

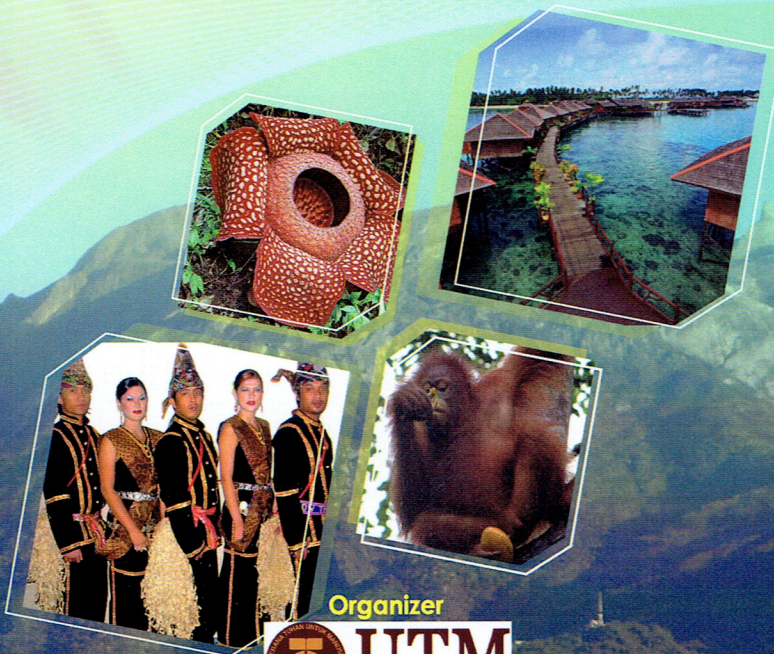
The 8th International Conference on

# GEOTECHNICAL AND TRANSPORTATION ENGINEERING

## *GEOTROPIKA 2010*

"Sustainability in Geotechnical and Transportation Engineering"

1-3 DECEMBER 2010 | SUTERA HARBOUR, SABAH, MALAYSIA



Organizer



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

RESEARCH UNIVERSITY

Faculty of Civil Engineering &  
School of Professional and Continuing Education  
Universiti Teknologi Malaysia

Supported by



Minerals and Geoscience  
Department Malaysia



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Malaysia



Tourism Malaysia



The 8th International Conference on  
**GEOTECHNICAL AND  
TRANSPORTATION  
ENGINEERING**

*"Sustainability in Geotechnical  
and Transportation Engineering".*

## TABLE OF CONTENTS

Foreword by Chief Minister of Sabah	03
Foreword by The Vice Chancellor, Universiti Teknologi Malaysia	04
Foreword by The Dean Faculty of Civil Engineering, Universiti Teknologi Malaysia	05
Foreword by The Chairman of The Conference	06
Keynote Speakers	07
Invited Speakers	07
The Programme	08
Advertisement	26
Organizing Committee	29
Acknowledgement	30
Abstracts	31

## KEYNOTE SPEAKERS

**Prof. Dr Adrian F.L Hyde**

University of Sheffield

Title: Sustainable Ground Engineering

**Assoc. Prof. Dr. Johnnie .Ben Edigbe**

Universiti Teknologi Malaysia

Title: Trends in Transportation Engineering

## INVITED SPEAKERS

**Dato' Prof. Ir. Dr. Azmi Hassan,**

Highway Planning Unit, Ministry of Works Malaysia.

Title: Highway Planning in Malaysia

**Prof. Dr. Kazuya Yasuhara,**

Ibaraki University

Title: Geotechnical Technique Compatible for Reduction of Environmental Impact and Natural Disaster

**Prof. Dr. Kenichi Soga,**

University of Cambridge.

Title: Slope Monitoring Using Optical Fibre Technology

**Prof. Dr. Hamid R. Soleymani,**

University of Alberta

Title: Characterization of Subgrade and Urbound Granular Material for Flexible Pavements: Evolutions and Future Challenges

**Dr. Che Hassandi Abdullah,**

Public Works Department, Malaysia

Title: Sustainable Development in Geotechnical Engineering in Public Works Department, Malaysia.

**Mr. Zakaria Mohamad,**

Minerals and Geoscience Department Malaysia (Selangor/Fed. Territory)

Title: Geomorphological Approach to Study the Potential Debris Flow in Hulu Kelang Area.

Title: Geological Perspective of Site Investigation in Malaysia.

