



# *20<sup>th</sup> Anniversary Report*

School of Civil Engineering  
UNIVERSITI SAINS MALAYSIA

PPKA AWAM  
CELEBRATING  
**20** YEARS  
1989 - 2009

Making Our Mark For A Sustainable Tomorrow



## FOREWORD

- 01 A Message From The Vice chancellor
- 02 A Message From The Dean

## HISTORY OF PPKA

- 03 - 08 How It Began
- 09 - 10 Civil Engineering Program Over The Years
- 11 - 12 Reflections From A Former Dean
- 13 - 17 Reflections From Senior Staff
- 18 Reflections From Senior Supporting Staffs
- 19 - 20 Academic Leaders From PPKA
- 21 - 23 Previous and Current Management Team
- 24 - 25 Former Staff

## CURRENT STAFF

- 27 - 28 Present Staff
- 29 - 30 New Staff
- 31 Academic Staff on Training

## RESEARCH GROUP PROFILE

- 46 Structural Engineering
- 47 Environmental Engineering
- 48 Water Resources Engineering
- 49 Geotechnical Engineering
- 50 Highway and Traffic Engineering
- 51 Geomatic Engineering
- 52 Management and Civil Engineering

## PPKA HONOURS AND ACHIEVEMENTS

- 54 Research and Consultancy
- 57 PPKA Achievements (2008)
- 59 Book, Thesis Examiner & Awards (2008)
- 60 Citation & Non-Citation Indexed Journal (2008)
- 61 Journal Paper Reviewer (2008)
- 62 Invited Speaker (2008)

## PAST CALENDAR OF EVENTS



## STUDENT SECTION

- 33 - 34 Student Statistics
- 35 - 36 Undergraduate Student
- 37 - 38 Postgraduate Student
- 39 - 43 Reflections From Former Student
- 44 The Awangs @PPKA



### FROM THE EDITOR-IN-CHIEF

This anniversary report bridges PPKA's nostalgic past with its current status of distinction. After two decades in existence, we may rightfully ask, How does PPKA begin? Find the answer in our feature article *History of PPKA* prepared based on old authoritative documents and interviews with key personnel involved during its formative years. Imbued with a deep sense of delight and pride; we profile two ex-deans and towering personalities including Professors Dr. Sabarudin, Dr. Ahmad Farhan, Dr. Wan Hashim, Datuk Dr. Abu Bakar and Dr. Rosli Hamir. They are now academic leaders having their roots at PPKA. We deeply miss them all. On a lighter note, senior PPKA staffs, including PPKA's first Deputy Dean, gracefully reflected upon their memorable years at PPKA. PPKA's rich historic past can be traced from an amalgamation of their sensational and moving accounts and diverse experience. As we are all aware, the core business of any academic institution lies in providing quality teaching and learning. In this context, student's satisfaction matters most to us. But how does one rate students' satisfaction? To answer this, we invited a handful of past and current PPKA students, undergraduates and graduates alike, to narrate their lasting impressions on PPKA. So explore the fascinating experiences of the three siblings of Pak Awang while some ex-students such as Hafizah, Patrick, Masria, Azinoor and Muhammad Khairuddin wrote on their overseas stint. Some serve as academicians in local institutions of higher learning. Regardless where they are, their glowing tributes to PPKA bear ample testimony to the quality of education available at PPKA. Some also express their hope for PPKA's future undertakings which we at PPKA should pay heed to. To add onto PPKA's grandeur, we publish PPKA's previous and current (year 2008) honours, achievements and academic recognition in the form of publications, research grants, consultations, awards and contribution hence impact on the industries. Finally, as a special retreat, we present a showcase of PPKA in pictures – then and now. It is a history we are proud of.



We hope you enjoy this rather unconventional anniversary report. The difference in presentation and style is intentional simply because PPKA is a believer in innovation and doing things in the *unusual* way to get our message across more effectively.



The background of the image is a tropical scene. In the foreground, there are large, green palm fronds. Behind them, a white building with a red roof is visible. The sky is blue with some light clouds. The text is overlaid on this scene.

# *20<sup>th</sup> Anniversary Report*

**SCHOOL OF CIVIL ENGINEERING  
(PPKA)**



## A MESSAGE FROM THE VICE CHANCELLOR



Congratulations to the School of Civil Engineering (PPKA), Universiti Sains Malaysia (USM) for its 20th Anniversary.

Throughout the years, PPKA has been highly regarded for its innovative approach to teaching and research. Graduates of its undergraduate and postgraduate programs have been regarded as the most sought after candidates for employment in the country.

The campus is now strategically located at the meeting point of three states - Penang, Kedah, and Perak - thus providing greater opportunities for PPKA to contribute towards the development of the locality as well as the Northern Corridor Economic Region (NCER).

PPKA has contributed so much in its 20 years of existence. I have full confidence that its strengths in serving the industry and community in the areas of contract research, consultancy, industrial testing, and community services will continue to grow in the forthcoming years. PPKA's emphasis on the sustainability of its curriculum is very much encouraged by the USM as it is in line with the main agenda of APEX University.

I wish that the spirit of team work and relentless effort but with prudent way of doing things within PPKA will continue to be enhanced as it is the only route for a better and sustainable tomorrow.

PROFESSOR TAN SRI DATO' DZULKIFLI ABDUL RAZAK



## A MESSAGE FROM THE DEAN



Congratulations to PPKA on its 20th anniversary celebration this year.

**Over** the years, PPKA has soared to greater heights. This is made possible by the presence of highly spirited and motivated teamwork at PPKA, committed towards excellence. As the fifth Dean, I am proud to be associated with this dynamic team. I well appreciate that it is hard for me to continue with the good work laid down by my predecessors. Tuan Haji Ir. Mohd Hashim Daud, Professor Sabarudin Mohd, Professor Dr. Wan Hashim Wan Ibrahim and Professor Dr. Ahmad Farhan Mohd Sadullah have laid the foundations for PPKA to further prosper and to make its mark on the nation's academic landscape for a sustainable tomorrow.

PPKA has undergone a number of transformation ever since it was formed in 1989. We had to date successfully produced over 2000 well trained civil engineers for the nation. We had a success procurement of equipments from the Fifth Malaysian Plan to the Ninth Malaysian Plan. We had successfully shifted from conventional teaching mode to the current more challenging task OBE of fulfilling the mission of a Research University and subsequently the sole APEX university of the country. The Key Performance Indicator (KPI) is the main phrase used by the stakeholder to gauge our performance.

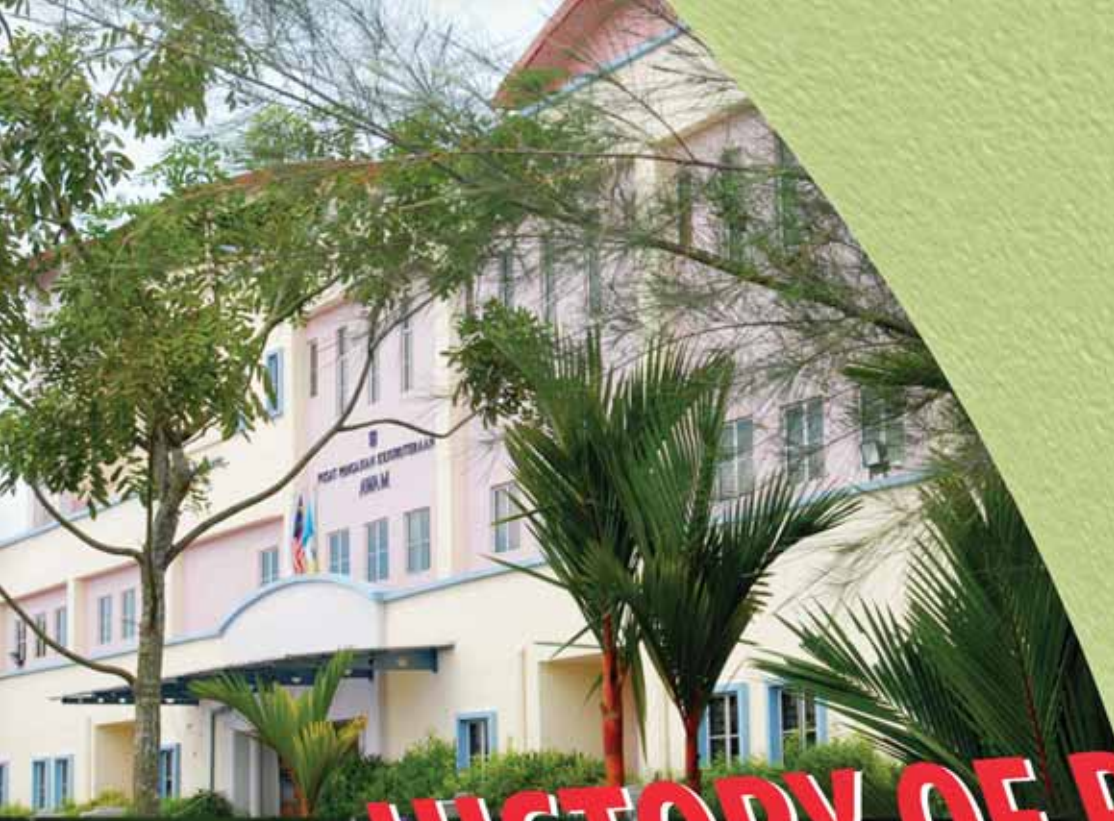
At this juncture, it may be worthwhile to reflect upon PPKA past success stories, partly to motivate PPKA younger staff members. We successful organized many international conferences notably Humid Tropics in 1993, Bridge in 1994, LARREN in 1997 and commencing 2001, the AWAM bi-annual conference was successively held. Our consultancy works continue to flourish, the Ladang Buntar site investigation work was the first conducted in 1990, followed by an evaluation of Teluk Intan Leaning Clock Tower a year later. Now we are proud to serve as consultants to numerous international projects including those under UNESCO, SHELL, Hajj Research cluster, etc. The expertise at PPKA is well recognized by the industries and many staffs sit in technical committees and expert panels in various prominent organizations at national and international levels. Many staffs also serve as editorial board members in many prestigious journals.

Our challenge under the APEX university status is greater and we have to put our brains together to ensure that failure is not an option. I have full faith that everyone at PPKA is a strong supporter of this noble mission. As the Dean, I will focus on three main agenda, namely infrastructure and human capital development, conducive working environment and teamwork. I sincerely hope that with all the efforts that we put in, will place PPKA as one of the top civil engineering departments in the country.

Thank you.

PROFESSOR DR. HAMIDI ABDUL AZIZ





# HISTORY OF PPKA





## HOW IT BEGAN

**This** year, the School of Civil Engineering, (PPKA) celebrates its 20th anniversary. Therefore the Editorial Board's decision of compiling a document that would serve as an authoritative text explaining the history of PPKA is long overdue. The formidable task of the setting up of PPKA was given to Assoc. Prof. Ir. Dr. Hj. Md. Azlin Md. Said. It appears that documenting the historical birth of PPKA would be impossible without looking back the birth of the engineering programmes at USM. Apart from browsing through old official documents, interviews were conducted with the following key personnel who were involved during the formative years at PPKA, namely

- Dr. Hj. Mohd Muslim bin Mohd Yusoff
- Associate Professor Ir. Nik Fuaad Bin Nik Abllah
- Ir. Hj. Mohd Hashim Bin Daud

## The Birth of Engineering at USM

**It** all started in the early 1980's when several Bachelor of Applied Science graduates from two programmes, namely Electronics Science and Technology and Mineral Science and Technology, came back to USM to inform that they were hired by several factories in Kuala Lumpur and Penang as "engineers" but sadly not recognized as engineering graduates. To answer their plight, USM applied to the Public Services Department (JPA) to get the Bachelor of Applied Science Degree recognized as equivalent to engineering degrees. When JPA rejected the application, the then Deputy Vice Chancellor (Academic Affairs), Professor Kamal Salleh agreed to the request by Mr. Mohd Muslim Mohd Yusoff, then a lecturer at the School of Applied Science, to form a committee to conduct a feasibility study on offering engineering programmes at USM.

What the committee discovered was that the School of Housing, Building and Planning (HBP), USM was already offering several core civil engineering subjects and hiring several lecturers with civil engineering and mechanical engineering background. Meanwhile, the School of Applied Science had lecturers and offering courses in the areas of Chemical Engineering, Minerals Engineering and Electronics Engineering. The committee concluded in its report to the Vice Chancellor that USM was in fact ready and capable of offering engineering programmes. The report was nicknamed the 'Green Book (*Buku Hijau*)', a popular term used until 2002 to refer to the engineering academic programme book.

A Board of Studies was set up by the USM Senate on 23rd February 1983 to study the restructuring and renaming of the School of Applied Science to the School of Engineering Science and Industrial Technology. It was recommended that the two Engineering Programmes (Mineral Resources Engineering and Electronics Engineering) and three Industrial Technology Programmes (Food Technology, Polymer Technology and Paper Technology) should be offered. The proposal was accepted by the University Senate and it was submitted to the Malaysian Ministry of Education.

Subsequently, the Ministry of Education conducted a study entitled 'Skop Pengajian Kejuruteraan di Malaysia', which among others, concluded that the number of engineering faculties in the 1980's were inadequate for the nation. Thus it was recommended that at least 3 new engineering faculties be set up.

After USM's application was approved, USM conducted a study in 1984 to evaluate the feasibility of setting up an engineering campus in Perak, specifically in Ipoh, the state capital. Henceforth, Politeknik Ungku Omar (PUO) and nearby areas were evaluated for the proposed siting of the new engineering campus.



Dr. Mohd Muslim Bin Mohd Yusoff



Associate Professor Ir. Nik Fuaad Bin Nik Abllah



Ir. Hj. Mohd Hashim Bin Daud



## The Polytechnic Ungku Omar (PUO) Link

**PUO** was offered to be the new engineering campus with strong support from His Royal Highness, Paduka Seri Sultan Azlan Shah, the past Pro Chancellor of USM himself. Great efforts were made to study the transformation of PUO into a USM branch campus, which included setting up Schools based on the PUO existing set-up, academic programmes and academic staff. However, the proposal to take over PUO did not materialize. USM was offered several other sites in the vicinity of Ipoh such as Bercham, Manjoi and Ampang. The sites suggested were not favourable since the land area was somewhat insufficient to cater for a full fledged engineering campus.

