

# 香港岩土及岩土環境工程專業協會 ASSOCIATION OF GEOTECHNICAL & GEOENVIRONMENTAL SPECIALISTS (HONG KONG)

# AGS (HK) NEWSLETTER

## **Editorial**

Welcome to a further edition of the AGS (HK) Newsletter. This year the AGS (HK) have continued the ties with the sister organizations Hong Kong Institution of Engineers (HKIE) and Hong Kong Geotechnical Society (HKGES) in organizing a number of well-attended ground forums and seminars. At the same time, the Association has organised more continued professional development (CPD) courses on our own and also jointly with both the academic and other professional institutions such as the Chartered Institution of Water and Environmental Management, Hong Kong (CIWEM-HK). A number of these events are described in the articles to follow. All members of last year's executive committee, subcommittees and working groups and the speakers of the various seminars are thanked for their hard work throughout the year.

Mr Mike Hendy from Geotechnical Consulting Group has completed a very productive two year term as AGS (HK) chairman. Under Mike's leadership, AGS (HK) continue the active participation in the geotechnical and geoenvironmental community through ground forums, seminars and publications. Mike will continue his representation on the executive committee as immediate past chairman. We would like to thank Mike for all his past and future contributions. The Association would also like to convey its heartfelt thanks to the hard work of Mr Rajan Khemlyani from Jacobs, Mr Jonathan Li from Gammon, Mr Philip Daynes from Atkins and Dr Limin Zhang from HKUST whom have stepped down from the Committee. Several new members are welcomed to the Executive Committee (see below for details).

In 2008, the AGS (HK) welcomes Dr Angus Maxwell from Maxwell Geosystems who takes over from Mike as Chairman. Mr Richard Hinchliffe from Jacobs is acting as Treasurer and Mr Lee, Tse-hung from Gammon as Secretary. In this issue, Dr Angus Maxwell introduces himself to the readers through his 2008 Chairman's Address.

The AGS (HK) is committed towards promoting the interests of its member organisations. Please contact us with your views on how the Association might better serve the geotechnical and geoenvironmental profession. Volunteers who wish to get involved or contribute towards the activities of the AGS (HK) are also encouraged to do so.

We hope you enjoy the newsletter.

### **Comments**

Please feel free to send comments to:
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## 2008 Chairman's Address

Dear Members

I am very fortunate to have inherited an Association in such a sound position and during what promises to be a very interesting period in Hong Kong's infrastructure development. The last five years have been difficult for many and it is a reflection of the spirit of the Hong Kong community that so many members are still with us despite the attractions of



the booming sectors of Australia, China and the Middle East.

The government has commitment to infrastructure expenditure over the next 10 years. This is re-assuring however, we now have the challenge of resourcing the projects and ensuring that these projects are brought to the public with a high degree of skill and professionalism.

Our ongoing commitment over these next two years is to encourage good practice amongst our members and in particular to motivate and mentor new entrants into the industry. The Association has set up many initiatives over the past few years to achieve this.

We continue to support the Universities by providing scholarships to those students showing particular industry and interest in the disciplines of engineering geology, geotechnics and environmental science. The awards are always gratefully received.

We will continue to organize seminars and ground forums and encourage continued professional development. The topics aim to be of particular relevance to current and near future issues facing the industry. Rather than focus on training alone our aim is to stimulate and lead discussion so that the experience of our members, both good and bad, is disseminated as widely as possible. We will also continue to provide valuable feedback to government.

The committee members have spent many hours developing our Ground Investigation Guidelines and these represent a useful resource for all members involved in planning and carrying out ground investigations in HK. Over the next two years these will be expanded to include Construction Information Guidelines which will focus on aspects of construction supervision of geotechnical works.

We have plans for a number of social events throughout the year including a family junk trip, the long awaited golf day and the usual site visits.

On behalf of the committee we look forward to seeing you throughout the year.