**Mr. Zamri Ramli,**

Minerals and Geoscience Department Malaysia (Sabah)

Title: The Importance of Geological Input for Land-Use Planning: "Case Study of Ranau Area, Sabah".

# THE PROGRAMME

## DAY 1 - 01st December 2010 (Wednesday)

8.00 am – 9.00 am      Arrival and Registration of Participants  
Arrival of Invited Guests

### OPENING CEREMONY

Venue                      : Grand Ballroom

9.00 am – 9.45 am      Arrival of the Vice Chancellor of Universiti Teknologi Malaysia (UTM)  
Arrival of the Chief Minister of Sabah  
Recital of Doa  
Welcoming Speech by the Chairman of Conference  
Y.Bhg. Prof. Dr Aminaton Marto  
  
Speech by the Vice Chancellor of UTM  
Y.Bhg Dato' Prof Ir. Dr Zaini bin Ujang  
  
Officiating Speech by the Chief Minister of Sabah  
Y.Amat Berhormat Datuk Seri Panglima Musa Haji Aman  
  
Press Conference

9.45 am – 10.30 am      Refreshment

### KEYNOTE ADDRESS

Venue                      : Grand Ballroom  
Chairperson              : Prof. Dato' Dr Ismail Bakar (UTHM)

10.30 am – 11.10 am      **Keynote Address I**  
Prof. Dr Adrian F.L Hyde  
Title: Sustainable Ground Engineering

11.10 am – 11.50 am      **Keynote Address II**  
Assoc. Prof. Dr. Johnnie .Ben Edigbe  
Title: Trends in Transportation Engineering

11.50 am – 12.20 pm      **Special Invited Paper**  
Minerals and Geosciences Department Malaysia (Sabah)  
Title: The Importance of Geological Input for Land-Use Planning: "Case Study of Ranau Area, Sabah".

12.30 pm – 2.00 pm      LUNCH

## TECHNICAL SESSION 1 : GEOTECHNICAL ENGINEERING

Venue : Grand Ballroom  
Chairperson : Prof. Dr Khairul Anuar Kassim

2.00 pm – 3.40 pm

### INVITED SPEAKER

Prof. Kenichi Soga, University of Cambridge.  
Title: Slope Monitoring Using Optical Fibre Technology

#### ID 120:

Prediction of Long-Term Settlement of Soft Clay using the Continuous Surface Wave Method & Damping Measurement  
Mohamad Nor Omar, Public Works Department, Kuala Lumpur.

#### ID 130:

The Compaction of Laterite Using Gyratory Compactor  
Nor Hazwani Md. Zain, Universiti Teknologi MARA.

#### ID 135:

Swelling Potential of Clay Mineral Contents of Soft Rocks in Northern Peninsular Malaysia  
Intan Shafika Saiful Bahri, Universiti Teknologi MARA

#### ID 142:

Re-Evaluation of Unit Skin Friction in Instrumented Bored Pile in Kenny Hill Formation  
Ramlee Othman, Public Works Department Malaysia.

Question and Answer

3.40 pm – 3.45 pm

Preparation of next technical session

## TECHNICAL SESSION 2 : GROUND STABILIZATION

Venue : Room VII  
Chairperson : Assoc. Prof. Dr. Nurly Gofar

**2.00 pm – 3.40 pm**

**ID 112:**

Design and Development of Large Scale Shear Box for Landfill Liner Interface Testing  
Sumathi Subramaniam, Universiti Malaya.

**ID 126:**

Thermal Properties of Lime Stabilized Soils  
Amin Eisazadeh, Universiti Teknologi Malaysia.

**ID 137:**

Strength Characteristics of Clay Soil Stabilized With Mixtures of PFA-Lime and PFA-OPC  
Norazlan Khalid, Universiti Teknologi MARA.

**ID 150:**

Subgrade Stabilization by Fly and Bottom Ash, Kuantan Clayey Case Study  
Achmad Fauzi, Universiti Malaysia Pahang.

**ID 177:**

Strength Characteristics of Kaolin mixed with Bottom Ash  
Mohammad Ehsan Jorat, Universiti Teknologi Malaysia.

**ID 204:**

Preliminary Characterization of Natural zeolites by using X-Ray Techniques  
Felix Ling Ngee Leh, Universiti Teknologi Malaysia.