## USM Campus in Ipoh

In the name of progress at that time and the vital need of establishing a campus in Ipoh focusing on basic engineering degree programs, the 54th Senate Meeting (24th October 1984) agreed to set up a Board of Studies to study the offering of engineering programmes at the campus in Ipoh and the present programmes offered by the School of Engineering Science and Industrial Technology in the main campus.

To establish its presence in Perak, USM moved temporarily into several buildings in Ipoh, particularly the Majlis Perbandaran Ipoh (MPI) building near Padang Ipoh. A total of RM1.8 Million was spent on building a workshop, a 4-storey laboratory building and renovating the former Perak State Library. Three old Majlis Perbandaran Ipoh buildings were also renovated to house lecture theatres, laboratories and office space. Accommodation for female students were provided at Desasiswa Perak while male students were accommodated in several terrace houses at Pekan Razaki, approximately 5 km from the campus in Ipoh.



In line with the campus master plan, three more new programmes were approved at the 61st Senate Meeting (11th December 1985), namely:

- Mechanical Engineering (to start in 1988)
- Civil Engineering (to start in 1988)
- Electrical Engineering (to start in 1989)

Nevertheless, the School of Electrical and Electronics Engineering and the School of Materials and Mineral Resources Engineering were set-up at the main campus since 1984. During the 63rd Senate Meeting (April 1986), it was agreed that the School of Civil Engineering and the School of Mechanical Engineering would be set up at the Ipoh Campus. The setting up of the new Schools was to facilitate recruitment of academic and administrative staffs and to ardently prepare for the first intake of students in July 1989 for the 1989/90 academic session.

The new and existing programmes' philosophy and goals are to produce engineers in the basic engineering disciplines (civil, electrical and electronic, materials, minerals resource, mechanical and chemical) who are responsible and geared up towards research and development, project management, planning, product control and fitness certification of facilities in various sectors in Malaysia. With this in mind, the students were given basic and specialized knowledge in engineering, which integrates theory and practice, and appropriate basic business practices such as finance, marketing and management, through optional and co-curriculum courses. On top of that, the students must also experience a 3-week practical training during the first year and 4 weeks during the 3rd year. The students must undergo a compulsory industrial training for 14 weeks during the second semester in the third year.





## USM Campus in Bandar Seri Iskandar

**Bandar** Seri Iskandar, a yet to exist town sited near Tronoh, about 30km from Ipoh, was selected as the place for the 'permanent' campus to house engineering programmes. The 500 acres (250 acres of ex-mining land and 250 acres of forest reserve) site was chosen since it was large enough to cater for 4,000 students and future expansion. It was considered an ideal place for development by the planners, with 'six hills, six lakes and two streams' to explore and expand.

## The Birth of Civil Engineering Programme

**The** arduous task of preparing the working paper for the formation of the Civil Engineering Degree Program was done by Ir. Nik Fuaad Bin Nik Abllah, from the School of Housing, Building and Planning. The philosophy of the programme was modelled on the Australian civil engineering undergraduate degree programme. Several visits to Australian Universities, namely Adelaide University, Melbourne University, University of Sydney and University of Perth were made under the Australian International Development Program (IADP) programme. A draft syllabus was developed based on discussions made with the Australian counterparts. The experiments and laboratories were designed based on the Australian Universities laboratory concepts. A good example is the structural laboratory strong floor which was modeled on Melbourne University. As a result, several staffs were sent to Australian universities to pursue postgraduate studies.

In the initial formative years, the Civil Engineering programme focused on Water Resources and Public Health, Structures and Highway and Geotechnics. The programme was oriented towards professional based courses and practical exposure. Therefore, the curriculum was focused more on practical and design projects, where practical visits to civil engineering projects are included. An important facet of the engineering degree programme is the common courses for all engineering subjects in the first year. Not overlooking an essential element, the academic staff must also be qualified and professionally trained. The curriculum formulation also derived benefits from visits to the engineering faculties at Universiti Malaya and Universiti Teknologi Malaysia.

The United Kingdom academic connection especially towards the academic development, was incorporated later during 1990-1996 during the British Council CICHE and ODA Cells especially in academic staff training via postgraduate studies, academic programmes and laboratory developments. The prolific academic ties were strengthened with UK Universities including University of Newcastle Upon Tyne, University of Leeds, University of Wales (Swansea) and University of Wales, (Aberystwyth).





## The Birth of the **School Civil Engineering (PPKA)**

In 1986, the Civil Engineering curriculum was coordinated by Ir. Hj. Mohd Hashim Bin Daud, previously the Head of Department, Civil Engineering programme at PUO, who later became the first PPKA Dean in 1989.

The launching of PPKA was planned in 1988 but was unfortunately delayed due to unforeseen circumstances. It was formally set up on 1st January 1989 with three lecturers, a Tutor and an Assistant Registrar. The first student intake took place in July 1989 numbering only at 11 students.

PPKA was later moved to the USM Branch Campus, Seri Iskandar in 1989, where it was allocated with its own building and laboratory facilities.



## The Move to **Seri Ampangan Campus**

Between 1996 to 1998, there was a suggestion to relocate the Engineering and Health campuses back to USM Penang. Nevertheless, the main campus was unable to accommodate both campuses. A proposal was made to transfer the engineering campus to Bertam, Penang. Subsequently, plans were drawn up for the supposedly new campus. But somehow, the proposal was rejected in 1998.

During the Budget Speech in 1998, the then Minister of Finance announced that the USM Perak Branch Campus would move to the new site at Seri Ampangan, near Nibong Tebal, Penang while Universiti Teknologi Petronas would take over the Bandar Seri Iskandar site. It caught everyone by surprise. Subsequently, PPKA made preparations on the proposed move with the design of new buildings and facilities.

In March 2001, PPKA and the entire USM Perak Branch campus shifted to Seri Ampangan to start a new era in Nibong Tebal. In the early stage, a lot of challenges and hardships were encountered since most buildings were either not ready or yet to be occupied. However, the staff and students met all challenges with perseverance while PPKA began to make its mark on the nation's academic scene and to become what it is now.

### *The next 20 years*

*From its inception, PPKA has gone through a tremendous period of growth from being a small School to one which is accepted as one of the best in the country. It is hope that the next 20 years will further propell PPKA into the nation's best Civil Engineering School.*







## RIVER ENGINEERING AND URBAN DRAINAGE RESEARCH CENTRE (REDAC)

**River** Engineering and Urban Drainage Unit (UKSSB) or now popularly known as REDAC is the first Unit then Research Centre born from PPKA in 1997. Eversince its inception, it has been helmed by Professor Dr. Nor Azazi Zakaria. The unit has been active in research and consultancy works in River Basin Management in particular urban flooding and sediment transport in rivers. UKSSB has received several grants from the Department of Irrigation and Drainage (DID) Malaysia and Seberang Perai Municipal Council, Penang towards resolving Urban Drainage and River Engineering related problems.

With the launching of a new urban drainage manual (Urban Stormwater Management Manual for Malaysia or MSMA) effective 1st January 2001, the Malaysian Department of Irrigation and Drainage (DID) has approached the USM in March 1999 to consider its new engineering campus at Transkrian, Nibong Tebal as the pilot project in implementing a Bio-Ecological Drainage System (BIOECODS), one of alternatives listed in MSMA to create an environmentally friendly urban development. UKSSB has since been awarded a new research grant amounting to RM2,900,000.00 to study the effectiveness of using BIOECODS under a close cooperation with DID.

UKSSB is also active in postgraduate research funded by IRPA Long-Term Grants and scholarships from government agencies. The students come from different backgrounds including engineers, lecturers and consultants.

Due to its active role in research and consultancy, the University felt that UKSSB should be operating as a Research Centre leading to Centre of Excellence, the first in Engineering Campus. The University Senate formed a Study Committee in their 145th meeting on 22nd April 2000 under Clause 22[b], Constitution of USM to consider the proposal to form River Engineering and Urban Drainage Research Centre (REDAC). The committee met on 9th June 2000 and was chaired by Yang Berbahagia Dato' Professor Jamjan Rajikan representing the then Vice Chancellor. The committee agreed and fully supported the establishment of REDAC to fulfill the need of the present and future research in River Engineering and Urban Drainage.

In the 146th Senate Meeting on 22nd June 2000, the resolution to form REDAC was presented and agreed. The University Board of Directors (LPU)'s meeting on 26th July 2000 affirmed the establishment of REDAC. Subsequently a report on the proposal to form REDAC was forwarded to the Department of Higher Education, Ministry of Education for evaluation. On 17th April 2001, the Ministry of Education confirmed the resolution by the Higher Education Committee dated 13th May 2001 for the establishment of REDAC commencing on 2001/2002 Academic Year. Subsequently, Professor Nor Azazi Zakaria and Professor Aminuddin Ab Ghani were appointed as the Director and Deputy Director of REDAC respectively.



## CIVIL ENGINEERING PROGRAM OVER THE YEARS (1989 - 2009)

**Over** the years, PPKA curriculum has evolved in tandem with the requirements of the time. Nevertheless, the basic objective of the curriculum remains which is aimed at producing well rounded graduates able to meet the challenges facing the industry. PPKA curriculum consists of four basic components: common, core, electives and university requirements. In its present (and still evolving) form, PPKA curriculum combines the core disciplines such as structural, geotechnical, water resources, transportation and environmental engineering but deriving support from the sciences, geomatics and management. A graduate civil engineer is not expected to specialize in any of the above disciplines. However, students are allowed to pursue their interest in some areas through the elective courses but integration between the disciplines remains as the crux of the matter.

The curricular has evolved from the following systems:

- University System (146 units, 4 years)
- SPU Sistem Pengajian Universiti (150 units, 4 years)
- SPTT Sistem Pengajian Tiga Tahun (126 units, 3 years)
- SPKET Sistem Pengajian Empat Tahun (135 units, 4 years)
- SPKET Outcome Based Education System (135 units, 4 years)

The undergraduate Civil Engineering program was offered via distance learning (DL) too. This is a program which is a mirror image of the in-campus degree program except for the mode of learning which was based on modules, video conferencing and the intensive course. Despite its popularity, intake to the program which commenced in 1994/95 session was phased off during academic session 2000/01. A total of 178 civil engineering students graduated from this mode.

External examiners have played significant roles in the growth and development of PPKA since it was setup in 1989. Different external examiners have been appointed for the undergraduate and the postgraduate programs. A typical appointment stretched over a period of two consecutive academic sessions.

The main role of external examiners is to ensure that examination standards at PPKA are of international standing. Apart from advising PPKA on matters pertaining to the structure, contents and facilities of undergraduate and mixed-mode programs, they also ensure uniformity in the evaluation of answer scripts by the internal examiners and take part in the oral component or viva-voce as and when is required.

### UNDERGRADUATE PROGRAM

Session	External Examiner	University
1989/90 - 1994/95	Prof. Thomas Hamilton Hanna	University Of Sheffield, United Kingdom
1995/96 - 1997/98	Prof. Lawrie Baker	Deakin University, Australia
1998/1999	Prof. Chongrak Polprasert	Asian Institute of Technology, Thailand
1999/2000	Prof. P. Paramasivam	National University of Singapore, Singapore
2000/2001	Prof. Henry Fan Shing Leung	Nanyang Technological University, Singapore
2002/2003	Prof. Kaoru Takara	Kyoto University, Japan
2004/05 - 2005/06	Prof. Dennes T.Bergado	Asian Institute of Technology, Thailand
2006/2007	Prof. Pan Tso-Chien	Nanyang Technological University, Singapore
2007/2008	Prof. Hitoshi Gotoh	Kyoto University, Japan



## MIXED MODE PROGRAM

Program	Session	External Examiner	University
M.Sc (Highway and Transportation Engineering)	1999/2000	Prof. Henry Fan Shing Leung	Nanyang Technologic University, Singapore
M.Sc (Structural Engineering)	1999/2000 2002/2003	Prof. P. Paramasivam	National University of Singapore, Singapore
	2004/2005 2005/2006	Prof. Worsak Kanok Nukulchai	Asian Institute of Technology, Thailand
	2006/2007 2007/2008	Prof. Panitan Lukkunaprasit	Chulalongkorn University, Thailand
	1999/2000	Prof. Chongkrak Polprasert	Asian Institute of Technology, Thailand
M.Sc (Enivironmental Engineering)	2000/2001 2002/2003	Prof. Dr. Eng. Shinsuke Morisawa	Kyoto University, Japan
	2004/2005	Prof. Trevor David Waite	University of New South Wales, Australia
	2005/2006 2006/2007 2007/2008	Prof. Ng Wun Jern	National University of Singapore, Singapore

## EXTERNAL ADVISOR

Professor M B. Pescod	Head of Department and tyne and Wear Professor of Environmental and Control Engineering Universiti of Newcastle Upon Tyne NE1 7RU United Kingdom	1989 - 1991
Professor Keith Beckett Wallace	Head School of Civil Engineering Queensland University of Technology 2, George Street, GPO Box 2434 Brisbane Q4001 Australia	1991/92 - 1997/98

## INDUSTRIAL ADVISORY PANEL

Ir. Elias Ismail	Senior Manager	Bahagian Pembangunan Teknologi Pembinaan Lembaga Pembangunan Industri Pembinaan Malaysia Ibu Pejabat CIDb, Tingkat 7, Grand Seasons Avenue No. 72, Jalan Pahang, 53000 Kuala Lumpur.
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Ir. Dr. Goh Teik Cheong	Executive Director	M.E.I. Project Engineering Sdn. Bhd. 51-12-A Menara BHL, 51 Jalan Sultan Ahmad Shah, 10050 Pulau Pinang
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Ir. Dr. Ismail Mohamed Taib	Director	Cawangan Kejuruteraan Awam, Struktur dan Jambatan Ibu Pejabat JKR, Tingkat 15, Centre Point North, The Boulevard Mid Valley City Lingkaran Syed Putra, 59200 Kuala Lumpur



## REFLECTIONS FROM A FORMER DEAN

### **PROFESSOR DR. WAN HASHIM WAN IBRAHIM** **Dean, School of Civil Engineering** **(March 2003 – March 2007)**

I felt honoured and in a way, surprised by my appointment as PPKA Dean in 2003. My earlier experience managing several research grants, managing students' activities and annual budget allocated for operating one of the student's hostels, were useful when helming PPKA for two terms.

