can use the stockpiled water to quickly rev up the hydro generators. Hydroelectricity can thus promote wind development.

Despite the advances, hydropower still can't shake its clouded image. Some states, for instance, allow only small projects to count toward a clean energy mandate to minimize environmental harm.

"It's sort of been relegated to the same position as nuclear," says Douglas Hall, manager of the water energy program for the Idaho National Laboratory. "It's really almost injurious to take that kind of attitude if we're seriously hurting for power."

(Paul Davidson, USA Today, December 14, 2008 / ASCE SmartBrief December 14, 2008)

Shanghai Skyscraper Named "Best Tall Building"

The Council on Tall Buildings and the Urban Habitat has named the Shanghai World Financial Center the "Best Tall Building Overall" for 2008. Designed by Kohn Pedersen Fox (KPF) and completed last year, the building was chosen from among four "Regional Tall Building" winners, including The New York Times Building by Renzo Piano Building Workshop with FXFOWLE, London's 51 Lime Street by Foster and Partners, and the Bahrain World Trade Center by Atkins.

Photo courtesy Kohn Pederson Fox

The Council on Tall Buildings and the Urban Habitat has named the Shanghai World Financial Center (pictured at left) the "Best Tall Building Overall" for 2008.

The Shanghai World Financial Center, which boasts the highest occupied floor in the world, was chosen as the winner for "its revolutionary structural design and inspirational symbolism," according to the council. Formed out of a square prism intersected by two "cosmic arcs," the building includes a distinctive, multi-story trapezoidal aperture at its upper floors. The firm's design was inspired by two Chinese burial symbols: "a square prism essentially representative

of the earth, and a heaven symbol—a circular disc with a circular aperture cut through it," says Bill Pedersen, FAIA, of KPF. "We wanted to do a building that was a genuine expression of the relationship between the earth and the sky," he explains, "and also that could be connected to the culture within which it is placed."

The tower's tapering form is more than an aesthetic move—it also allows the building to maximize floor plate and material efficiency. Structural innovations by the engineering firm Leslie E. Robertson Associates succeeded in increasing the building's volume by 20 percent while retaining its original weight, thereby minimizing its total embodied energy. And the range of floor plates that the design's unique geometry creates allowed KPF to "negotiate the different program necessities" of the building's office, hotel, and retail components, according to Pedersen.

Though the building is replete with unusual features, Pedersen singles out one as particularly important: the tower houses a seven-story observatory and two sky walks on the 97th and 100th floors, thereby opening its most spectacular spaces and best views to the public. "One of the things we're most proud of in this building," says Pedersen, "is that the top 80 meters are devoted to functions that everyone can go in and enjoy."

(McGraw Hill CONSTRUCTION, Anya Kaplan-Seem, December 24, 2008)

ΝΕΕΣ ΕΚΔΟΣΕΙΣ ΣΤΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΠΙΣΤΗΜΕΣ

Increasing Seismic Safety by Combining Engineering Technologies and Seismological Data

Proceedings of the NATO Advanced Research Workshop on Increasing Seismic Safety by Combining Engineering Technologies and Seismological Data Dubrovnik,Croatia 19-21 September 2007

Series: NATO Science for Peace and Security Series Subseries: NATO Science for Peace and Security Series C: Environmental Security

M. Mucciarelli, M. Herak, J Cassidy (Eds.)

Too often the Earth's surface acted as a divide between seismologists and engineers. Now it is becoming clear that the building behaviour largely depends on the seismic input and the buildings on their turn act as seismic sources, in an intricate interplay that non-linear phenomena make even more complex. These phenomena are often the cause of observed damage enhancement during past earthquakes. While research may pursue complex models to fully understand soil dynamics under seismic loading, we need also simple models valid on average, whose results can be easily transferred to end users.

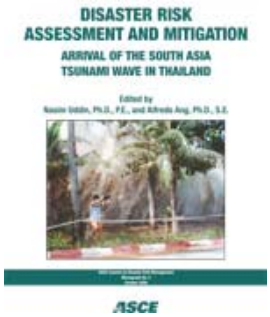
Under the title "Increasing Seismic Safety by Combining Engineering Technologies and Seismological Data", we grouped several topics to be discussed together by engineers and seismologists: (1) Can we use ambient noise building and soil characterisation to extract useful information for engineers? (2) How we can tell apart a frequency decrease due to distributed damage, concentrated damage, time- varying building and soil behaviour? (3) Which is the role of transients in ambient noise analysis? (4) Can we quantify the influence of existing buildings on ground-motion recordings? (5) To which extent soil-building resonance is a cause of damage enhancement? (6) How to couple soil and building non-linear behaviour?