Yours truly,

**Angus Maxwell** 

### **New Faces**

The Association warmly welcomes the following new faces to the Executive Committee:

#### Richard Hinchliffe (Jacobs China Limited)

Richard is a Technical Director of Jacobs China Limited. He is a Chartered Civil Engineer with over 30 years tunnelling experience with contractors, consultants and clients. He graduated in civil engineering at the University of Leeds in 1971 and obtained a Masters Degree in Rock Mechanics at the University of Newcastle-upon-Tyne in 1978. He has



worked on a wide variety of tunnelling projects in UK, Hong Kong and Singapore for underground railways, water, drainage, sewerage, and power cables. He has experience in TBMs, openface shields, compressed air, ground treatment, drill and blast, segmental linings, insitu linings, deep cofferdams, and civils structures.

#### Mr Lee, Tse-hung (Gammon Construction Limited)

Tse-hung is a Chartered Engineer and currently employed as a Senior Engineer in Lambeth Associates Limited (the inhouse engineering design office of Gammon). He is an enthusiastic and dedicated geotechnical engineer with ten years of professional experience in the cavern and ground engineering.



Throughout the years, he had successfully completed several major construction projects in Hong Kong including (i). KCRC Kowloon Southern Link, Contract KDB200; (ii). Three Pacific Place – Queensway Subway and (iii). Route 8 – Nam Wan Tunnel & West Tsing Yi Viaduct. He has elected as a committee member of the IMMM (HK) in 2004-2005.

### Dr Yu-Hsing Wang (HKUST)

Dr. Yu-Hsing Wang takes over from Dr Limin Zhang as the HKUST representative. Dr. Yu-Hsing Wang obtained his Ph.D. from Georgia Institute of Technology in 2001. After receiving the degree, he joined The Hong Kong University of Science and Technology. Dr. Wang's major research interests include attenuation mechanisms and



measurements in the particulate media (damping), innovative wave-based characterizations of geomaterials (using mechanical and electromagnetic waves), innovative testing techniques (micro-sensors developments and applications), physico-chemical soil behavior, and particulate geomechanics. He received the ASTM International Hogentogler Award in 2005.

# Seminar on "Numerical Modelling in Geotechnical Engineering – Prediction or Process?"

On Wednesday 17<sup>th</sup> January 2007, the AGS (HK) held an evening seminar on "Numerical Modelling in Geotechnical Engineering – Prediction or Process?" in conjunction with the Hong Kong Geotechnical Society, the University of Hong Kong and the Centre for Research & Professional Development.

Numerical modelling (or numerical analysis) is an integral part of geotechnical engineering, as was so validly illustrated by Prof John Burland from Imperial College, London in his 1987 Nash Lecture, entitled The Teaching of Soil Mechanics – a Personal View. Prof. Burland envisaged geotechnical practice as involving a clear understanding of the ground profile established from a site investigation, the definition of soil behaviour provided from field and laboratory measurements, and then the application of this understanding through the use of analysis or modelling.

Numerical modelling is increasingly taking its rightful role in geotechnical practice, due largely to the software tools and computing power that are now so readily available. However, proper use of these powerful numerical tools remains somewhat immature. Often the expectation of what is to be achieved is unrealistic and the purpose of the numerical modelling is unclear. The seminar was presented by Dr John Krahn, the President and Chief Executive Officer of GEO-SLOPE International Limited who explored the issues of what exactly is numerical modelling and what are the purposes and benefits of numerical modelling.

During the course of seminar, Dr Krahn has highlighted a number of features of numerical models that must be appreciated to make effective use of these analytic tools in the modelling process. These features include the fact that all models are only simplified abstractions of a complex reality. He advocated a critical point which is that the key advantage to modelling and using computer modelling tools is the capability it has to enhance engineering judgment. It is not only about enhancing our predictive capabilities. While it is true that sophisticated computer tools greatly elevate our predictive capabilities relative to hand calculations, graphical techniques, and closed-form analytical solutions, prediction is not the most important advantage these modern tools provide.