Instituting the implementation of the Outcome Based Education (OBE) at PPKA proved to be difficult task. Mechanisms to establish the Program Educational Objectives (PEO), Learning Outcome (LO) and Course Outcome (CO) for PPKA were put in place. Structured surveys to the respective program stakeholders were carried out. Surveys were also carried out to the final year students (exit interviews), industries, parents, employers and alumni. The outcome of the surveys was used to improve the learning and teaching aspects of PPKA Civil Engineering program which in turn lead to the changes of the overall curriculum.

I always view students as one of our clients and academics must view students from the students' perspective. Hence, I treated their feedback as invaluable information to further improve the effectiveness of teaching and learning process. So that is why I sought to improve the effectiveness of the student evaluation process. A committee was set up for this purpose and the feedbacks of the students' evaluation were communicated back to the respective lecturers.

During my tenure as Dean, the Integrated Design Project (IDP) was planned. Also known as the capstone project, the IDP aimed at exposing the final year students on the interrelationship between different Civil Engineering disciplines. Its implementation will enable students to work in a team, able to communicate and to design a typical Civil Engineering project.

Construction of the much needed concrete casting laboratory using in-house expertise was something that I am proud of. The design of the facility was carried out by PPKA staffs at no cost. Its construction was also monitored by PPKA staffs. In this way, the available annual development budget allocated for PPKA was sufficient to fund the construction of the concrete casting lab. In this regards, I have to express my deep admiration to all staffs who had given their unparalleled commitment and sacrifice.

The heavy task to helm PPKA was made easy by the continuous support given by all PPKA staffs. The close working relationship with all staffs enables us to implement all planned activities. On this occasion, I wish PPKA a Happy and Successful 20th Anniversary.

Professor Dr. Wan Hashim Wan Ibrahim  
Dean  
Faculty of Engineering  
Universiti Malaysia Sarawak





## REFLECTIONS FROM A FORMER DEAN

**PROFESSOR DR. AHMAD FARHAN MOHD SADULLAH**  
 Dean, School of Civil Engineering  
 (March 2007 – June 2008)



It was a mixed feeling I had when the news came to me that I was about to be nominated to be at the helm of the Malaysian Institute of Road Safety Research (MIROS). Excited and honored on one hand, while sad and mystified on the other. The latter feelings were primarily felt due to the fact that the appointment came as a shock and somewhat premature as much of what we wanted to achieve at PPKA USM was really just being implemented.

I always believe that the true assets of any organizations are its people. That was my primary concern and much of what we had in plan for PPKA was centered on capacity building, capability enhancement and most of all to sustain good and effective teamwork. The silos that were clearly dividing us in the past had to be undone, and I hope it has now enabled PPKA to function as a cohesive unit, rather than being fragmented under the loose definitions of programmes. Equally, I also believe that good, efficient and enabling systems would allow the people to operate and perform beyond expectation.

Managing intellectual and skilful people is never easy, and I hope in the short time I was Dean, we manage to work well together, by giving due recognition and respect to each other. Good working relationship enforced by conducive working environment will only facilitate productive and healthy outcomes. Indeed, that has begun to be seen by the performance of PPKA for the years 2007 and 2008 respectively.

PPKA will always be regarded as my home, and I hope the present team shall always uphold and treasure the greatness of the past, to firm up the present, towards a more illustrious future. I sincerely believe that the present administration led by a capable individual in the form of Professor Hamidi shall continue the exemplary work given by my predecessors as PPKA Deans. I wish PPKA all the best and I would like to seek apologies for any misdeeds that I may have performed during my short tenure as Dean as well as during my longer term as staff.

In the event of this important milestone for PPKA, I wish you "ALL THE BEST".

Professor Dr. Ahmad Farhan Mohd Sadullah  
 Director General  
 Malaysian Institute of Road Safety Research



## REFLECTIONS FROM FIRST DEPUTY DEAN



**In** August 1989, I came back as a young guy from England armed with a Doctorate Degree in Cadastral Surveying from the Nottingham Trent University. I was searching for a place called USM Ipoh Campus. I thought it was such a great place to start a new life as a lecturer. What more could I get when I was so accustomed with life at Nottingham Trent University, a campus right in the middle of Nottingham City, and there I was in the heart of Ipoh, as if that was the place I was meant to be. My experiences as a land surveyor at the Department of Survey and Mapping Malaysia and a part-time lecturer at the Loughborough Technical University in England gave me new strength in so many ways.

Try imagining being a land surveyor who knows nothing about nuts and bolts and given the privilege in 1989 to set up a new school to be called the School of Civil Engineering (PPKA). But with pride and lots of prayers, this so-called land surveyor was given the task of being the first deputy dean of PPKA for a good 2 terms. The teaching experience gained while lecturing part-time for the MSc Water Engineering Program at Loughborough Technical University and being a Research Assistant and Demonstrator at the Department of Civil and Structural Engineering at Nottingham Trent University for 3 years in 'an engineering environment' gave me the added ammunition as far as teaching goes, for being a land surveyor to be entrusted to 'set up and run the PPKA' at its very infancy stage. But the imagination was worth all the story line.

Being the first PPKA deputy dean from 1989, it was worth the effort and the experience. It was then a real challenge with all kinds of deficiencies that you could imagine when the shift from the good old USM Ipoh Campus that now housed the MBI workshop to the new USM Perak Campus in Tronoh. It was only 35 km from Ipoh but I kept on wondering why it was so far then when it is still 35 km today. Travelling to Tronoh then was like an adventure in a 4WD and I really meant it when I decided to buy a Pajero to make it relevant to the road situation. Things were even so relevant then when I got hold of not one but two 4WD Pajeros, in case one broke down.

### **A Good 20 Years at PPKA**

Such a small community then, the resident Ustaz kept on reminding us on the need and perseverance of *hijrah* to make living worthwhile. True enough, the earlier generations really understood the true meaning of *hijrah* when the shift from Ipoh to Tronoh in 1990 resulted in another shift to Nibong Tebal in 2001. But this time, the road geometry is good and no 4WD is needed.

A good 20 years was the song I sang. And the lyrics were sweet though symbolic. And a land surveyor could do it all right, fit for the current Akademi Fantasia (AF). Being the first deputy dean, the first program chairman for post-graduate studies, and the program chairman for the geomatic engineering and management till 2007, the experience gained was so invaluable to me, nothing to match Mawi's AF achievement. That was some 20 years and it was a land surveyor who did it at the School of Civil Engineering.

When Barrack Obama was sworn in as the new USA president in January 2009, the slogan he brought to the world was 'Change'. I said to myself "...as far as PPKA and USM are concerned, we have been changing ever since. So change has been with us and has been our buzzword..."

So folks, don't benchmark others; let others benchmark us for change has always been with us, forever and ever.

***It was a real good 20 years, and a lot more is coming!!***

**Assoc. Prof. Sr. Dr. Wan Muhd Aminuddin Wan Hussin**  
PhD, MBA, BSc (Hons), Dip. LSurv, FISM, MSP, CPUL  
Malaysian Speaking Professional  
Certified Professional Utility Locator  
Licensed Land Surveyor.



## REFLECTIONS FROM A SENIOR STAFF



I feel privileged to have served PPKA for more than two decades. I have my own share of joys and sorrow, yet I register no regrets being at PPKA. What matters most to me are those moments that I cherish and remember. I have worked under 4 PPKA Deans, each with his own administrative style and personal traits.

The first dean was a very accountable person, a senior who has been with the government for many years before helming PPKA. The General Order was at his fingertips and he governed PPKA with moral excellence and honesty. What I remember most about him were the frequent knocks at our doors at odd hours and liked to hold meetings during late evenings for reasons that only God knew. Nevertheless, he was PPKA founding dean and I thank him for laying the foundations to our current stature.

The second dean was very young and energetic. He was never short of ideas and believed in flexi hours for the academics. He always encouraged us academics to go out seeking consultancy jobs, without jeopardizing our teaching responsibility of course, and bring back monies to PPKA. During those days, many of us were naive, ignorant and did not see the relevance of papers and publications for promotion. During his tenure, PPKA generated among the highest consultancy income for the University PIP, now USAINS Holdings Sdn. Bhd. I appreciate his effort and his policy stays until now.



The third dean is an equally smart person who seems to be pretty much contented with PPKA prominence. He always reminded staffs about budget and spending through his financial tactic but otherwise uphold the dictum 'have grant will travel'. That strategy has encouraged us to apply for research grants and to be financially independent. The tactic worked well and kudos for him.

### **My wonderful experience with PPKA Deans**

The fourth dean is very visionary, vocal and bestowed with an outstanding public speaking ability. He implemented a corporate style of governance for PPKA where KPI's, SOP's, and TOR's have become daily practical routine. He is one of the deans favoured by the Vice Chancellor and was roped into the university think tank committee. Sadly, his term of office was short. The Ministry of Transport recognized his credentials and invited him to be the Director General of the Malaysian Institute of Road Safety (MIROS). I missed him greatly and wish that one day he will come back to his home turf.

Last but not least, the current dean is brilliant, punctual, diligent, meticulous and has vast administrative experience since early in his carrier. His policy is based on fast decision and immediate action. Sometimes, you just cannot catch up with him. He is a very outstanding academic staff in USM in terms of research merits, academic recognition and consultancy works. What else do you expect out of a dean? I salute him.

Over the years I have been here, I am glad to observe that changes for betterment always take place at PPKA.

**Assoc. Prof. Sr. Dr. Mohd Sanusi S.Ahamad**  
[Deputy Dean of Academic  
and Student Development  
over the last 6 years and still standing!]



## REFLECTIONS FROM A SENIOR STAFF

I began employment with USM in 1986 and served in the School of Material and Mineral Resources Engineering in the first three years. PPKA had only started in 1989. Between 1986 and 1989, the founding members worked on the preparation including designing curriculum and specifying facilities. I left for Australia for my postgraduate study in 1990 and returned 4 years later to resume teaching. Even upon my homecoming, PPKA did not seem to have finished with the groundwork where curriculums kept changing, academic staffs came and gone, undergraduates crowded in small class rooms, and postgraduates did not seem to have a trust for the place yet.

Over the years, PPKA has developed from being a back water institution into a full blown establishment, from having merely 30 students into catering for more than 500 students during the peak years of late nineties. The academic staff has grown from a company of only 4 people, none with PhD degree, to a large organization as it is today with almost 76 members. Postgraduate students came and gone, one after another, but never in PPKA entire history that we have seen so many of them, from various countries around the world, like what we are seeing today.

The most exclusive aspect of PPKA history though is the fact that we have occupied 3 different sites during our short 20 year history. From the records, the official founding date for PPKA is January 1st, 1989, that was when we were still in Ipoh campus. The founding year was hectic and confusing mainly because we had to meet datelines for various preparations in accepting new intakes while at the same time moving the entire office to the new campus in Sri Iskandar. We would stay in Sri Iskandar for the next 12 years before shifting again to the Sri Ampangan site in 2001.

My own personal life also seemed like have never settled during the transition period. I got married in 1988, two years after joining USM, went to Australia during PPKA founding years with my wife and 2 toddlers, and came back when PPKA was still unsettled. Life gradually organized as PPKA early years passed by and by 1998 we had built a home in Batu Gajah which was quite near the Sri Iskandar campus. Our decision to own a home was however quite ill-timed when we heard of the intention to move again only shortly afterwards.

Here we are, after asserting our existence for 20 years, we finally seem to have reached a point when we can be proud of our achievements. I am mainly proud of my contributions though they don't seem to match those of great people elsewhere. I have nevertheless, given my most productive years towards helping to establish a very post-modern



educational institution with facilities matching those in advanced countries. At the same time, I have nurtured my family into what we are – a team consisting of 8 teeming children.

## MY 20 YEARS WITH PPKA

I have two families to be proud of – one of my own biological and that of PPKA where I am working. I have mentioned about the first one earlier but the second one is more amazing. I have in fact worked with some of these ladies in the General Office longer than I have lived with my wife. I have seen them growing older and mellowed with the environment. New ones have come in, some old ones gone, some have come from other departments, some retired, some went to work some where else, but all seemed to be very happy and not much that I have heard them complaining about their employer. I came to work with PPKA hoping to be able to contribute to my country and I have in fact worked with the most wonderful employer in the world, the School of Civil Engineering, Universiti Sains Malaysia.

If I have to leave you with an advice, I would say that you should have in mind the purpose of why our campus was created in the first place. I have had the opportunity to work with the original founders and am happy to let you know that their conscience was to provide opportunity to the new generation of Malaysians to lead better lives. I must say that we should not let down their effort and must continue providing the best of our service to the society.

**Assoc. Prof. Ir. Dr. Mohamad Razip Selamat**



## REFLECTIONS FROM A SENIOR STAFF

### The Setting Up and Development of Aerospace Engineering Programme and School of Aerospace Engineering

**Associate Professor Ir. Dr. Hj. Md Azlin bin Md Said** started service as a Lecturer at PPKA, Perak Branch Campus on 26th December 1991, after completing his PhD studies at the University of Wales College, Cardiff. His area of research was in application of remote sensing and GIS in water resources modelling.

In 1996, he was asked by the USM to assist in the formulation of the working paper to offer the 3 year Aerospace Engineering program and the setting up of the School of Aerospace Engineering. The program was approved by the Ministry of Education in 1998 where the first intake was made in May 1998. He initiated the Aerospace Engineering Unit (UKA) in May 1998 which was later upgraded to the School of Aerospace Engineering in March 1999. He was appointed as the Aerospace Engineering Coordinator in 1998, the Deputy Dean in the same year and later the Dean from 1999 - 2003. He was involved in the design and development of the School of Aerospace Engineering Building at the USM Engineering Campus at Nibong Tebal which was completed in 2001.



During 1995-2003, he was involved in aerospace engineering exposure academic exchanges at Indian Space Research Organisation (ISRO), National Cheng Kung University (NCKU), Taiwan; British Council ODA CICHE 727 project (Southampton University, Imperial College, Cranfield University, Bristol University), MiG29 Offset (Moscow Aviation Institute (MAI), Moscow Power Engineering Institute (MPEI), Moscow Institute of Electronics Technology (MIET), Moscow State University named after Baumann (MSTU), Lavoshkin Association), DAAD and Aachen Fachhochschule, Germany; and Milan Polytechnic, Italy.