Question and Answer

**3.40 pm – 3.45 pm** Preparation of next technical session

### TECHNICAL SESSION 3 : HIGHWAY ENGINEERING

Venue : Room VIII  
Chairperson : Assoc. Prof. Dr Mohd Rosli Hainin

**2.00 pm – 3.40 pm**

**ID 113:**

Bus Speed Acceleration and Accelerator Pedal Position Behaviour at Signalised Intersection  
Munzilah Md. Rohani, Universiti Teknologi Tun Hussein Onn Malaysia

**ID 124:**

Estimating Critical Gap at Unsignalised T-Intersection Using Maximum Likelihood, Raff and Probit Methods  
Ahmad Raqib Ab Ghani, Universiti Tun Hussein Onn Malaysia.

**ID 134:**

Traffic Data Collection and Reduction Technique Using Specially Fabricated Portable Pole and Traffic  
Analyser Software (POPTAS) for Malaysian Rural and Suburban Highway and Expressway  
Mohd Azahar Awang, Universiti Sains Malaysia

**ID 146:**

Accident Trends and Accident Prediction Model at Federal Route 50, Malaysia  
Mustakim Fajaruddin, Nagoya Institute of Technology, Japan.

**ID 147:**

Comparison Study of Maintenance and Rehabilitation Method and Procedure: Case Study for Kuching-  
Samarahan Road  
Ron Aldrino Chan @ Ron Beking, Universiti Malaysia Sarawak.

**ID 183:**

Signalling Practices of Drivers on Multilane Highways  
Othman Che Puan, Universiti Teknologi Malaysia.

Question and Answer

**3.40 pm – 3.45 pm** Preparation of next technical session

#### TECHNICAL SESSION 4 : PAVEMENT ENGINEERING

Venue : Grand Ballroom  
Chairperson : Assoc. Prof. Dr Othman Che Puan

3.45 pm – 5.15 pm

##### INVITED SPEAKER

Prof. Hamid R. Soleymani, University of Alberta

Title: Characterization of Subgrade and Urbound Granular Material for Flexible Pavements: Evolutions and Future Challenges

##### ID 169:

Stripping Performance Of Tender Mix  
Ekarizan Shaffie, Universiti Teknologi MARA.

##### ID 160:

An Assessment of the Surface Roughness Index of Various Bituminous Pavements In Malaysia  
Suleiman Arafat Yero, Universiti Teknologi Malaysia.

##### ID 143:

Properties of Dutch Twinlay Porous Asphalt Utilizing Local Aggregates  
Noor Halizah Abdullah, Universiti Sains Malaysia.

##### ID 173:

Skid Resistance and the Effect of Temperature  
Haryati Yaacob, Universiti Teknologi Malaysia.

Question and Answer

5.15 pm – 5.30pm

Refreshment

#### TECHNICAL SESSION 5 : NUMERICAL MODELLING

Venue : Room VII  
Chairperson : Dr Amin Eisazadeh

3.45 pm – 5.15 pm

##### ID 101:

Model Study on Root Pull-Out Failure  
Siti Sara Seera Mustapa Kamil, Universiti Malaya.

##### ID 102:

The Effect of Capillary Barrier on Mitigating Rainfall-Induced Slope Failure  
Bimo Brata Adhitya, Universiti Teknologi Malaysia.

**ID 109:**

Numerical Analysis of Vegetative Induced Matrix Suction Changes and Deformation  
Mu'azu Mohammed Abdullahi, Universiti Malaya.

**ID 110:**

2-D Axi-Symmetric of Root Water-Uptake and Deformation  
Nazri Ali, Universiti Teknologi Malaysia.

**ID 111:**

Comparative study of two-dimensional and three-dimensional stability analyses in an irregular soil slope with respect to intercolumn forces  
Nazri Ali, Universiti Teknologi Malaysia.

**ID 175:**

Finite Element Simulation Analysis of Steel Frame with Concrete Panel Retaining Wall  
Mohammad Ehsan Jorat, Universiti Teknologi Malaysia.

Question and Answer

5.15 pm – 5.30pm Refreshment

**TECHNICAL SESSION 6: GEOTECHNICAL ENGINEERING**

Venue : Room VIII  
Chairperson : Dr Hisham Mohamad

3.45 pm – 5.15 pm

**INVITED SPEAKER**

Mr. Zakaria Mohamad, Minreals and Geoscience Department Malaysia  
(Selangor/Fed. Territory)  
Title: Geomorphological Approach to Study the Potential Debris Flow in Hulu Kelang Area.