The seminar was ended with the conclusion that the modelling process is actually a journey of discovery – a way of learning something new about the complex behaviour of our physical world. It is also a process that can help us more fully understand highly complex real physical processes, and that in turn can help us exercise our engineering judgment with increased confidence to make predictions.

# Seminar on "Non-destructive Testing in Civil Engineering Structures using Geophysical Methods"

An evening seminar on "Non-destructive Testing in Civil Engineering Structures using Geophysical Methods" was held on Wednesday 21st March 2007 at the City University of Hong Kong. The seminar was organised by AGS (HK) jointly with the HKIE – Civil Division.

Geophysics has historically been developed and applied to finding sub-surface geological features. The civil engineering industry requires a better understanding of the construction and condition of a structure in order to make more informed engineering decisions.

The seminar was presented by Mr Jon Baston-Pitt, a Director of Furgo Aperio. Mr Baston-Pitt shared his experience on how geophysical and related non-destructive testing tools can be used in Civil Engineering to make better engineering decisions. Of the many geophysical tools available, Jon's presentation focused on the application of Ground Penetrating Radar (GPR) on buildings, structures, railways, roads and airports. Jon emphasised the technology limitations of GPR along with the concept of improving report confidence by using a combination of testing technologies. Using case studies, Jon further illustrated how managers, consultants and contractors could benefit from a better understanding of the built environment and condition of a structure.



Dr Johnny Cheuk (Left) presented the AGS souvenir to Mr Jon Baston-Pitt on behalf of AGS (HK)

# Seminar on "Risk-based Remediation: An Overview of the UK Contaminated Land Regime"

The AGS (HK) supported this seminar that was held on Wednesday 13th June 2007 and organised by the HKIE – Geotechnical Division and CIWEM-HK. The AGS (HK) was one of the parties recently consulted by the Environmental Protection Department (EPD) on the adoption of risk-based remediation foals. Recent initiatives by EPD will be leading to changes in the way that contaminated land is tested. It is therefore timely for us to have an update on current practice elsewhere.

The seminar was presented by Mr James Potter, the Principal Environmental Consultant of Hyder Consulting Limited. Mr Potter is a former Regional Land Contamination Officer with the UK Environmental Agency, where he oversaw implementation of the contaminated land regime in the Thames Region. He has extensive experience in contaminated land assessment and remediation with projects including the 2012 London Olympics site, the M25 Environmental Impact Assessment and the U2 Tower in Dublin.

In the seminar, Mr Potter introduced the regulations and soil guideline values adopted on the contaminated land assessment in UK. Mr Potter presented a case study on the Thames View Estate of UK, a contaminated residential site near to the 2012 London Olympics site and mentioned that a site-specific risk assessment had to be undertaken when soil quideline values were exceeded.

# CPD Course on "Faults in Hong Kong: Distribution, Composition & Engineering Significance"

On Saturday 10<sup>th</sup> November 2007, the AGS (HK) held a short CPD course on "Faults in Hong Kong: Distribution, Composition & Engineering Significance" at the City University of Hong Kong. The objective of the seminar was to provide engineers, engineering geologists and geologists with an upto-date overview of the current understanding of faults in Hong Kong.

The first half session was presented by Prof Chris Fletcher of the City University of Hong Kong. Prof Fletcher explained to the audience on most aspects of the morphology, composition, associated alteration, weathering and origin of faults in Hong Kong. He described the geological and engineering implications of ductile and brittle faults in Hong Kong.



Mr Mike Hendy (Right) presented the AGS souvenir to Prof Chris Fletcher on behalf of AGS (HK)

The second half session was presented by Mr Steve Parry, the Director of GeoRisk Solutions. Mr Parry shared some examples of faults encountered in recent infrastructure and development projects in Hong Kong which covering foundations, tunnels, slope

stability and dams. Suggestions made for the thorough geological modelling of future project sites where faulting is, or could be an issue were discussed in the lecture.