He was also invited to attend international meetings such as the Sponsorship from Office of the Outer Space Agency (OOSA), United Nations, Vienna for Space Generation Forum (SGF) in conjunction with UNISPACE III, 1998. He was also a Joint Chairman Session "Space Environmental Utilization Session", the Eight session of The Asia Pacific Region Space Agency Forum, organized by MACRES, MEXT Japan, NASDA, ISAS, MOSTE. He also chaired several sessions at the Asian Space Conferences in Chiangmai, Thailand and Hanoi, Vietnam. He was also invited to several national level meetings and workshops organized by Ministry of Education, MOSTE, MIGHT, National Space Agency (NSA) mainly in aerospace matters. He presented a research paper at the Malaysia-China Seminar on Space for Sustainable Development, organized by National Space Agency, 2004 and joint papers at the International Association of Astronautics (IAA) conferences.



In research, he was mainly involved in satellite technology and satellite application research and development. The main focus for satellite technology is the design of a small nanosatellite for remote sensing, which must be low cost and light (<10kg) which is the only IRPA research in Malaysia awarded to any local university. After gaining experience from the nanosatellite design, the current research is the development of a project in altitude determination systems payload for the Agensi Angkasa Negara (National Space Agency) and ATSB InnoSAT project. The payloads will be launched with InnoSAT as piggy-back to RazakSAT hopefully in 2009. If launched, it will be a first for USM to conduct experiments from space. In satellite technology research, he was invited as an expert panel in evaluating research proposal in the areas of remote sensing and space technology.

After spending 13 years at the School of Aerospace Engineering, on 1st July 2008, he moved back to PPKA and is now the PPKA Program Chairman for Quality and Accreditation.



## REFLECTIONS FROM SENIOR STAFFS

I joined PPKA barely six months after it was born. With a PhD scroll at hand, I was so eager to embark upon my career path as a civil engineering lecturer. That was some 20 years ago! During those long years, I met people from diverse background both in and outside the campus working together either as colleagues or as collaborators in research and consultancy. It was very enjoyable and those experiences brought me to the level of professionalism that I am now. I owe my accomplishments to so many good friends who taught me many things, provide me with the motivation directly or indirectly through their exemplary character, helping hands and not least sharing their experiences. I appreciate such friendship and I am sure it shall flourish over time.



Over those long years also, I witnessed many good endeavor that has placed PPKA in the ivy leagues especially among local universities. Apart from the core business of teaching, I conduct research, develop innovative products and hopefully it will be accepted for commercialization and widely used by the construction industry. A number of products developed have attained international recognition. At PPKA, I see that contribution from every individual is highly treasured. While academic work matters most, there is always the human dimension, hence many activities were organized to promote the spirit of camaraderie and working together as a family. I do hope that one day all of us will regard PPKA as our home where the spirit of understanding, solidarity, caring and forgiveness thrives.



***Warmest regards and special thanks  
to all PPKA citizens!!!!***

**Assoc. Prof. Dr. Fauziah Ahmad**

I was accepted as a PPKA student based on my Certificate and Diploma qualifications. I graduated in 1993 and it was the first ever batch to graduate. The same year, I was offered the Academic Staff Training Scheme that enabled me to join PPKA academics. I am now the Deputy Dean (Graduate Studies and Research). During my student days, many expatriates taught me. To comprehend their deep accent, I have to pay great attention when they spoke. Luckily, the local lecturers and tutors were out there to help me score in the exams. At that time, PPKA laboratories were not well organized. In some instances, equipments were still in boxes and at times we assisted technicians not only to open up those boxes but helped them to understand the operations. Before I pursued my undergraduate studies at PPKA, I had several years of experience at JKR. Hence, by the time I get into PPKA as a student, my colleagues looked upon me as a matured student. I became the resource person in organizing student activities and dealing with PPKA administration. The brotherhood among PPKA first batch was very cohesive. We manifested no signs of racism. I remember staying under the hot sun in the middle of the mining desert, working on our project for "latihan praktikal". Some of my chinese friends turned dark-yellow! Though tensions at times ran high, some frictions here and there, yet we ended up as a big happy group upon completion of our project.



As the pioneer batch, I witnessed with profound interest PPKA's growth and development. Now that I am one of the key administrators given the task to enhance the quality of PPKA's graduate program aiming for the top and for it to become the program of choice among all Malaysian public universities.

**Assoc. Prof. Dr. Badorul Hisham Abu Bakar**



## REFLECTIONS FROM SENIOR SUPPORTING STAFFS

I have been a secretary in the Dean's office for as long as PPKA exist but I felt as if it was only yesterday that I joined PPKA! When I contemplate on the events during those early years, I can appreciate how much PPKA has changed. Beginning with a handful of staffs, now PPKA is like a big happy family of 76 academics, technical and clerical staffs. This does not take into consideration the research officers and those on USM fellowships! I treasure all the experiences serving PPKA for 20 years especially the hardships of moving from place to place. Everytime we moved, we faced problems such as poor facilities and incomplete building condition. Whatever it was, PPKA is close to my heart and I treasure every moment serving this wonderful university!

**Khalijah Binti Hashim**

On 1st February 1990, I joined PPKA as a technician a year after PPKA was set up at Ipoh. However, my association with the USM dates more than twenty years beginning with my career at the School of Housing, Building and Planning in the main campus. In early days, there were few activities at PPKA. Now, many excellent, creative and innovative events take place throughout the year. This bears testimony to the presence of diverse talents at PPKA and the recognition given by the industries. In 1991, I participated in an educational visit to the Faculty of Built Environment and Engineering, Queensland University of Technology, Australia sponsored by USM-AIDP Australia. It was really a turning point in my carrier. I was exposed to new valuable experiences including work culture. I regard PPKA as not only my employer but also a place where I earned my Bachelor Degree in Civil Engineering. May this effort and experience serve as testimonial to my colleagues and family. Thank you PPKA.

**Ali Huddin Bin Ibrahim**

I began my career at USM as a technician at Development Department, Health Campus, Kelantan in 1983. I joined PPKA on 17th November 1989. As a new School at the USM, much efforts were placed upon setting up PPKA and hence not many activities were visible. After 20 years, PPKA has made great progress, thanks to the well structured management system. Nowadays, the responsibility and task given by the top management to manage the laboratory is based on trust. As the senior technician, I believe that the way forward to further enhance PPKA's competency lies in teamwork and working as a family.

**Mohd Taib Bin Yacob**

I have been a technician at PPKA for a good 18 year since 15th October 1991. Over those years, I observe plenty of changes in terms of facilities, equipments, management and relationship between colleagues. My experience has not been confined only to laboratory work. I also participated in many research activities including helping the lecturers to promote their research products in exhibitions and competitions. I am particularly indebted to the USM for sponsoring my Diploma study. I used to recall the hardships faced when we moved from Tronoh to the current campus in Nibong Tebal. At that time, construction activities were still going on, facilities were poor while the infrastructure was barely completed. Our progress was momentarily halted, yet it made us more resilient. However, I am glad that it has become history and I am very happy to be part and parcel of PPKA's route to excellence.

**Ahmad Halmi Bin Ghazalli**



## ACADEMIC LEADERS FROM PPKA

*As I see them all.....*

Professor Dr. Sabarudin, Datuk Assoc. Prof. Dr. Abu Bakar and Professor Dr. Rosli Hamir are currently Deputy Vice Chancellors or equivalent at their respective universities while Professor Ahmad Farhan is the Director General of the prestigious Malaysian Institute of Road Safety (MIROS). They are now academic leaders having their roots at PPKA, with each one of them leaving behind great legacies that will be cherished throughout PPKA's existence. While I felt privileged to have them as companions, being together during PPKA's inception, naturally I sorely miss these rare individuals. The impressions I have on their magnanimity, nobility, high mindedness and kindness will be forever etched in my heart and mind. As a matter of fact, PPKA has lost some of its precious gems, they are likened to rough diamonds, and when polished would shine and glitter wherever they are. At times, I ponder what PPKA would be like if they are all still around at the USM, but life has to go on, while tender memories of them remain intact. At PPKA, we take pride for the fact that they are now making their mark on Malaysia's academic landscape - **Professor Dr. Meor Othman Hamzah.**

### PROFESSOR DR. SABARUDIN MOHD (1990 – 2004)

**Among** close acquaintance, Professor Dr. Sabarudin Mohd is affectionately known as 'Sab'. Sab holds a BSc Civil Engineering degree from Glasgow University, MSc from Strathclyde and a doctoral degree in Structural Engineering from Glasgow University. Barely few months after serving the USM, Sab was made PPKA's first program chairman for Structures and is one of PPKA founding members. He moved on to become PPKA's second and longest serving dean. Sab has a magnetic personality and is a natural leader. While at the helm, Sab impressed many with his management prowess and exceptional academic talent. While being very articulate and able to defend his ideas and opinion, he kept the door wide open to suggestions from his subordinates. With his affable nature, anyone who has the good fortune of entering a conversation with him, always felt at ease despite his tight schedule. Now Sab serves as the Deputy Vice Chancellor (Academic and Internationalisation) at Universiti Malaysia Pahang (UMP).



### PROFESOR DR. AHMAD FARHAN MOHD SADULLAH (1995 – 2008)



**Professor** Dr. Ahmad Farhan Mohd Sadullah, a Catholic University, Washington DC Civil Engineering graduate, will be remembered as a person who has clarity of vision and thoughts, a strong believer in innovation. When he speaks, he mesmerized and dazzled everyone by his oratory skills. Despite his academic and social standing, it is hard to find someone more humble than him. He manifests his noble intentions in his daily routines and has a great sense of humour. Farhan always reminded himself and others to be genuine, sincere and God fearing which I believe is the driving force behind his many accomplishments. While at PPKA, he spent more time

serving the university in various capacities including the USM Director of Innovation. It caught everyone by surprise that Farhan would 'return to his home turf' upon his appointment as PPKA Dean in March 2007. Just 15 months later, Farhan was sadly taken away from PPKA to become MIROS Director General to serve the nation's agenda towards saving lives. Replacing the Malaysian guru of road safety, Professor Dato' Ir. Radin Umar, has been a daunting task for him. However, Farhan has adjusted well and are now in full gear to elevate MIROS to higher status towards global prominence. His tenure as PPKA dean may be the shortest ever, yet the impact remains. We wish him all the best and anticipate him to 'come home' again.



## ACADEMIC LEADERS FROM PPKA

### DATUK ASSOCIATE PROFESSOR DR. ABU BAKAR MOHAMAD DIAH (1994 - 2003)

**Datuk** Associate Professor Dr. Abu Bakar Mohamad Diah or Bakar, as we know him, was conferred the Darjah Mulia Seri Melaka in 2004 and is the first 'Datuk' from PPKA. Congratulations! He graduated with first degree from UTM and MSc and PhD from Dundee University, UK. Bakar is one of PPKA's pioneers of the 1990's. He was PPKA's Structural Engineering Program Chairman and served as the *Penggawa* of the Engineering Campus Desasiswa for many years. Academically, 16 research students graduated under his supervision and is recipient of the "Anugerah Penggalakkan Penyelidikan Kejuruteraan" award by the Perak State and the Perak Foundation. In concrete technology, it is hard to match his expertise. He is a true example of a 'living concrete' connoisseur, educating the public on concrete technology. His audience ranged from the professional consultants to the man on the street. He has delivered strings of professional, motivational and inspirational lectures to the community via international journals, proceedings, mainstream media and short courses. During those heydays, Bakar was known for his dynamism conducting short courses on concrete technology. Politics run deep in his blood and this explains his distinguished service to the community. Anyone who had a conversation with him would recollect his jovial and amicable character. In 2003, he was sadly taken away from PPKA for a bigger job with the Melaka State Government as Director of the Manufacturing Technology Department. There, he successfully gathered and promoted local products under the brand name "Melaka Best". Later, he joined Universiti Teknikal Malaysia Melaka (UTeM) and is now the Deputy Vice Chancellor (Research and Innovation). Nevertheless, his profound interest in concrete technology remains despite his high position. He has shown exemplary dedication to his job responsibilities. Under his stewardship, UTeM has bagged 8 gold medals, 19 silver medals and 32 bronze medals in local competition and 8 gold medals, 8 silver medals and 8 bronze medals in international competition.



### PROFESSOR DR. IR. ROSLI HAMIR (1990 - 2003)

**Professor** Dr. Ir. Rosli Hamir is a Civil Engineering graduate of Aston University, UK and later earned a PhD for his pioneering works on Soil Stabilisation from Newcastle University in 1997. Prior to joining PPKA, he served as an engineer with the Malaysian Public Works Department (JKR) for 10 years. Rosli was PPKA's first Program Chairman (Civil Engineering). Later, he was appointed the Geotechnical Engineering Program Chairman and Deputy Dean (Research and Graduate Studies). He played an instrumental role in getting the program accredited by the Malaysian Board of Engineers. As the Deputy Dean (Research and Graduate Studies), he initiated the graduate seminar that still runs until today. Rosli is characterized by his pleasant character, a truly remarkable and inspirational person by any measure. He is very cultured and his humility impressed many people. Rosli is currently the Vice President (Learner Management and Campus Development) of the Open University of Malaysia (OUM). He is responsible for the operation of the learning centre and campus development. The experience gained as a lecturer in USM and as a practicing engineer in JKR is now put to good use for the development of learning centers for the OUM.