**ID 149:**

The Potential of Using Rubberchips as a Soft Clay Stabilizer Enhancing Agent  
Meei-Hoan Ho, Universiti Tun Hussein Onn Malaysia.

**ID 151:**

Sustainability of Geosynthetic Clay Liners (Gcls) In Tropical Countries – Thermodynamic Modelling  
E.W.K.Loh, Legenda Education Group.

**ID 154:**

Feasibility Of Lightweight Concrete Piles To Be Utilized for Deep Foundation of Particular Structures on Soft Soils  
Agus Sulaeman, Universiti Tun Hussein Onn Malaysia.

**ID 117:**

Sediment Transport With A Hydrodynamic Perspective  
Ravindra Jayaratne, University of East London, United Kindom.

**ID 191:**

Risk Analysis of Factors Affecting the Safety and Quality in Soil Nailed Structures  
Peyman Behtash, Universiti Teknologi MARA.

Question and Answer

**5.15 pm – 5.30pm** Refreshment

**WELCOMING DINNER**

Venue : Sutera Harbour (To be confirmed)  
Hosted by : Chief Minister Office of Sabah

07.00 pm Arrival of guests

07.30 pm Welcoming speech by Y.A.B Datuk Seri Panglima Musa Haji Aman  
The Right Honourable Chief Minister of Sabah

Dinner and Cultural Show

**TECHNICAL SESSION 7 : GEOTECHNICAL ENGINEERING**

Venue : Grand Ballroom  
Chairperson : Prof. Dr Aminaton Marto

**8.30 am – 10.30 am**

**INVITED SPEAKER**

Prof. Kazuya Yasuhara, Ibaraki University

Title: Geotechnical Technique Compatible for Reduction of Environmental Impact and Natural Disaster

**ID 139:**

Laboratory-Based Remedial Study of A Road Embankment on Peat Soil  
Zaihasra Abu Talib, Universiti Tun Hussein Onn Malaysia.

**ID 144:**

Experimental Study on Resilient Modulus of Liquid Silica (SiO<sub>2</sub>) Stabilized Subgrade Soil  
Ismail Yusof, Universiti Tun Hussein Onn Malaysia.

**ID 163:**

Effect of Particle Composition on the Shear Strength Characteristics of Residual Soil at Constant Dry Density  
Norbaya Haji Sidek, Universiti Teknologi MARA.

**ID 178:**

Bearing Capacity of Strip Footing on single reinforced sand slope  
Enas B. Altalhe, Universiti Kebangsaan Malaysia.

Question and Answer

**10.30 am – 11.00 am** Refreshment

## TECHNICAL SESSION 8 : NUMERICAL MODELLING

Venue : Room VII  
Chairperson : Assoc. Prof. Dr Mohd Idrus Mohd Masirin (UTHM)

**8.30 am – 10.30 am**

**ID 194:**

Finite Element Analysis of an Anchored Reinforced Earth Wall Under Slope Surcharge  
Md Zahidul Islam, Universiti Malaya.

**ID 138:**

Numerical and Experimental Analysis of Pullout Test on Square Horizontal Anchor Plates in Sand  
Hamed Niroumand, Universiti Teknologi Malaysia.

**ID 187:**

2D Finite Element Analysis of Bamboo Reinforced Embankment  
Badrul Nizam Ismail, Universiti Teknologi MARA.

**ID 132:**

The Effect of Elevation Model and Rainfall Trend as a Triggering Factor in LandSlide  
Fauziah Ahmad, University Sains Malaysia.

**ID 114:**

Backanalysis of Rainfall Induced Landslides by Perisi Model  
Siti Jahara Matlan, Universiti Malaysia Sabah.

**ID 165:**

Mechanical and Hydrological Effects of A Tree on Slope Stabilization  
Mohammad Ehsan Jorat Universiti Teknologi Malaysia

Question and Answer

**10.30 am – 11.00 am** Refreshment

## TECHNICAL SESSION 9 : HIGHWAY ENGINEERING

Venue : Room VIII  
Chairperson : Assoc. Prof. Dr. Mohd Rosli Hainin

8.30 am – 10.30 am

### INVITED SPEAKER

Dato' Prof. Ir. Dr Azmi Hassan,  
Highway Planning Unit, Ministry of Works Malaysia.  
Title: Highway Planning in Malaysia

#### ID 125:

Determining Passenger Car Equivalent for Motorcycle at Signalised Intersection in Batu Pahat, Malaysia  
Mohd Erwan Sanik, Universiti Tun Hussein Onn Malaysia.