## **AGS (HK) Junk Trip**

On the evening of Friday 18th May 2007, the AGS (HK) organised a junk trip to Lamma Island for a seafood dinner. The event was attended by a small yet enthusiastic band of members.



# Seminar on "An Update on AGS Activities in the United Kingdom"

On Wednesday 30<sup>th</sup> May 2007, the AGS (HK) held an evening seminar on "An Update on AGS Activities in the United Kingdom" at the Mariner's Club in Tsim Sha Tsui. This seminar was a follow-up event to Mike's visit on the Member's Day of the United Kingdom AGS which was held on 21<sup>st</sup> March 2007.

The talk was given by Mr Jonathan Gammon, the Chairman of the AGS (UK). Mr Jonathan is a former Chairman of the AGS in Hong Kong. He is well known in Hong Kong and returned to the UK several years ago where he now leads the geotechnical group of Jacobs. In the seminar, the members were allowed to meet and to hear what initiatives are being progressed by the AGS in UK.

In conclusion, this event provided an excellent opportunity for the Hong Kong AGS to forge closer links with the parent group and to discuss some the new initiatives being undertaken in UK.

# **Ground Forum on "Designing For Safety in Construction"**

On Monday 11<sup>th</sup> June 2007, the AGS (HK) Working Group on the Design for Safety held a ground forum entitled "Designing for Safety in Construction" at the Mariner's Club in Tsim Sha Tsui. The seminar was aimed to promote interest and encourage discussion on the role of designers, clients and the government in addition to contractors in facilitating safety on construction sites.

Construction still stands as one of the world's most dangerous industries. There are approximately 60,000 construction fatalities recorded worldwide each year and Hong Kong alone recorded 25 deaths in 2005 and 16 in 2006. The death toll for 2007 is set to exceed 20. Particular issues that designers should arguably become more acquainted with include addressing buildability, addressing risks early in the design of a project, becoming more closely involved in temporary works control, designing in standard safety features and making greater use of innovation and technology. Wider questions that need to be asked concern the development of a strong safety culture within an organization, the manner in which contracts are procured and the state of the industry's "design talent pool."

The importance of the designer and the client in ensuring the safety of the worker, the end-user and the public has been recognised for some time. The United Kingdom introduced the Construction (Design and Management) or CDM Regulations in 1994, which were updated in April 2007. Under the regulations, legal duties are placed on virtually everyone involved in construction work ('duty holders') to ensure integration of safety and health into the management of a project. Duty holders include clients, CDM coordinators, designers, principal contractors, subcontractors and workers. Similar to the first version of the regulations, one responsibility of various duty holders is the updating and passing on of a health and safety file. Clients are required to check the competence and resources of all appointees and designers are required to eliminate hazards and reduce risks during design and provide information on remaining risks. Legislation of a similar nature has also been passed in Australia.

Recommendation No. 81 of the 2001 report of the Construction Industry Review Committee, *Construction for Excellence* encouraged the Hong Kong Government to review the need for introducing legislation similar to the UK CDM Regulations. A pilot study was conducted by the Environment, Transport and Works Bureau (ETWB), the Housing Authority and the Occupational Safety and Health Council from 2003-2004 in which CDM practices were trialled on a range of public works and public housing projects. As of May 2006, Labour Department had concluded that there was no urgent need to introduce regulations. However, ETWB have issued a set of guidelines to promote wider adoption of CDM practices within the industry.

The ground forum featured three speakers representing various corners of the industry namely contractors, consultants and the Government. Mr Derek Smyth of Gammon Construction spoke on the critical role of top management and strong leadership in ensuring safe sites. Mr Smyth discussed both the moral imperative and the financial cost of accidents. He stressed the need to collate and interpret accident statistics, and discussed the greater ability of designers in the early stages of a project to improve safety. Mr Smyth followed this up with examples of both good and poor practices by designers in influencing safety.