## Previous and Current Management Team\*

### Dean

Ir. Hj. Mohd Hashim Daud  
Dr. Sabarudin Mohd  
Dr. Wan Hashim Wan Ibrahim  
Dr. Ahmad Farhan Mohd Sadullah  
***Professor Dr. Hamidi Abd Aziz***

### Deputy Dean

#### ***Academic Affairs***

Deputy Dean

Deputy Dean 1  
and (Academic and Student Development)

Deputy Dean  
(Academic and Student Development)

Dr. Wan Muhd Aminuddin Wan Hussin  
Dr. Sabarudin Mohd

Dr. Fauziah Ahmad

***Assoc. Prof. Sr. Dr. Mohd Sanusi S.Ahamad***

#### ***Postgraduate and Research, Distance Learning***

Deputy Dean II  
(Distance Learning)

Deputy Dean  
(Postgraduate and Research)

Dr. Majidi Mohd  
Dr. Meor Othman Hamzah

Ir. Dr Rosli Hamir  
Dr. Hamidi Abd Aziz  
Dr. Taksiah Majid  
Dr. Hamidi Abd Aziz  
***Assoc. Prof. Dr. Badorul Hisham Abu Bakar***

\* Current management team is shown in *Italics*

***Professor Dr. Hamidi Abd Aziz***

***Ir. Hj. Mohd Hashim Daud***

***Dr. Ahmad Farhan Mohd Sadullah***

***Dr. Wan Hashim Wan Ibrahim***

***Dr. Sabarudin Mohd***



## Previous and Current Management Team\*

### Program Chairman

Program Chairman (Civil Engineering)	Ir. Rosli Hamir
Program Chairman (Structural Engineering)	Dr. Sabarudin Mohd Ir. Dr. Shaari Abu Dr. Abu Bakar Md. Diah Dr. Taksiah A. Majid Dr. Megat Azmi Megat Johari
Program Chairman (Geotechnical And Highway and Traffic Engineering)	Ir. Dr. Rosli Hamir Dr. Fauziah Ahmad Dr. Ahmad Farhan Mohd Sadullah Ir. Dr. Mohamad Razip Selamat
Program Chairman (Geotechnical Engineering)	Dr. Fauziah Ahmad Ir. Dr. Mohamad Razip Selamat
Program Chairman (Highway and Traffic Engineering)	Dr. Madzlan Napiah Dr. Wan Hashim Wan Ibrahim
Program Chairman (Water Resources Engineering and Environmental Engineering)	Ir. Dr. Mohd Nordin Adlan Ir. Dr. Md. Azlin Md Said
Program Chairman (Water Resources Engineering)	Ir. Dr. Md. Azlin Md Said
Program Chairman (Environmental Engineering)	Dr. Hamidi Abd Aziz
Program Chairman (Water Resources Engineering and Environment)	Dr. Dini Ramya Hassan Basri Dr. Ismail Abustan
Program Chairman (Geomatic Engineering)	Sr. Dr. Wan Muhd Aminuddin Wan Hussin
Program Chairman (Geomatic Engineering and Management)	Sr. Dr. Wan Muhd Aminuddin Wan Hussin
Program Chairman (Graduate Studies)	Sr. Dr. Wan Muhd Aminuddin Wan Hussin Dr. Dini Ramya Hassan Basri Dr. Ahmad Farhan Mohd Sadullah
Program Chairman (Distance Learning)	Dr. Meor Othman Hamzah

\* Current management team is shown in *italics*



## Previous and Current Management Team\*

### Program Chairman

Program Chairman  
(Environment and Sustainable)

Dr. Fauziah Ahmad  
***Prof. Dr. Meor Othman Hamzah***

Program Chairman  
(Structure and Physical)

Dr. Megat Azmi Megat Johari  
***Assoc. Prof. Dr. Choong Kok Keong***

Program Chairman  
(Quality)

Ahmad Shukri Yahya

Program Chairman  
(Quality and Accreditation)

***Assoc. Prof. Ir. Dr. Md. Azlin Md. Said***

Program Chairman  
(Industrial Network and Community )

Dr. Badrol Hisham Abu Bakar  
***Assoc. Prof. Dr. Rozi Abdullah***

### Assistant Registrar

Assistant Registrar

Ahmad Khaizi Mahidin  
Zuber Mohamed  
Abdul Aziz Mohd Najimudin  
Mohd Saberi Mohd Yusuf  
Azahari Azmi  
Aidanurfirhan Badaruddin  
Zamzami Rasidi

Senior Assistant Registrar

***Zaharah Mohamed***

Assistant Registrar  
(Human Resource)

***Monaliza Mohd Nor***

\* Current management team is shown in *italics*





## FORMER STAFF

### ACADEMIC STAFF

### SERVICE DURATION



- 1 Ir. Haji Mohd Hashim Daud
- 2 Dr. Sabarudin Mohd
- 3 Dr. Wan Hashim Wan Ibrahim
- 4 Ir. Dr. Lariyah Mohd Sidek

(01/01/89 - 12/08/97)  
(14/05/90 - 30/04/04)  
(01/09/94 - 01/04/07)  
(01/07/95 - 02/01/02)



- 5 Dr. Abu Bakar Mohd Diah
- 6 Dr. Rosli Hamir
- 7 Dr. Faridah Abu Hassan Assari
- 8 Dr. Ir. Mohd Zaid Yusof
- 9 Dr. Malay Chaudhuri

(04/11/94 - 29/02/03)  
(16/01/90 - 01/12/03)  
(02/05/80 - 01/05/06)  
(01/10/01 - 31/01/07)  
(03/05/05 - 03/05/06)



- 10 Dr. Mohd Hasnain Isa
- 11 Dr. Shamshad Ahmad
- 12 Dr. Rezaur Bhuiyan
- 13 Dr. Mohd Nordin Adlan
- 14 Dr. Agarwal, K.B

(16/01/03 - 04/03/07)  
(02/05/02 - 02/05/07)  
(22/08/02 - 14/02/07)  
(01/10/91 - 03/04/08)  
(15/01/90 - 14/01/93)



- 15 Dr. Inamdar, D.A.
- 16 Dr. Dewaikar, Dileap Moreshwar
- 17 Dr. Gupta, Shashi Kumar
- 18 Late Dr. Kapoor, Prakash Narain
- 19 Dr. Sumiani Yusoff

(12/07/89 - 11/07/92)  
(04/08/89 - 31/07/91)  
(31/07/89 - 31/12/92)  
(04/08/89 - 15/08/97)  
(01/01/89 - 30/09/89)



- 20 Dr. Shaari Abu
- 21 Dr. Majdi Mohamad
- 22 Late Dr. Rosley Abdul Malik
- 23 Dr. Dini Ramya Hassan Basri
- 24 Dr. Madzlan Napiyah

(20/05/91 - 27/05/95)  
(08/02/91 - 06/09/96)  
(10/07/92 - 15/02/95)  
(02/09/93 - 01/05/01)  
(21/01/94 - 14/07/01)



- 25 Ir. Abdul Aziz Omar
- 26 Sia Mal Kong
- 27 Dr. C. Ghanapathy
- 28 Dr. K. Gopal Rao
- 29 Khairul Nizar Mohd Yusof

(02/04/90 - 02/05/92)  
(02/12/91 - 31/10/94)  
(03/05/97 - 02/06/98)  
(12/01/96 - 10/01/98)  
(05/08/02 - 06/03/03)



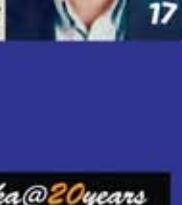
- 30 Dr. Ren Weixin

(27/05/97 - 26/05/98)





# HISTORY OF PPKA



## FORMER STAFF

- 1 Ahmad Khaizi b. Mahidin
- 2 Aidanurfirhan Badaruddin
- 3 Robiatul Adawiyah Abd. Karim
- 4 Hafizah Md Yusof
- 5 Late Muhamad Razali Ali
- 6 Zaiton Md Napiah
- 7 Zamzami Rasidi
- 8 Bayzura Binti Baharom
- 9 Abd Aziz Bin Mohd Najimudin
- 10 Fodziah Binti Mohd Mansor
- 11 Hasniah Binti Yahya
- 12 Mohd Mostafa Bin Ahmad Shahini
- 13 Nurfishah Binti Mat Saad
- 14 Abdul Karim Bin Shahbudin
- 15 Ruzaida Bt Che Din
- 16 Noor Reha Binti Zainuddin
- 17 Zuber Bin Mohamad
- 18 Mohd Saberi Bin Mohd.Yusuf
- 19 Azahari Azmi
- 20 Jamaatun Satina Isa
- 21 Alim Ezaimi Abdul Rashid
- 22 Mohamad Ahmad
- 23 Mohd Zairil Faizal Mohd Zain
- 24 Hartiney Mohd Zakey
- 25 Duraida Salleh
- 26 Azhar Ramli
- 27 Mohamed Fauzi Bin Ahmad Shah
- 28 Sharifah Binti Musa
- 29 Rohimi Harun
- 30 Abdul Rani Bin Harun
- 31 Abdul Razak Bin Mohammad
- 32 Sunita Binti Jamalludin
- 33 Huzaime Bin Abdul Hadi
- 34 Mohd Said Bin Sitam

## SERVICE DURATION

- (06/03/09 - 14/10/91)
- (20/11/00 - 30/06/02)
- (01/10/97 - 22/08/05)
- (12/02/90 - 22/07/02)
- (22/05/73 - 25/08/03)
- (01/08/89 - 15/10/07)
- (01/07/02 - 31/10/07)
- (15/03/98 - 31/05/96)
- (01/01/93 - 31/10/94)
- (01/03/90 - 07/08/94)
- (01/06/96 - 07/03/00)
- (01/11/89 - 14/01/96)
- (01/12/07 - 02/11/08)
- (15/06/95 - 30/06/01)
- (01/04/89 - 14/06/95)
- (08/08/94 - 30/09/97)
- (15/10/91 - 31/12/92)
- (15/11/96 - 19/11/00)
- (9/11/94 - 15/11/96)
- (05/08/95 - 31/08/97)
- (02/06/03 - 09/09/06)
- (01/04/02 - 31/10/05)
- (01/12/03 - 16/07/06)
- (08/08/94 - 31/03/02)
- (03/01/00 - 05/08/01)
- (16/06/03 - 14/08/03)
- (01/02/90 - 31/07/01)
- (26/03/90 - 31/03/97)
- (01/11/95 - 31/10/96)
- (15/10/91 - 17/12/91)
- (15/10/91 - 10/12/91)
- (02/05/97 - 31/08/97)
- (01/02/90 - 08/06/91)
- (02/04/90 - 30/12/90)

## ADMINISTRATIVE STAFF



## TECHNICAL STAFF







# CURRENT STAFF





## ACADEMIC

### CURRENT STAFF

Structural Engineering	Assoc. Prof. Dr. Badorul Hisham Abu Bakar Cert Dip (UTM), BSc (USM), MSc, PhD (Leeds) <i>Masonry Structures, Timber Structures</i>	Assoc. Prof. Dr. Taksiah A. Majid BSc (Hons)(CNA), MSc, PhD (Liverpool) <i>Wind Engineering, Seismic</i>	Assoc. Prof. Dr. Choong Kok Keong BSc(UTM), MSc (Gifu), PhD (Tokyo) <i>Shell and Spatial Structures, Computational Mechanics</i>
	Dr. Megat Azmi Megat Johari BSc (ONU), MSc, PhD (Leeds) <i>Concrete Technology, Concrete Repair Materials and Techniques</i>	Shaharudin Shah Zaini BEng (UITM), MSc (USM) <i>Structural Engineering</i>	Dr. Shahid Kabir Dip (Oxnard), MSc (Sherbrooke), PhD (Sherbrooke) <i>Structural Health Monitoring, Computational Problem Solving in Civil Engineering, Analytical and Numerical Modeling for Concrete Condition Assessment, Non-destructive Testing and Evaluation, Image and Signal Processing, Remote Sensing</i>
	Dr. J. Jayaprakash BE (India), ME (NIT), PhD (UPM) <i>Structural Retrofitting, Fibre Reinforced Polymer (FRP) / Advanced Composites</i>	Dr. Fatimah De'nan B.Tech (UTM), MSc. (USM) PhD (UTM) <i>Structural Engineering</i>	
	Mustafasanie M. Yusoff B.Eng (UTM), MSc (USM) <i>Structural Engineering</i>	Aizam Yusof B.Eng (USM)	
Environmental Engineering	Prof. Dr. Hamidi Abdul Aziz Dip (UTM.), B.Eng, MSc, PhD (Strathclyde) <i>Waste Water, Solid Waste</i>	Dr. Mohd Suffian Yusoff BSc (UPM), MSc (USM), PhD (USM) <i>Environmental Engineering</i>	Assoc. Prof. Dr. Nor Azam Ramli BApp.Sc (USM), MSc, MPhil, PhD (Wales) <i>Environmental Engineering</i>
	Mohamad Fared Murshed B.Eng (USM), MSc (USM) <i>Water Treatment and Supply</i>	Nor Habsah Sabiani B.Eng (USM)	
Water Resources Engineering	Assoc. Prof. Dr. Ismail Abustan BSc (George Washington), MEng, PhD (UNSW) <i>Water Resources Engineering, Urban Water</i>	Assoc. Prof. Dr. Ir. Md Azlin Md Said BEng, MSc, Eng. (Liverpool), PhD (Wales) <i>Remote Sensing, Geographic Information System (GIS) Application in Water Resources</i>	Prof. Dr. Aminuddin Ab. Ghani BSc (Columbia), MSc, PhD (Newcastle) <i>Hydraulic, River Engineering</i>
	Assoc. Prof. Dr. Rozi Abdullah Dip (UTM), BSc (Salf), MSc. (Imperial), PhD (Newcastle) <i>Hydrology Engineering</i>		
Geotechnical Engineering	Prof. Dr. Nor Azazi Zakaria Dip, BSc (UTM), MSc, PhD (Newcastle) <i>Foundation Engineering</i>	Assoc. Prof. Dr. Mohamad Razip Selamat BSc, MEng (Louisville), PhD (Queensland) <i>Rock Mechanics</i>	Assoc. Prof. Dr. Fauziah Ahmad Dip (UTM), BSc (Strath), PhD (Strathclyde) <i>Geotechnical Engineering, Urban Geoinformatic</i>
	Assoc. Prof. Dr. M Mohammad Ali BSc.Eng (BUET), MEng (AIT), PhD (Arizona) <i>Geotechnical Engineering, Spatial Analysis, Geostatistics, Shear Strength of Soft Clay, Collapsing Soil, Environmental Risk Assessment</i>	Dr. Syafalni Drs. Chemistry (Indonesia), MSc (Belgium), PhD (Indonesia) <i>Environmental Pollution, Isotopes Hydrology</i>	Mastura Azmi BEng, MEng (UTM) <i>Soil Stabilization and Geotechnical Engineering</i>
		Muhd Harris Ramli BEng, MEng (UTM) <i>Soil Improvement, Environmental Geotechnic</i>	