#### ID 156:

Road Safety Traffic Standard of Riau Province  
Abd. Kudus Zaini, Islamic University Of Riau-Pekanbaru- Indonesia.

#### ID 168:

Measurement Performance of Soekarno – Hatta Airport by Balanced Scorecard Methods  
Juanita, Muhammadiyah University of Purwokerto, Indonesia.

#### ID 172:

Mobile Ad-Hoc Networking for Vehicular Road and Traffic Safety  
Hannes Masanding, Universiti Tun Hussein Onn Malaysia.

Question and Answer

10.30 am – 11.00 am Refreshment

## TECHNICAL SESSION 10 : ROCK MECHANICS

Venue : Grand Ballroom  
Chairperson : Dr Nazri Ali

11.00 am – 1.00 pm

### INVITED SPEAKER

Mr. Zakaria Mohamad,  
Minerals and Geoscience Department Malaysia  
(Selangor/Fed. Territory)  
Title: Geological Perspective of Site Investigation in Malaysia.

#### ID 170:

Effect of Moisture Content on the Strength of Weathered Granite In Tropical Climate  
Mohamed Fauzi Md Isa, Universiti Teknologi Malaysia.

**ID 171:**

Excavatability Assessment of Weathered Sedimentary Rock Mass Using Seismic Velocity Method  
Mohamed Fauzi Md Isa, Universiti Teknologi Malaysia.

**ID 188:**

Potential Alkali Silica Reactivity in Aggregates  
Mohamed Fauzi Md Isa, Universiti Teknologi Malaysia.

**ID 195:**

Underground Structures Under Squeezing Rock Condition- A Review  
Vahed Ghiasi, Universiti Putra Malaysia.

**ID 140:**

Rippability Assessment of Quartzite in Kenny Hill Formation  
Chan Sook Huei, Public Works Department Malaysia.

Question and Answer

1.00 pm – 2.00 pm      LUNCH

**TECHNICAL SESSION 11 : SOIL MECHANICS & LABORATORY TESTS**

Venue : Room VII  
Chairperson : Dr P. Rajeev Kumar

11.00 am – 1.00 pm

**ID 103:**

Rate Effect and Vane Shear Strength of Sandy Clay  
N.A. Yusoff, Sheffield University.

**ID 105:**

The Correlations and Analysis of Properties for Soils In Maran, Pahang  
Muzamir Hasan, Universiti Malaysia Pahang.

**ID 106:**

Analytical and Experimental Behaviour of Soil Nailed Embankments in Clay Under Centrifuge Loading  
Dayangku Salma Awang Ismail, Universiti Malaysia Sarawak.

**ID 119:**

Evaluation of Migration of Light Nonaqueous Phase Liquid by Image Analysis  
Samira Albaty Kamaruddin, Universiti Putra Malaysia.

**ID 131:**

Geotechnical Characteristics of Peat Soils Through A Fabric and Micro-Structure Perspective  
Annan Zainorabidin, Universiti Tun Hussein Onn Malaysia.

**ID 116:**

Development of IRB Test-Bed at Research Centre for Soft Soil Malaysia (Recess Malaysia): from Concept to Testing

Mohd Idrus Hj. Mohd Masirin, Universiti Tun Hussein Onn Malaysia.

Question and Answer

1.00 pm – 2.00 pm      LUNCH

**TECHNICAL SESSION 12 : PAVEMENT ENGINEERING**

Venue : Room VIII  
Chairperson : Dr Anil Minhans

11.00 am – 1.00 pm

**ID 136:**

Modified Bitumen with Oil Palm Fruit Ash

Gatot Rusbintardjo, Universitas Islam Sultan Agung, Semarang, Indonesia.

**ID 166:**

Mix Design of Cold Recycled Mix Using Different Recycled Asphalt Pavement (RAP) Proportion

R. Razali, Public Works Department, Malaysia.

**ID 167:**

Use of Dynamic Modulus Test to Evaluate Moisture Susceptibility of Asphaltic Concrete Mixtures

Juraidah Ahmad, Universiti Teknologi MARA.