On most questions there is an unanimous answer, but in some cases different views are present and the disagreement is faithfully reported.

Written for:

Earthquake engineers, engineering seismologists, applied geophysicists, geotechnical engineers

(Springer-Verlag, 2009)



Disaster Risk Assessment and Mitigation

Arrival of the South Asia Tsunami Wave in Thailand (CDRM Monograph 2)

N. Uddin & A. Ang (Eds.)

After recent earthquakes, tsunamis, and hurricanes devastated more than a dozen countries, civil engineers find themselves at the forefront of building and repairing the infrastructure of destroyed communities. A balance must be struck between potential losses from natural disasters and financial commitments to infrastructure protection. Civil engineers are positioned to achieve this balance, but may need new tools to do so. This monograph asks the bigger question: are civil engineers doing their jobs or should their roles be redefined? Topics covered in this publication include: an introduction to disaster risk assessment and mitigation; disaster risk assessment for natural hazard mitigation; reducing the effects of hazards; system evaluation for hazard mitigation; lessons learned from recent disasters; construction challenges; and political commitment to disaster mitigation. This monograph is a sequel to two previous monographs: Acceptable Risk Processes: Lifelines and Natural Hazards, TCLEE monograph no. 21 (2002), and Infrastructure Risk Management Processes: Natural, Accidental and Deliberate Hazards, CDRM monograph no. 1 (2006), published by ASCE. The previous monographs covered many broad topics pertaining to acceptable risk processes for lifelines and natural hazards; hazard issues; system evaluation issues; risk criteria issues; and systems management issues. This publication is invaluable to engineers involved in disaster risk assessment and mitigation, lifelines, and owners and operators of public and private infrastructure systems.

(ASCE, 2009)

Beyond Failure

Forensic Case Studies for Civil Engineers

Norbert J Delatte Jr

This Engineering failures get a lot of attention—inciting morbid curiosity and fueling concern over the condition of our infrastructure. But every engineering loss is the start of a forensic investigation into how, why, and what can be done to prevent future failures. As with scientific failures, engineering failures can be very instructive in teaching us what does not work. *Beyond Failure* presents the circumstances of important failures that have had far-reaching impacts on civil engineering practice. Each case study narrates the known facts: design and construction, the failure, subsequent investigation or analysis, and, where appropriate, additional issues such as technical concerns, ethical considerations, professional practice issues, and long-term effects. The case studies are organized around eight common

topics of undergraduate engineering courses and include teaching points and a reading list, so this book is useful to engineering faculty and students. With more than 40 full cases, including the Silver Bridge collapse in Point Pleasant, WV; the levee breaches in New Orleans, LA; and the Challenger space shuttle explosion, this book will also appeal to practicing engineers with an interest in forensic investigations or the analysis of historic failures.

(ASCE, September 2009)

"Guidelines for Good Occupational Health and Safety Practice in Tunnel Construction"

ITA Report (available online)

Not all countries have a comprehensive framework of regulations and guidance to ensure that underground construction work is conducted in a safe and healthy manner. In those which do, the regulations normally lay down as broad principles the measures that are to be adopted, but detailed guidance may be left to national standards or industry publications.

The "Guidelines for Good Occupational Health and Safety Practice in Tunnel Construction" are not intended to replace existing national regulations or guidance but to provide guidance on basic good practice where none exists. As such they should be incorporated into contract documents where appropriate.

These guidelines contain details of publications relevant to health and safety in tunnelling from countries represented on WG5. (**download the report**)

(www.ita.org, 2008)

WAVE PROPAGATION FOR TRAIN-INDUCED VIBRATIONS
A Finite/Infinite Element Approach

Y. B. Yang *(National Taiwan University, Taiwan)* **& H. H. Hung** *(National Center for Research on Earthquake Engineering, Taiwan)*

For buildings and factories located near railway or subway lines, the vibrations caused by the moving trains, especially at high speeds, may be annoying to the residents or detrimental to the high-precision production lines. However, there is a lack of simple and efficient tools for dealing with the kind of environmental vibrations, concerning simulation of the radiation of infinite boundaries; irregularities in soils, buildings and wave barriers; and dynamic properties of the moving vehicles. This book is intended to fill such a gap.

Compared with the boundary element method (BEM) for solving the half-space problems, the finite/infinite element method (FIEM) presented in this book has the following advantages:

- It requires less effort in formulation and computation.
- It can be directly incorporated in an existing FEM analysis program.
- It is capable of simulating the irregularities in buildings, soils and tunnels.
- It can be used to evaluate the efficiency of various wave barriers for vibration reduction.