## ACADEMIC

Prof. Dr. Meor Othman Hamzah  
BSc (Aston), MSc (Strath), PhD (Leeds)  
*Highway Engineering,  
Asphalt Technology*

Dr. Joewono Prasetyo  
BEng (UNTAN), Dipl. TREND (DELFT),  
MSc (DELFT), Dr.-Ing. (Bochum)  
*Traffic Engineering*

Prof. Dr. Ahmad Farhan Mohd. Sadullah  
BSc (CUA), MSc (London), DIC, PhD  
(London)  
*Transportation Engineering*

Shafida Azwina Mohd Shafie  
BSc (USM)

Dr. Leong Lee Vien  
BEng, MSc, PhD (USM)  
*Traffic and Transportation  
Engineering*

Assoc. Prof. Sr. Dr. Wan Muhd Aminuddin  
Wan Hussin  
Dip.LSurv., BSc (Hons) (UEL), MBA(AUL)  
PhD (Trent), FISM, CPUL, MAIMS, MSP  
*Geomatic Engineering, Stress  
Management (Malaysian Speaking  
Professional, Certified Professional  
Utility Locator)*

Assoc. Prof. Sr. Dr. Mohd. Sanusi S. Ahamad  
Dip.LSurv, Adv Dip. (UITM), MSc,  
PhD (Nottingham)  
*Geomatic Engineering, Geographic  
Information System (GIS)*

Assoc. Prof Ahmad Shukri Yahaya  
BSc (Nottingham), MSc (Aston)  
*Statistics, Data Analysis,  
Operational Research*

Dr. Farid Ezanee Mohamed Ghazali  
Dip, BEng (UITM), MSc, PhD (Leeds)  
*Construction Management*

Mr. Md Sayuti Ishak  
BSc (UTM), MSc (USM)  
*Construction and Project Management*

Mrs. Sharifah Akmam  
Syed Zakaria  
BBA (UKM), MBA (USM)  
*Engineering Management*

Highway and Traffic  
Engineering

Geomatic Engineering  
and Management

CURRENT STAFF

### TECHNICAL

Zulkifly Hashim  
Ahmad Halmi Ghazalli  
Mohd Taib Jacob  
Rasidi Razak

Technical Assistant  
Technical Assistant  
Senior Technician  
Senior Technician

Shamsul Ishak  
Mohd Hurman Abd. Ghani

Computer laboratory

Zulhairi Ariffin  
Mohd Fouzi Ali

Highway and Traffic  
Laboratory

Abd. Hanif Abd. Aziz  
Abdullah Nanyan

Heavy Structures  
Laboratory

Samsiah Mohamad Ali  
Junaidi Ramli  
Muhammad Zaini Mohd Zuki

Environmental  
Laboratory 1

Mohamed Nizam Mohd Kamal  
Mohad Shukri Zambri

Environmental  
Laboratory 2

Shahril Izham Md Noor  
Mohd Fauzi Zulkfle

Concrete Laboratory

Ali Huddin Ibrahim  
Mohamad Zabidi Yusuff@Md. Yusoff

Geomatic  
Laboratory

Dziauddin Zainol Abidin

Geotechnical Laboratory

Nor Ainun Azwa Zainun

Structures and Strength  
of Material Laboratory

Nurul Akma Sunai

Hydraulic Laboratory

### ADMINISTRATIVE

Zaharah Mohamed	N44
Monaliza Mohd Nor	N41
Fauziah Hashim	N22
Hafsah Sahar @ Zahar	N17
Johari Alhadi Zainal Abidin	N4
Khalijah Hashim	N17
Noraskhkin Darus	N17
Nurshalydah Salleh	N17
Suriani Zainal Abidin	N11
Wan Zaharah Mohamed Khalid	N17
Zuraily Mohamed Zahari	N11
Rosilawati Radzuan	N17



## NEW STAFF

### DR. FATIMAH DE'NAN

I never dreamed of becoming a lecturer in a world class university. Nevertheless, I am grateful to God that I am now at such a place. I appreciate efforts made by the USM to excel in science and technology while emphasizing on sustainable issues in tandem with its status as an APEX university. I am giving my utmost to strengthen my research in steel structures. PPKA has indeed become part of my life and I am very proud to be one of its citizens.



### MOHAMAD FARED MURSHED



It was eight years ago when I first step foot at PPKA as a full time undergraduate student. At that moment, I never expect to join the rank and file of PPKA's distinguished academicians. However, on 1st July 2008, it happens! On that day, I was appointed as a lecturer in water resources engineering at PPKA. I felt privileged to serve in a highly regarded APEX University of Malaysia. Hence, I have to focus on strengthening my research, putting extra effort to extend the boundaries of knowledge and work hard to attain international recognition. On its part, the USM has provided ample research funding. I hope to excel in my area of expertise, water treatment and supply, hence enhancing the University's endeavor to achieve world class stature. Besides, PPKA is just like my home where all staffs work as one big family, knowledge is shared and everyone is supportive of each other.

### DR. SHAHID KABIR

Besides the opportunity to enjoy the Pearl of the Orient – Penang Island, and the mosaic of rich cultures in Malaysia, the prospect of working at the Universiti Sains Malaysia, fondly known as the university in a garden, is what caught my interest in Malaysia. The good reputation and the potential to be a world-class ranking by the USM, and its increasingly dynamic research and professional environment make it an institution that attracts students and professionals from far and wide. I am here at PPKA to be a part of all that.



### DR. MOLLA MOHAMMAD ALI

Prior to joining PPKA USM as Associate Professor of Geotechnical Engineering, Dr. Mohammad Ali was an adjunct faculty at the University of Southern California where he taught courses in Design of Transportation Facilities and was involved in research in the area of Geostatistics. He was working full time with the California Department of Transportation (Caltrans) in Los Angeles, California. Dr. Mohammad Ali earned his PhD in Civil Engineering from the University of Arizona, USA; MEng from the AIT, Bangkok; and BSc Eng from BUET, Dhaka. He is a Registered Professional Engineer in the States of Arizona and California. With his diversified teaching, research and industrial experiences, Dr. Mohammad Ali decided to return to academia to share his experiences with the new generation and choose USM because of its reputation as a Research University, and Malaysia because of its unique and unparallel living environment. Besides working on several Geotechnical projects in the USA, Dr. Ali worked on projects in South East Asia in the areas of soil improvement by vertical drains, management of construction project, analysis and design of deep foundation, instrumentation and monitoring of highway embankment on soft clay, and many others. Beside offering courses in Civil and Geotechnical Engineering Dr. Mohammad Ali will pursue his research on application of geostatistics to Geotechnical / Geological Engineering, probability and statistics in soil engineering, geo-environmental study of debris flow, embankments on soft clay, retaining structures and risk assessment in geotechnical engineering.





## NEW STAFF

**DR. FARID EZANEE MOHAMED GHAZALI**



My academic career began with a tutorship post at UiTM. In the meantime, I tried my luck elsewhere and was successfully awarded lecturership schemes at various other public and private universities. However, my passion for research and innovative ventures led me to choose PPKA USM. So I took up the USM Academic Staff Training Scheme and earned a PhD in Construction Management from Leeds University in 2008. As if I could envision the future, USM was selected to be one of the Research Universities when I started my career as a lecturer at PPKA and later on into an APEX University. This is in harmony with my ideals as an academician. Time flies and it has been a year since I served PPKA. Looking in retrospect, I take pride being at PPKA. I am impressed by the working environment while support from the more senior staffs are truly amazing. I am determined to do well at PPKA by giving the best.

**DR. JOEWONO PRASETIJO**

Before joining PPKA, Dr.-Ing. Joewono Prasetijo was a senior lecturer at Universitas Tanjung Pura, Indonesia reigning his expertise in transportation and traffic engineering. He obtained his MSc degree from TUDelft, the Netherlands in 1996. Two years later, he was appointed as a Visiting Research Fellow at the Department of Civil Engineering, Nagaoka University of Technology, Japan. A year before he joined PPKA, he graduated with a Doktor Ingenieur degree from Ruhr-Universitaet Bochum, Germany. He chose PPKA for it provides him with an excellent environment and it gives him an immense opportunity to explore his knowledge and to embark upon his future career. He has been maintaining his focus of research and collaboration with Ruhr-Universitaet Bochum and University of Nevada, Reno. From being a Research University, the USM was granted the APEX University status three months after his arrival. And Dr. Joewono reckoned that he is at the right time and at the right place.



**DR. ABU AHMED MOKAMMEL HAQUE**



Dr. Abu Ahmed Mokammel Haque is PPKA's first Post-Doctoral Research Fellow. He joined the Environmental Engineering Program in September 2008. He received his MSc in August 2004 and PhD in December 2007 with specialization in Agricultural Systems and Engineering from the Asian Institute of Technology (AIT), Bangkok, Thailand. Dr. Haque earned his BSc in Agricultural Engineering degree from Bangladesh Agricultural University (BAU), Mymensingh, Bangladesh in 1997, as well as MS in Farm Power and Machinery degree in August, 1999 from the same university. Before commencing his higher study abroad, Dr. Haque was involved with the 'Department for International Development' (DFID, British Donor Agency) funded 'Rural Livelihood and Farm Power Project' in Bangladesh. Upon completion of his doctoral degree, he felt the desire to increase his research competency on environmental degradation issues. In his quest for a suitable place, he found the PPKA Environmental Engineering Program to be a competitive place for his future career development.



## ACADEMIC STAFF ON TRAINING SCHEME (ASTS)

### MOHD ASRAF MOHAMAD ISMAIL (Geotechnical Engineering)



I always believe that a long journey begins with the first step. My decision to enroll in PPKA, many years ago, was definitely the right first step towards my long professional career. During my childhood days, I have never grown to really appreciate the Civil Engineering world. That perception changed after my exposure to the dynamic learning process at PPKA. As an undergraduate, I have many fond memories especially those days spent in formal and informal ventures particularly with the student society. Furthermore, the lecturers' passion for knowledge dissemination and encouragement to do research motivates me to explore the amazing world of Civil Engineering. They inspired me to further my studies. I was among the blessed souls to be awarded the Japanese JICA AUNSEED-Net scholarship and the USM Academic Staff Training Scheme. The 2-year spent at Gadjah Mada University as an MSc student and currently a PhD candidate in Kyoto University, Japan proved that there is always a chance to fulfill your dream via PPKA. God willing, my doctorate is just around the corner. Soon, I will come back to PPKA, but this time as an academic staff with responsibility to devote and to share the knowledge with the new generation in PPKA.

### MOHD FADZLI BIN NAZRI (Structural Engineering)

I graduated with both BSc and MSc (Structural Engineering) from PPKA. Having excelled in both degrees, I was selected for the Academic Staff Training Scheme to pursue my PhD at the University of Bristol. Without PPKA, I never imagined that I would go this far. At the Bristol, I pursue my research in Structural and Earthquake Engineering. Before I set foot in the UK, I thought I will be struggling with the weather, food, culture and language. No doubt living in a foreign country with its rough weather, different culture and language do provide challenges. There was the initial culture shock, adjusting to the different accents and struggling to find halal food, but I've largely adapted to it by now. With the support that I got, it turns out into a valuable experience of a life time. I now enjoy the food, appreciate the local culture and gradually speak better English. I appreciate being part of the Faculty of Engineering in one of the top-ranking universities in England. I am given the trust to conduct the undergraduate concrete and steel design class, which helps to refresh my knowledge and improve my teaching skills. Exposure to the integrated system of



teaching also allows me to think out of the box and to incorporate different teaching elements. As a PhD student, I also got the opportunity to attend the 'staff development skills' training programs. These programs allow me to gain knowledge and skills to be a better researcher and lecturer, and also give me the opportunity to meet more people. After gaining a PhD, I want to come back to Malaysia and serve PPKA by sharing all knowledge and experiences acquired at Bristol.

### CURRENT ASTS

Nastaein Qamaruz Zaman	Ph.D	University Of Canterbury, New Zealand
Noor Aida Binti Saad	Ph.D	Imperial College, U.K
Nuridah Binti Sabtu	Ph.D	University of Sheffield, U.K
Puganeshwary Palaniandy	Ph.D	USM, Malaysia

### MOHD REMY ROZAINY MOHD ARIF ZAINOL (Water Resources Engineering)

*Whatever* has passed will remain as bygone, but some memories remain green in the archives of our mind. This applies to the four years that I spent at PPKA as an undergraduate student. To say it all, it was a great learning experience. PPKA employees from the dynamic dean to skilled technicians and other supporting staffs made me feel at ease every time problems cropped up. I admired the professors and lecturers who not only went to



great length sharing their knowledge but also pushing the frontiers of technology and in so doing, contribute to many novelties which the industry appreciate. This episode inspires me to adopt lecturing as my future career at PPKA. With this in mind, I continued my MSc at PPKA and graduated in 2007. Bearing in mind that 'the more we learn and know the more we realise how much ignorant we have been', I decided to pursue my doctoral degree. I suppose luck was on my side, as I was awarded the USM Academic Staff Training Scheme. I have just embarked upon my PhD at Kyoto University, Japan. However, I am only at the beginning of a long and tireless journey to secure a doctoral degree but I hope that one day I will join the big family of PPKA.....InsyaAllah.