The second speaker was Mr Pang Kwok-Lam of the Labour Department. Mr Pang opted to speak openly and passionately on his personal involvement in the investigation of a fatal accident that occurred in Hong Kong in the late 1990's, which was strongly involved with temporary works design decisions.

The final speaker, Mr Philip Jones of Jacobs China spoke on "inherent safety by design." Mr Jones defined "inherent safety" as a process that reduces or eliminates hazards associated with materials and operations, which is permanent and inseparable for the duration of the process. He gave examples of fatal accidents across various industries that were a result of poor decisions in design and planning and presented strategies for designing for safety. These included "minimize" – the use of smaller quantities of hazardous materials or work undertaken in smaller units to minimize risk, "substitute" – the replacement of a material or a work plan with a less hazardous material or work plan and "moderate" – the creation of less hazardous conditions, a less hazardous form of a material, or facilities which minimize the impact of a release of hazardous material or energy.

The presentations were followed by a lively discussion between the audience and speakers which was chaired by Dr C K Lau of Fong On Foundation Limited. Questions raised by the audience covered any future plans of the government to reconsider introducing CDM regulations and the key role that client's play in terms of the method of scoring tenders. It was debated that "typical" private sector clients may currently place too high an emphasis on price and programme and there should be wider adoption of 60/40 price to technical score ratios such as being commonly used by the Government.



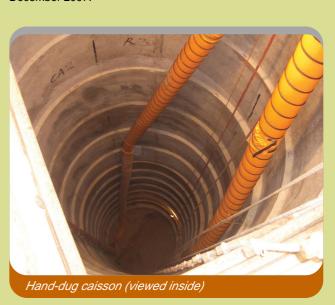
Article by Jonathan Li (Gammon Construction Limited)

### Site Visit to Sai Wan Estate

A visit by AGS (HK) members to the site of Sai Wan Estate was held on Saturday 26<sup>th</sup> May 2007. This is a CEDD Contract for the Landslide Preventive Measure (LPM) works at Sai Wan Estate in Western District. Designed and supervised by Fugro (Hong Kong) Limited, the HK\$30 million project involves the installation of 1, 600 soil nails on a 190m long, 110m high cut slope. It also calls for the construction of 19 hand-dug caissons with a 2.5 to 3m diameter. This method has been banned in Hong Kong since 1995 because of its inherent danger and workers skilled in the use of the method – usually husband-and-wife teams – have long retired.



Given the site conditions in this case though, there was no feasible alternative available and an exception was made subject to the implementation of stringent safety measures. The workers were trained to carry out the works and precautionary measures include a stipulation that materials could only be removed from the caissons, which are up to 40m deep, when the workers had already returned to the ground and were no longer inside. The project started in October 2005 and is due for completion in December 2007.



The site visit was very well received by the young and experienced engineers / engineering geologists with more than 20 people attended. The visit started with a brief introduction on the scope of work by the site engineers and followed by a tour on the relevant LPM works. The attendees were allowed to view what is now, the rarely seen construction of hand-dug caissons as part of the slope upgrading works for the site.



## **Site Visit to Po Shan Road Tunnel**

A visit by AGS (HK) members to the site of Po Shan Road Tunnel was held on Saturday 8th September 2007. This is a CEDD Contract for the LPM works at Mid-levels. The works include drainage tunnels and natural terrain risk mitigation works located at Po Shan Road. The contract was awarded to the China State and China Railway with contract sum of approximate HK\$145 million. The works started in July 2006 and is scheduled to take about 24 months to complete.

The project involves the excavation of a 6.5m high, 8m wide and 30m long portal for the launch of a tunnel boring machine to excavate two 3.5m diameter drainage adits of 260m and 175m length respectively. The tunnels are being constructed by drill & break method at the portal, and will be driven by a Robbin 119-222 Tunnel Boring Machine (TBM) from the portal chamber. After completing the High Tunnel of 260m, the TBM will be retracted and re-orientated to excavate the Low Tunnel for another 175m. No blasting is allowed for the tunnel construction, the portal chamber and the launching chambers are to be formed by non-explosive drill & break method. The works also call for other natural terrain risk mitigation measures such as soil nailing, debris resisting barriers and surface drainage improvement.