The methodology presented in the book can be adopted to analyze the vibrations caused by road traffic as well.

Contents:

- Elastic Waves in Half-Space Due to Vehicular Loads
- 2D Finite/Infinite Element Method
- Characteristics of Foundation Vibrations
- Wave Barriers for Vibration Isolation of Foundations: Parametric Study
- Vibration Reduction of Buildings Located Alongside Railways
- 2.5D Finite/Infinite Element Method
- Ground Vibration Due to Moving Loads: Parametric Study
- Wave Barriers for Reduction of Train-Induced Vibrations: Parametric Study
- Soil Vibrations Caused by Underground Moving Trains

Readership: Senior undergraduate and graduate students, researchers and engineers in civil and structural engineering.

(World Scientific, Summer 2009)

ΗΛΕΚΤΡΟΝΙΚΑ ΠΕΡΙΟΔΙΚΑ

Το Δελτίο των Σηράγγων

www.eesye.gr

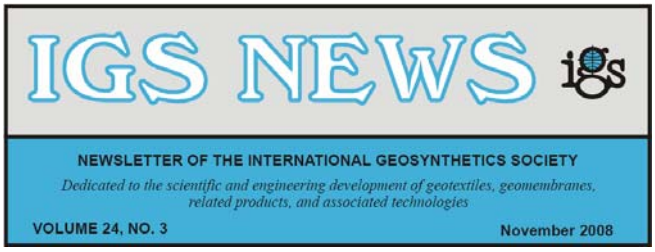
Κυκλοφόρησε το Τεύχος Νοεμβρίου 2008 του ηλεκτρονικού περιοδικού της Ελληνικής Επιτροπής Σηράγγων και Υπογείων Έργων «Το Δελτίο των Σηράγγων» ανανεωμένο και με πολύ ενδιαφέρουσα ύλη. Συγχαρητήρια στην εκδότριά του.

www.geoengineer.org

Κυκλοφόρησαν τα Τεύχη #47 και #48 του Newsletter του Geoengineer.org (Νοέμβριος και Δεκέμβριος 2008) με πολλές χρήσιμες πληροφορίες για όλα τα θέματα της γεωτεχνικής μηχανικής. Υπενθυμίζεται ότι το Newsletter εκδίδεται από τον συνάδελφο και μέλος της ΕΕΕΕΓΜ Δημήτρη Ζέκκο (secretariat@geoengineer.org).

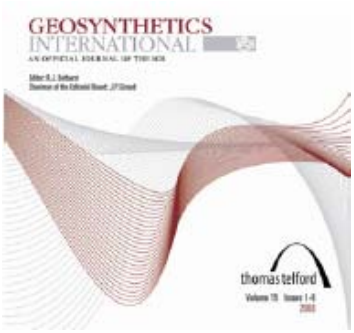
www.ita-aites.org

Κυκλοφόρησε το Τεύχος 27 των ita@news της International Tunnelling and Underground Space Association.



www.geosyntheticssociety.org

Κυκλοφόρησε το τεύχος αρ. 3 του 24ου τόμου (Νοέμβριος 2008) του ενημερωτικού περιοδικού της IGS με αναφορά στην επέτειο των 25 χρόνων από την ίδρυση της IGS.



Geosynthetics International

www.thomastelford.com/journals

Κυκλοφόρησαν τα τεύχη αρ. 5 και 6 του 15ου τόμου (Αύγουστος και Οκτώβριος 2008) του περιοδικού Geosynthetics International.

Geotextiles & Geomembranes

www.geosyntheticssociety.org/journals.htm

Κυκλοφόρησε το τεύχος αρ. 5 του 26ου τόμου (Οκτώβριος 2008) του περιοδικού Geotextiles & Geomembranes.

www.piarc.org

Κυκλοφόρησε το τεύχος αρ. 15 (Δεκέμβριος 2008) του περιοδικού – newsletter της PIARC – WORLD ROAD ASSOCIATION.

www.britishtunnelling.org.uk

Κυκλοφόρησε το Newsletter του Δεκεμβρίου 2008 της British Tunnelling Society.

INTERNATIONAL ASSOCIATION OF ENGINEERING GEOLOGY
Electronic Newsletter No. 3 (November 2008)
www.iaeg.info

Κυκλοφόρησε το Newsletter του Νοεμβρίου 2008 της International Association of Engineering Geology.

www.isrm.net

Κυκλοφόρησε το Τεύχος 5 του ISRM Newsletter (Δεκέμβριος 2008) με ενδιαφέρουσες πληροφορίες για τις δραστηριότητες των Technical Committees της ISRM και για άλλα θέματα βραχομηχανικής.

ΕΕΕΕΓΜ
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