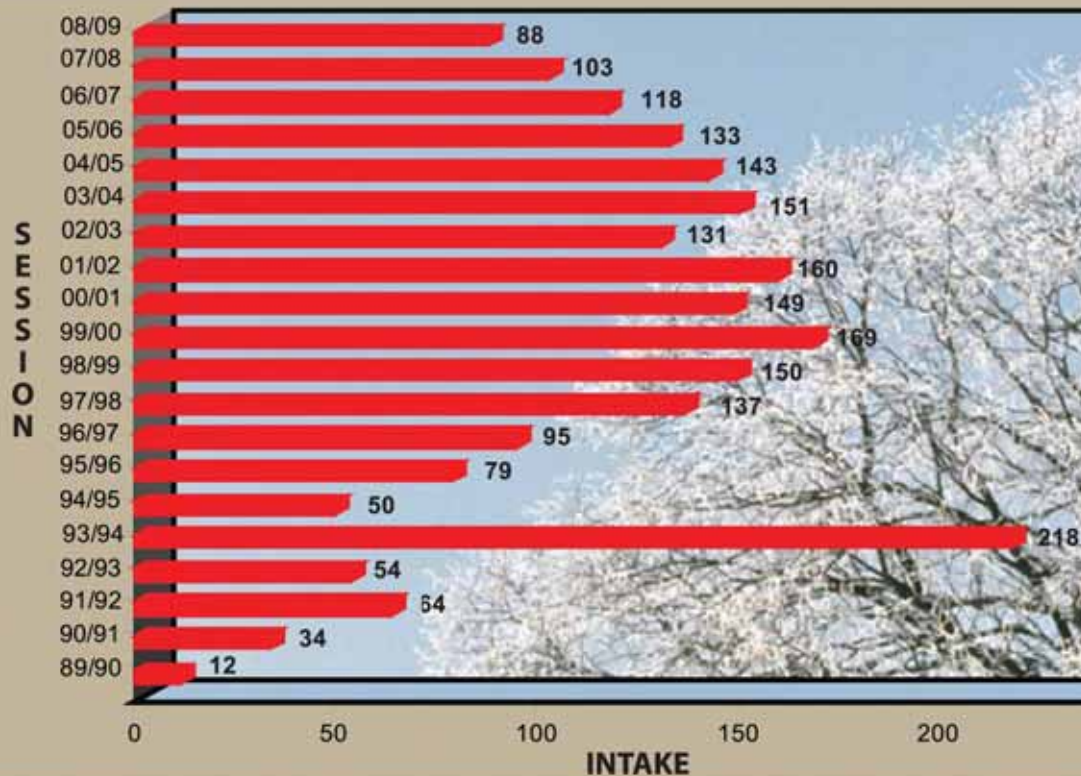
# STUDENT SECTION



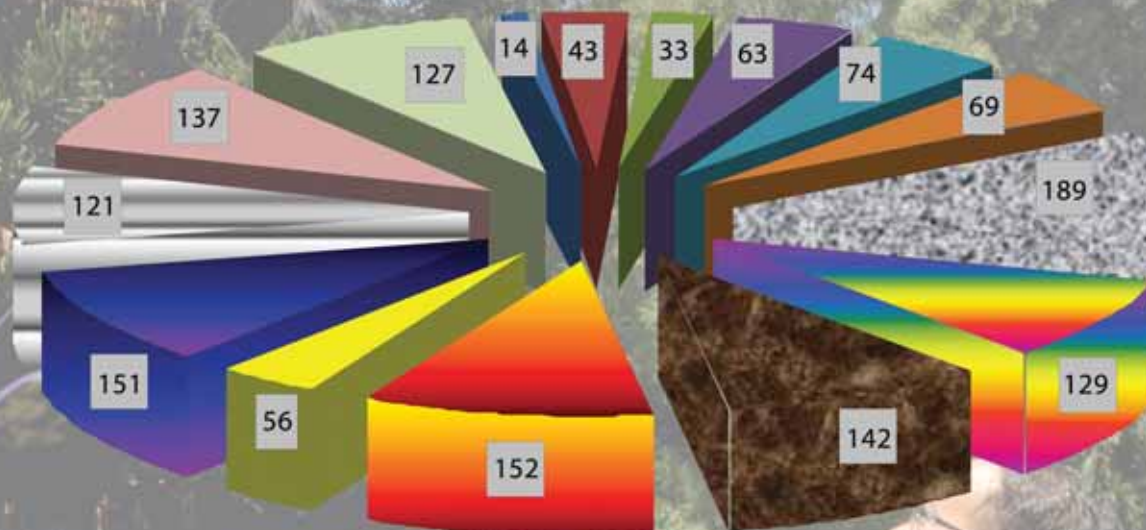


## UNDERGRADUATE STATISTICS

As an academic institution, PPKA has actively contributed to the education of future civil engineers in the context of nation building. With a modest starting of just 12 students in 1989, PPKA has since seen an increase in its intake of undergraduate students albeit with some fluctuations over the last 20 years. In line with the status of USM as a research university, PPKA has since reduced its intake of undergraduate students since 2006. To date, the number of students successfully graduated from PPKA numbers at about 2000.



## GRADUATED STUDENT



1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007



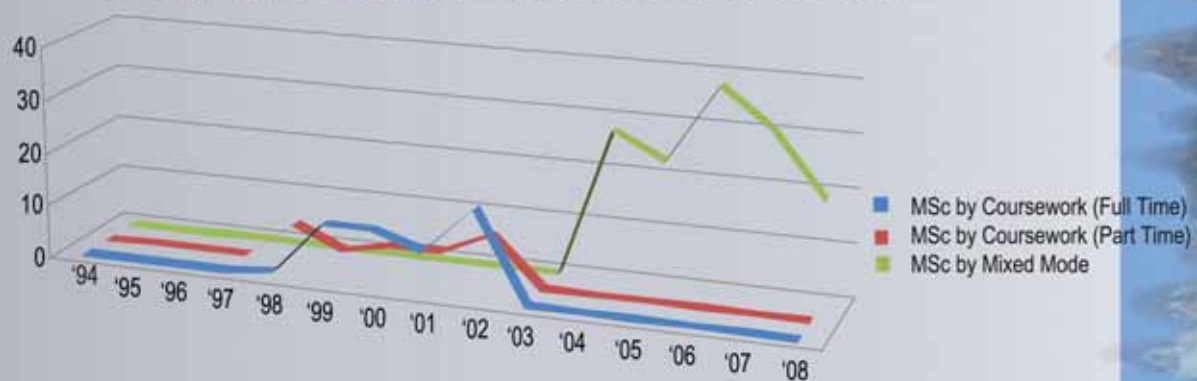
## GRADUATE STATISTICS

**Realizing** its role as a training ground for future researchers in order to support the national agenda of strengthening research and development, PPKA has planned since its establishment, a systematic approach to MSc and PhD students' supervision. To date, a total of 75 PhD students and 326 MSc students (including 216 registered for coursework-mode and mixed-mode) have carried out their research studies encompassing various disciplines of civil engineering under the supervision of PPKA academic staffs.

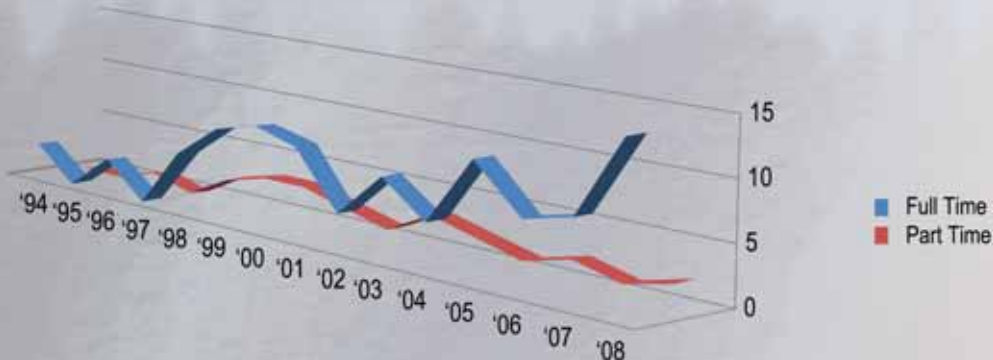


## STUDENT'S SECTION

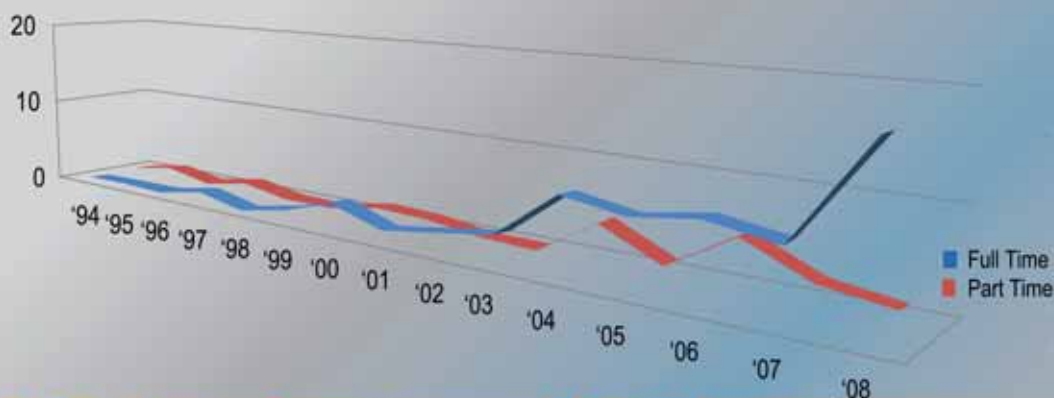
**M.Sc by Coursework and Mixed Mode Student Enrolment**



**M.Sc by Research Student Enrolment**



**Ph.D Student Enrolment**





## UNDERGRADUATE

### MOHAMAD ANUAR KAMARUDDIN



*Being* a civil engineer has always been my childhood dream. I was inspired by my father who works as a quarry manager producing concrete and asphalt for civil engineering structures. Hence, it was a pleasant experience that I was enrolled at PPKA. Over the four years I am here, I was educated by some of the most committed lecturers around. They provide me with the necessary foundations for life long learning and to become a competent civil engineer. This was further aided by the existence of first class facilities and experienced technicians. Learning at PPKA helps me improved my soft skills which is much required by fresh graduate when

employed by the industry. I appreciate programs organized by the Civil Engineering Society and PPKA that helps to nurture cordial relationship between students and academic staffs. PPKA has equipped me with the required skills that make me marketable and sought after by the industries.

### GIAP HO CHONG



*We* are very grateful that our plans and efforts to become the sole APEX Malaysian University are acknowledged and proven worthwhile. In our joy of attaining this status, we must keep in mind that the status shows that the USM is potentially on the right track and has the required ingredients to join in the rank and file of those prestigious world-class universities. Understandably, it does not indicate that we are already one. Thus, there is still much more to be done and a greater challenge lies ahead of us. We are expected to put in even more efforts and commitment. Looking from the perspective of a student, I believe students play a very big role, simply because students are the major constituent of a university. As USM has helped us so much, we ought to show our gratitude towards the university as well, by helping the university to grow and achieve its goals. We should be aware and alert on the university plans, and play our role properly as a token of gratitude towards the university. For me, PPKA is like my second home. I will try my best to contribute as a member of the family and trust that the return will be bountiful, not only for me, but also for the generations to come, and ultimately for the future of education of the country. So, are you with me?

### SEAH IVY

*As* I looked out of the window pane, I observed the built environment embedded with countless civil engineering outputs particularly buildings and infrastructure. Civil engineering field is therefore crucial in social development and over the years has played a significant role to transform society. Civil engineers are also required to possess strong management, planning and problem-solving skills, apart from creativity and integrity. On this note, I must register a big thank you to PPKA for providing dedicated lecturers to mould my understanding, paradigm and all skills required by an engineer. Throughout my days at PPKA, I have been imbued not only in understanding the academic detail but also executing my responsibilities well. With a good reputation of producing many successful graduates, I am really grateful that I am here at PPKA with the many experienced educators and lifelong friendships. Happy celebrating 20th Anniversary PPKA!





## UNDERGRADUATE

# STUDENT SECTION

### MUHAMMAD KHAIRUL ANUAR BIN MOHD MAKHTAR and SYAFIQ BIN ALIAS

*We* both share many ups and down during our nearly four years at PPKA and now our studies are nearing completion. We did badly during our first year, but that incident served as the motivation for us to wake up from the slumber. We began to appreciate the need to work smart rather than to work hard. We initiated a study group, complete assignments to the satisfaction of our lecturers and frequently consulted them. The efforts bore fruits when we finally score in our examinations. Thanks to all lecturers who serve as beacons of lights that guide us when we were in darkness. Specifically, we admire some lecturers for their dedication, professionalism, passion, practical working experience and achievements. We appreciate the balanced civil engineering curriculum served by PPKA ranging from structures to highways and transportation, water resources, geotechnical, environment and geomatics. In short, we were taught all the bare necessities required to be a qualified civil engineer including the soft skills. Four months down the road, we will bid farewell to PPKA fill with pride to be graduated from an institution of higher learning celebrated as the APEX university.



### TAN WEI SHUNG

*Approaching* the end of my second year, PPKA has offered a tremendous adventure for me. The hands-on experience and the manner in which theories are learned during lectures are certainly something new to me. With OBE already in full swing, there are many exposures towards different delivery modes. The group projects enable us to gain opportunity to take leadership skills and to acknowledge the fact that 'to lead one must also learn how to listen and to follow'. At high school, theories learned were primarily meant for exams. However, theories learned at PPKA would require its application in the forthcoming semesters. It is difficult to apply textbook material into actual civil engineering situations. Yet the task of doing so is made easier with the help of PPKA lecturers and technicians. Yes they are firm but their doors are always open to students who are in need of guidance. There are even lecturers, some



of whom are professors, who amongst the students. There are also the benefits of having a lecturer's evaluation system at the end of his or her lecture to enhance performance and the quality of the class conducted. Kudos to those who began the implementation of dual report cards. Another predilection of mine is the dialogue session held together with the Dean by the PPKA student council where we get to know more of our diligent and soft spoken Dean.

### WEE JENG SIM

*Understanding* is the most crucial aspect of learning. With understanding, students can seek viable and ideal solutions to complex problems and circumstances. This important aspect of learning is something I treasure from PPKA. The dedication of lecturers to impart knowledge based on an industry-oriented curriculum amazed me. More importantly, we students are given the opportunity to participate in numerous competitions that unravel our ingenuity to produce creative inventions and innovations, such as the Concrete Frisbee competition. I am in the PPKA Sports and Recreation Committee. We organized and managed events that enhance the cooperation and



integration among the staffs and students from different races and background. To put it briefly, it has been a really memorable two years in PPKA for me.



## GRADUATE

### SEYED MOHAMMADREZA GHADIRI

**The** pursuit of a doctoral degree in an internationally renowned university has been my aspiration, and I am proud to be a PhD candidate at PPKA. In May 2007 when I started my research in the field of intelligent transportation systems, I found the scenario at PPKA different from the university that I was in before this. The warm-hearted people and friendly atmosphere here helped me avoid feeling homesick despite the great physical distance between me and my family. Sometimes, the Malaysian heavy downpour reminds me of my hometown in the north of Iran. I have gained a lot of knowledge from my supervisor and find that friends, competent staff and expert lecturers provide each researcher the chance to pursue significant work.