**ID 181:**

The Effect of Epoxy Bitumen Modification on Hot Mix Asphalt Properties and Rut Resistance

Dorina Anak Astana, Universiti Teknologi Malaysia.

**ID 196:**

Exploring the Usage of Nanoparticles in Pavement Engineering

Mohd Ezree Abdullah, Universiti Tun Hussein Onn Malaysia.

**ID 197:**

Vertical Displacement of Underside Shaped Concrete Block Pavement

Azman Mohamed, Universiti Teknologi Malaysia.

**ID 104:**

Evaluation of Threshold Stress of Subgrades for Highway Formation Based on the Unconfined Cyclic Triaxial Test

Elsa Eka Putri, Universiti Malaysia Sabah.

Question and Answer

1.00 pm – 2.00 pm      LUNCH

### TECHNICAL SESSION 13 : GEOTECHNICAL ENGINEERING

Venue : Grand Ballroom  
Chairperson : Dr Hisham Mohamad

2.00 pm – 3.40 pm

#### INVITED SPEAKER

Dr Che Hassandi Abdullah, Public Works Department, Malaysia  
Title: Sustainable Development in Geotechnical Engineering in Public Works Department, Malaysia.

#### ID 176:

Settlement of Embankment on Prefabricated Vertical Drain Treated Ground  
Abdul Razak Ali, Prima Reka Konsultan.

#### ID 184:

Effect of Industrial Chemicals on the Shear Strength and Settlement Characteristics of Silty Soil  
P Rajeev Kumar, Universiti Teknologi Malaysia.

#### ID 185:

To Assessment of Viscosity of Cement-Sodium Silicate Grout with Kaolinite  
Sina Kazemian, Universiti Putra Malaysia.

#### ID 186:

Review of Newtonian and non-Newtonian Fluids and Grout Behaviors  
Sina Kazemian, Universiti Putra Malaysia.

Question and Answer

3.40 pm – 3.45 pm

Refreshment

### TECHNICAL SESSION 14 : HIGHWAY ENGINEERING

Venue : Room VII  
Chairperson : Dr Juraidah Ahmad (UiTM)

2.00 pm – 3.40 pm

#### ID 182:

Speed/Density Linearity Shift Resulting from Road Humps  
Ben - Edigbe, J, Universiti Teknologi Malaysia.

#### ID 202:

Guiding Framework for Traffic Management in Disasters  
Anil Minhans, Universiti Teknologi Malaysia.

**ID 205:**

A Critical Analysis of Road Accidents, Vehicular Flow-Rate and Speed With Reference to Route F050 BP-Kluang  
Mohd Idrus Hj. Mohd Masirin, Universiti Tun Hussein Onn Malaysia.

**ID 206:**

Appraisal on Investigation Methods of Approach Slab for Road-Bridge Interface Sections: A Proposed Recess Project  
Mohd Idrus Hj. Mohd Masirin, Universiti Tun Hussein Onn Malaysia.

**ID 207:**

Transverse Rumble Strips Application in Malaysia  
M.H. Othman, Universiti Teknologi Malaysia.

**ID 208:**

Transverse Rumble Strips: A Review of Noise Problems  
M.H. Othman, Universiti Teknologi Malaysia.

Question and Answer

3.40 pm – 3.45 pm Refreshment

**TECHNICAL SESSION 15 : UNDERGROUND EXCAVATIONS**

Venue : Room VIII  
Chairperson : Ir. Rusman Rais (SCG Consultant Sdn Bhd)

2.00 pm – 3.40 pm

**ID 203:**

A Short Review of Analytical Methods for Tunnelling In Elastic Ground  
Siti Norafida Jusoh, Universiti Teknologi Malaysia

**ID 157:**

Assessment of Contiguous Buildings Damage Due to Tunnelling  
Eshagh Namazi, Universiti Teknologi Malaysia.

**ID 198:**

Using 2D Electrical Imaging to Detect Cavities, Pinnacles and Bedrock at Gunung Keriang, Kedah, Malaysia  
Edy Tonnizam Mohamad, Universiti Teknologi Malaysia.

**ID 199:**

The Seismic Refraction Survey In Shallow Subsurface Investigation  
Edy Tonnizam Mohamad, Universiti Teknologi Malaysia.

**ID 200:**

Groundwater Survey Using Geophysical Method at Nenasi, Pahang  
Edy Tonnizam Mohamad, Universiti Teknologi Malaysia.