A delegation of 25 people gathered at the project site office at Sheung Wan in the morning of the 8th. The site visit began with a brief introduction by the Consulting Engineers from Maunsell Geotechnical Services Limited which detailed the works progress, tunnel methodology, design considerations and site constraints. Following the presentation, the delegation visited the site at No. 16 Po Shan Road where the final stage of the TBM assembly was

ongoing. Extensive instruments were installed on site to monitor the adjacent structures / ground movement during the tunnelling works. Noise enclosures were provided at the portals which to mitigate the nuisance to the nearby public during construction.



Article by Wong Tsang Hung, Chris (Gammon Construction Limited)

2007 Annual General Meeting and Ground Forum on "Why are our Engineers leaving the industry, can we stop them leaving?"

On Wednesday 13<sup>th</sup> December 2007, the AGS (HK) held its Annual General Meeting (AGM) and a ground forum on "Why are our Engineers leaving the industry, can we stop them leaving?" at the Hong Kong Football Club in Happy Valley.

Dr Angus Maxwell (on behalf of Mike Hendy) provided a brief overview of AGS (HK) activities and achievements over the 2006/2007 session. Dr Maxwell thanked the Executive Committee and all those who had contributed towards another successful year for AGS (HK). He reported that the finances for the Association remain healthy with a reported bank balance of approximately HK\$390K. He raised a motion to re-appoint Anthony Kam and Associates as the account auditor and Acctax Company Secretary Limited as the company secretary to the Association which was accepted unanimously by the members. He further proceeded to welcome the new Committee Members and thank the members who have stepped down from the Executive Committee.

After the AGM was successfully closed, several short presentations of the forum on "Why are our Engineers leaving the industry, can we stop them leaving?" were provided by Ms Catherine Tsui whom is a Human Resources Director of Ove Arup & Partners, Prof L. G. Tham whom is Associate Dean of Faculty of Engineering of the HKU, Mr K. S. Luk whom is the Vice Chairman of the Site Investigation Contractors Committee of the Hong Kong Construction Association, Mr Mike Tang whom is the Operations Manager of NES Global and Ir Ringo Yu whom is the Deputy Chairman of the HKIE – Geotechnical Division.



Dr Angus Maxwell (in the stage) provided a brief overview of AGS (HK) activities and achievements over the 2006/2007 session

The specific issues related to staffing for the Geotechnical industry in Hong Kong were discussed at the forum which including the dwindling numbers of engineer within the industry as well as the reduced numbers of student undertaking engineering programmes in university. Much of the discussion was centered on whether Hong Kong will experience a skill shortage for the future infrastructure projects. The forum was very well received with more than 50 members attended.



To conclude, this ground forum provided an excellent opportunity for engineers and other geotechnical professionals from various backgrounds to share the opinions on staffing for the Geotechnical Industry in Hong Kong. We would like to thank the speakers for their insightful presentations.

# Recipients of the AGS (HK) Scholarship

AGS (HK) regularly provides scholarships to universities in Hong Kong, typically for the study of postgraduate degrees in geotechnical and geoenvironmental field who have demonstrated considerable potential achieving outstanding results and high merit. A \$10,000 scholarship for 2007-2008 was awarded to **Mr Mo Long** 

**Ki** of the Hong Kong University (HKU) and a further \$10,000 scholarship was shared between **Mr Tse Yiu Man** and **Ms Yao Xu** of the Hong Kong University of Science and Technology (HKUST). The awardees have provided a few words on themselves below.

#### Mr Mo Long Ki

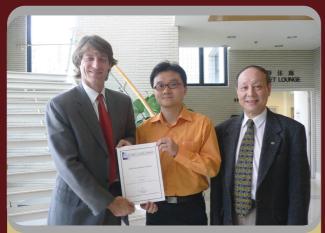
It is my pleasure and a great time to receive the AGS (HK) scholarship in studying the part-time master course in Geotechnical Engineering at night while busying with office works in day time. I enjoy working and studying in Geotechnical Engineering discipline as it has given me many chances to explore. I have to balance between my working time, studying time and my leisure time. Although sometimes I feel hard and under pressure, I experience a contented and meaningful life through trying my best in every aspect. I think all of us should keep on learning throughout our lives and never give up on our targets in order to enrich our lives. Here I use this opportunity to thank AGS (HK), HKU, my teachers, my classmates and my friends who have been supporting me.



### Mr Tse Yiu Man

It is my honour to be awarded the 2007 AGS (HK) Geotechnical Award, confirming my efforts in academic study and research. I would like to take this precious opportunity to express my deep gratitude to AGS (HK) which provides encouragement towards my further research and career.

Having joined the programme of Master of Philosophy in Civil Engineering in the Hong Kong University of Science and Technology since 2006, I have been devoting to study and research under the supports and supervision of Prof Charles Ng. Focusing on the climatic effects on shear strength and thus slope stability, especially within the vadose zone, extensive studies are being carried out. Hopefully, the results could be shared with the public in the near future. Thanks AGS (HK) again for the supports as well as a chance to introduce my research interest.



Dr Angus Maxwell (left) presented a HK\$5,000 AGS (HK) scholarship to Mr Tse Yiu Man towards his Master of Philosophy at the Hong Kong University of Science and Technology

#### Ms Yao Xu

I am truly honoured to receive the 2007 AGS (HK) Geotechnical Award. I would like to express the deepest appreciation to the AGS (HK).

I am now pursuing Ph. D. study in Department of Civil Engineering at the Hong Kong University of Science and Technology. My current research focuses on dam risks, involving analysis of dam failures

and diagnosis of distresses for dam rehabilitation. This study is of practical significance to flood risk assessment and management. In the last one and a half years, endeavours have been attempted to cope with this subject under the supervision of Prof Limin Zhang. Herein I sincerely appreciate Prof Zhang for his valuable guidance and friendly encouragement throughout my research work. Finally, I would like to say thanks again to the AGS (HK) for the scholarship. The award will motivate me to do my best in the remaining research work.



Dr Angus Maxwell (left) presented a HK\$5,000 AGS (HK) scholarship to Ms Yao Xu for her research at the Hong Kong University of Science and Technology

## **Diary Dates**

(Information on upcoming events is updated regularly on our website at www.ags-hk.org)

Event	Date	Time	Venue	Contact/Registration
AGS (HK) Golf Day	11 June 2008 (Wed)	09:30 – 17:00 Course	Kau Sai Chau	Lee, Tse-hung tsehung.lee@gammonconstruction.com
Ground Forum on Groundwater Prediction & Control in Underground Excavations	10 July 2008 (Thur)	18:30 – 20:00	City U	Angus Maxwell asm@maxwellgeosystems.com
Field Trip on a Natural Terrain Landslide Instrumentation Site	19 July 2008 (Sat)	09:00 - 12:30	Pa Mei	Mark Wallace Mark.wallace@arup.com
Site Visit on CLP Cable Tunnel	27 Sept 2008 (Sat) (tentative)	09:30 – 12:00 (tentative)	Castle Peak (tentative)	Joseph Lo Joseph.lo@maunsell.aecom.com & Barry Sum Barry.sum@maunsell.aecom.com
Seminar on Natural Terrain Hazard Studies	18 Oct 2008 (Sat) (tentative)	09:00 – 17:15 (tentative)	HKUST (tentative)	Samuel Ng samuelkcng@cedd.gov.hk
Seminar on Tunnelling (tentative)	15 Nov 2008 (Sat) (tentative)	09:30 – 17:00 (tentative)	To be announced	Joseph Lo Joseph.lo@maunsell.aecom.com & Barry Sum Barry.sum@maunsell.aecom.com