Question and Answer

**3.40 pm – 3.45 pm** Refreshment

**TECHNICAL SESSION 16 : SOFT CLAYS & PROBLEMATIC SOILS**

Venue : Grand Ballroom  
Chairperson : Assoc. Prof. Dr. Nurly Gofar

**3.45 pm – 4.45 pm**

**ID 115:**

Construction Challenges on Sibul Peat Soil: Case Study and Lessons Learned  
Mohd Idrus Hj. Mohd Masirin, Universiti Tun Hussein Onn Malaysia.

**ID 118:**

Field Tests on Natural Clay Deposit Reinforced With Granular Fill Layers  
Ahmet Demir, Cukurova University, Balcali, Adana, Turkey.

**ID 141:**

Performance of Various Piezometers in Soft Clay in Kandang, Melaka  
Edayu Salleh @ Aman, Public Works Department Malaysia.

**ID 192:**

Innovative High Vacuum Densification Method (HVDM) for Soft Cohesive Soil Improvement  
Robert Y. Liang, University of Akron.

Question and Answer

## TECHNICAL SESSION 17 : UNDERGROUND EXCAVATIONS

Venue : Room VII  
Chairperson : Assoc. Prof. Dr Fauziah Ahmad (USM)

3.45 pm – 4.45 pm

### ID 158:

Three Dimensional Analysis of Tunnel Face Stability using Upper Bound Theorem in a Two-Layered Soil  
N. Khezri, Universiti Teknologi Malaysia.

### ID 152:

Numerical Study on the Longitudinal Deformation Profile Considering the Pre-Reinforcement –Experience  
from Korean Subway Project  
Song Ki Il, Universiti Teknologi MARA.

### ID 108:

Prediction of Surface Settlement Based on the Analysis of Soil Movement Pattern Around the Tunnels  
Mohsen Hajihassani, Universiti Teknologi Malaysia.

Question and Answer

## TECHNICAL SESSION 18 : PAVEMENT ENGINEERING

Venue : Room VIII  
Chairperson : Mr. Mohd Ezree Abdullah (UTHM)

3.45 pm – 4.45 pm

### ID 180:

Development of Software for Rigid Pavement Thickness Design  
Mohd Khairul Idham Mohd Satar, Universiti Teknologi Malaysia.

### ID 128:

Effects of Waste Cooking Oil as A Rejuvenating Agent for Aged Bituminous Pavement  
Hallizza Asli, Universiti Malaya.

### ID 133:

Engineering Properties of Local Reclaimed Asphalt Pavement Aggregate  
Lillian Gungat, Universiti Malaysia Sabah.

### ID 107:

Optimum Binder for Porous Mixtures Made by Various Aggregate Gradations and Its Properties Towards  
Producing Grouted Macadam Composite Pavement  
Nadiyah Md. Husain, Univesiti Malaya.

Question and Answer

## CLOSING CEREMONY

Venue : Grand Ballroom

- |         |   |
|---------|---|
| 4.40 pm | Gathering of Participants   |
| 4.45 pm | Panel Discussion (Chairperson: Prof. Dr Aminaton Marto)<br>"Sustainability in Geotechnical and Transportation Engineering"  |
| 5.10 pm | Closing Speech by Deputy Dean (Research & Graduate Studies)<br>Faculty of Civil Engineering, Universiti Teknologi Malaysia. |
| 5.15 pm | Recital of Doa  |
| 5.20 pm | Group Photography   |
| 5.30 pm | Refreshment & Adjourn   |

**TECHNICAL VISIT (OPTIONAL TO PARTICIPANTS)**

07.45 am	Gather at Sutera Harbour Hotel, Kota Kinabalu
08.00 am	Depart to Kundasang
10.00 am	Arrive at Kundasang Site (Fault Zones) Site 1 – Kundasang Retaining Wall (Lobou-Lobou Fault Zone) Site 2 – SMK Kundasang (Lobou-Lobou Fault Zone)
11.05 am	Depart to Kg. Kibbas
11.20 am	Site 3 – Kg. Kibbas, Ranau (Fault Intersection – Kibbas Fault, Lipasu Fault & Koporingan Fault)
11.30 am	Lunch
12.15 pm	Depart to Dairy Farm and Kinabalu Park
04.00 pm	Depart to Kota Kinabalu
06.00 pm	Arrive in Kota Kinabalu

\* Registration required due to limited space.