### MHAMMED J K BASIR

I hail from the land of Palestine, now pursuing a doctoral degree in my favourite area - wastewater treatment. Earlier, I earned an MSc degree from PPKA. Currently, I am conducting experimental work to treat stabilized landfill leachate, comprising of high concentration of pollutants, and which need to be treated to conform to strict Malaysian environmental regulations. However, I receive all the support that I need from PPKA, be it academics, social or even financial. For this reason, I will always feel indebted to PPKA as well as to the beautiful country of Malaysia.



### WESAM AHMED YASSIN AL MADHOUN

**November,** 2004 I graduated from PPKA with an MSc in Environmental Engineering. Then I went back to Gaza, Palestine for 3 years working with few international and local organizations in Gaza. During my days there,



I patiently waited for the suitable opportunity to return to USM to pursue my PhD. In January 2008, I was thrilled by my success to secure the USM fellowship. So I made the arduous journey from Bayt Lahiya, north of Gaza strip, crossing the border town of Rafah into Egypt before boarding a flight to Penang from Cairo International Airport. The reunion with the PPKA family was a great relief and above all, I now can pursue my research ambition with the PPKA Clean Air Research Group (CARG). In August 2008, I was elected to preside over the PPKA Association of Postgraduate Students and Research Officers (ACEPRO). I take pride in the support given to me by both PPKA local and international colleagues. We plan to improve the student's skills, increase the interaction among students and establish new links with similar committees in other universities.

### MUHAMMED UMAR

I studied in the United Kingdom before coming to PPKA. Having step foot here, I found the PPKA community very friendly that enabled me to accustom quickly to the new



environment. My stay at PPKA has enlightened me on the professional approach to seek solutions to research problems. Other than the academics, I thoroughly enjoyed my social life surrounded by many international friends from diverse cultures and backgrounds. These add colours to my life. I always feel important at PPKA and helping hand is readily available whenever I need one. In return, I wish to contribute to enhance the university's reputation. Being at PPKA USM is just a GREAT EXPERIENCE.



## GRADUATE

# STUDENT SECTION



**ALI PAPZAN**

**USM** has an international reputation in research, academic standards and study facilities. These are the important reasons why I chose to study at PPKA. In terms of research, Engineering Campus is extremely active and highly ranked. The Engineering Campus in USM is definitely a nice friendly place to study. There is a great atmosphere at PPKA not only from the academic point of view but also in terms of friendship and good relationship between students and staff, which makes me feel part of a big family. The people are very kind and supportive here and this gives students enough self-confidence, especially students from other countries like myself!

**MARLIANA AZURA AHMAD PUZI**

I enjoyed and benefited from the very high level of attention, support and the time committed to my work by the supervisors. They are inspirational, read my work and give advice whenever I need it. The availability of books, journals and the efficiency of the library and librarian assistance are amazing too. I get allocated at a comfortable cubicle and has access to many facilities all the time. Another great strength of PPKA supervisor is the strong relationships with other departments and outsiders. I am co-supervised by a Professor from Department of Minerals and Resources Engineering. Majority of all Professors here willingly share their breadth of knowledge and multi-skills. It surprised me and proven why USM was chosen as the APEX University. The great help from my supervisor gave me the chance doing attachment with Department of Civil Engineering, Michigan Technological University (MTU), Michigan, USA for 3 months. At MTU, I was supervised by one of the pavement experts in USA. The exposures and input gained at MTU helped me to enhance my research undertakings. I truly believe that PPKA has the best PhD program in Asphalt Technology. I have had a wonderful experience at PPKA and hope that enables me to come up with interesting, original and insights in my PhD research.



**YEE HOOI MIN**

I shall be a USM thoroughbred! I earned my BSc and MSc from PPKA. Currently, I work on a PhD thesis at PPKA on tensioned fabric structures which I hope will contribute towards erecting more efficient membrane structures. After 18 months working on the subject matter, I am delighted to find that PPKA is well equipped with a variety of the latest analysis and programming software that I need to accomplish my research objectives. The lecturers here inspire a continuous interest to learn new things, sharing their global experiences in innovative research relevant to the industry. Throughout my years at the USM, the social interactions and experience at PPKA have helped me build a global network of contacts crucial for my future career.



## REFLECTIONS FROM FORMER STUDENTS

**WAN SHAHIMA MEOR SUHAIME** (*Graduated 2003*)

As if it was only yesterday that I first stepped foot on PPKA soils way back in 2000 at the Perak Branch Campus (KCP). At that time, the KCP land was barren, a remote place, residence to a small campus community. I felt somewhat frustrated as Civil Engineering was not my first choice. (I yearned to be a Chemical Engineer!)

With the firm belief that I was fated by the Almighty to pursue Civil Engineering, I took up all lessons seriously and did pretty well. By graduation time, I had totally changed my initial perception towards the course. PPKA had taught me many things pertaining to knowledge, life, sanguinity and friendship. I found the PPKA management team very experienced, dedicated and professional while the lecturers were approachable, dynamic and committed. The first three years upon graduation was spent working with a turnkey contractor, Road Builder, for the New Pantai Expressway project that was completed in 2005. I am currently a certification executive at the SIRIM Civil and Construction Section. I audit construction related companies or organizations

seeking or renewing accreditation with the management system scheme such as ISO 9001:2000, ISO 14000:2004 and OHSMS 18001. At the workplace, I am permeated with a great sense of pride being a PPKA Civil Engineering graduate. Much of my paradigm of thinking revolved around the training received at PPKA. Generally, the market perceived PPKA graduates as amongst the best produced by a local university. I am grateful that I am playing my role in nation building as a competent Civil Engineer. Thanks PPKA for making this happen! Thinking in retrospect, I should have chosen Civil Engineering as the first choice some nine years ago.



**SHARIFAH ROSFASHIDA SYED ABD. LATIF** (*Graduated 1999*)



**Back** at the former USM Perak Campus in 1995 in Tronoh (Toronto as we called it!), my first year undergraduate was very challenging since I was not sure if I had registered for the right course. Nevertheless, I was fortunate to get acquainted with PPKA staffs who were very dedicated and caring. So I spent 4 meaningful years actively participated in the PPKA club and setting up the Resource Centre. After a brief stint working in the industry upon my graduation, I decided to further my study and registered for an MSc by research at PPKA. For almost 2.5 years, it was such a great joy conducting research on trip generation while simultaneously working as a research officer. The research venture taught me the importance of attaining research milestones punctually, leadership quality and team work. The seven years that I spent at PPKA had moulded my personality, enhanced my capability and professionalism in all spheres of life. I finally settle down as a lecturer at the Faculty of Science and Technology, Open University Malaysia (OUM) and have been here for the past four years. At OUM, apart from teaching, I also facilitate online learning, develop printed and electronic learning materials, monitor online tutorials and conduct training to OUM tutors. However, my attachment for PPKA grew everyday and I am currently pursuing my PhD in transportation engineering at PPKA on a part time basis.



## REFLECTIONS FROM FORMER STUDENTS

### HAFIZAH HASAN (Graduated 1999)

I am a staff of the newly established Department of National Solid Waste Management Malaysian Ministry of Housing and Local Government (MHLG). At the MHLG, I acquired a broad range of skills and experience required to tackle Malaysian solid waste problems hence contributing towards sustainable development efforts. I now pursue my MSc degree in Sustainable Waste Management at the University of Leeds. While being a student, I had a firm grasp on the life of a Civil Engineer when I spent eight weeks Industrial Training with the Department of Irrigation and Drainage Muda in 1998. From there on, the sky seemed to be the limit. As a student, I learned a lot about engineering theories and scenarios; which later assisted me to balance between theory, practice and the fast moving engineering world. I graduated at a time when the economic climate was not promising but was glad to secure a good job with the private sector with a competitive salary. However, as a JPA scholarship holder, I was then offered and duty bound to join the government and served various ministries. The varied tasks that I executed allowed me to gain a broad experience in many areas required for my career development.



### PATRICK NG HONG CHUAN (Graduated 1998)

**Just** after graduation, I obtained job offers in Civil Engineering from both local and abroad. On the contrary, I opted to try something different. So I undertook the job as a researcher for Advanced Agriecological Research Sdn. Bhd. (AAR), a company that deals mainly with oil palm and rubber. It sounded crazy to most people. I strived to make an impact in this totally different industry and have since published and presented various agronomy and management related articles in both local and international conferences. In 2006, I applied for a British Chevening Scholarship to pursue my MSc at Imperial College London as I had a keen interest to study the impacts of the oil palm industry on the environment to ensure sustainability. With my experience in the oil palm field and the prospect to be a leader and opinion former for the industry, I managed to secure a full scholarship from Chevening to pursue my MSc in Environmental Engineering and Sustainable Development. With God's blessings and the support from my family and friends, I managed to deliver my promise to Dr. Meor, my all time mentor at PPKA, and graduated with a distinction and won 2 out of 3 available awards including the Black and Veatch top student award and the ERM Award for my Sustainable Development Design Guide on Palm Oil Mills. In addition, my MSc project on Biodiesel Manufacture from Spent Bleaching Earth has also provided an option to produce renewable energy from waste generated by the edible oil industry. I must say that the education I got from studying at PPKA in the earlier days and the close association with lecturers there who would take the extra effort to inculcate in us students with important values in life such as good leadership made the difference in my life's perspectives. Kudos USM ... **Kami Memimpin!**



*Selected amongst Australasian students to be 'presented' to Queen Elizabeth II during the visit of Her Majesty.*



*All good things have to come to an end. Graduation ceremony at Royal Albert Hall, London.*



## REFLECTIONS FROM FORMER STUDENTS

**IR. AZIZZUL ABD TALIP** (Graduated 1995)

I am among the pioneers of PPKA. My working experience as a design engineer, project engineer and resident engineer in a consultant firm for seven years and also as a project manager for two years in a construction company, provided me with the skills to handle any projects from the design stage until completion of construction. In 2004, I had the opportunity to set up my own consultant company, Perunding Nusa Perdana, and still remain in business. For me, the beauty of Civil Engineering lies in the completed projects that one can look at and more importantly, offering tremendous benefits to users. Like what I was taught during my studentship at PPKA, the most important thing in my professional career is to comprehend the basic concepts of structural design. In that manner, it makes it easy for me to supervise or to solve any problems arising at site.



**FAUZI BAHARUDIN** (Graduated 2005)

I completed my BSc and MSc degrees in 2005 and 2007 respectively at PPKA. I started working in 2007 with GHD, one of the leading engineering consultant firms in Australia. In 2009, I joined the academics at Universiti Teknologi MARA. As I look back at the past, I appreciate what a great place PPKA is for those who wish to learn and acquire knowledge. In this context, I am really grateful to all PPKA lecturers for their exemplary guide by providing me with that academic and moral guidance throughout the years spent at PPKA. I hope PPKA will continue its tradition of excellence and produce competent future engineers for our beloved country. I am so proud to be a PPKA graduate. A million thanks!



With colleagues from GHD – From left, Siti Fatimah, Jurgen, Mark Armstrong, Lindsay Furness, Zaila and myself.

**MUHAMMAD FAZLI bin ABU BAKAR** (Graduated 2003)



I spent with PPKA at both Tronoh and Nibong Tebal campuses. I now work as a structural engineer with Global Process System (GPS) Sdn. Bhd., a global provider technology-based 'design and build' process facilities solutions for the upstream oil and gas industry. Such services and equipment ranges from stand alone small skid-mounted units for onshore early production facilities to full 'topsides' for offshore platforms and FPSO's which can include gas compression, water injection, generation, control equipment and the like. My work takes me on a venture to many ASEAN countries other than Malaysia such as Indonesia, Singapore and Thailand. I work with design engineers in this reputable consulting firm and gave me

ample opportunities to deepen the depth and breadth of my knowledge acquired while at PPKA. I am utterly glad to be in oil n gas industry and thanks to PPKA lecturers who had provided me sound knowledge. To my mind, Civil Engineering is not restricted merely to construction but one can contribute to various other industries if one is capable, willing to learn and possesses self-confident.



## REFLECTIONS FROM FORMER STUDENTS

### AHMAD RAQIB AB. GHANI (Graduated 2000)

I am from among the so called Millennium Batch (since we graduated in the Y2K) and from the 2nd generation of the 3-year compact crash course at USM Perak Branch Campus. The remote town of Tronoh was full of peace and tranquility, obviously an ideal place to seek knowledge. However, the frequent power failures especially during heavy down pour or thunderstorms can be bothersome, but over time, get used to it and encouraged me to be proactive with assignment submissions. Upon graduation, I joined a Consultant Company at Seri Kembangan, Selangor and took part in a flood mitigation study. In my quest to deepen my knowledge, I re-joined PPKA in May 2001 as research student and mentored by my two 'sifu', Dr. Wan Hashim and Dr. Farhan, on highway capacity, one of PPKA's niche research areas. I am happy to learn that my two 'sifu' are now professors. Congrats! At the moment, I am one of University Tun Hussein Onn Malaysia (UTHM) academic staff. I hope to continue with all virtues acquired while at PPKA and to fly to greater heights in my academic career at UTHM. I always remember all PPKA staffs for their warm hospitality.



## STUDENT SECTION

### MOHD. HELMIE MAD DALAN (Graduated 2004)



**With** a degree from PPKA some five years ago, I now serve as an engineer with OPUS International (M) Berhad, a subsidiary company of United Engineers Malaysia (UEM). UEM role in mega highway and bridge construction projects in Malaysia has become a household word. My daily routine at OPUS is to supervise all the construction works along the PLUS Expressway. I always want to pen down words of appreciation for PPKA but never got the chance to do so until I got the opportunity to contribute to this Anniversary Report. So I want to say aloud, "Thank You PPKA". Thank you PPKA lecturers for sharing your

wisdom with me. My professional success in the industry would not be possible had it not be for the training that I received at PPKA. I have all the confidence that PPKA will continue producing well trained engineers to meet the stringent job demands both local and abroad.

### MASRIA MUSTAFA (Graduated 2004)

**My** decision to pursue undergraduate study at USM was underscored by my desire to be part of the PPKA family in a university that offers the flexibility needed for such a vast and rapidly changing field. The undergraduate curriculum, introduced me to a wide gamut of subjects, both in and outside the field. Courses like structural engineering, geotechnical engineering and transportation engineering had provided me with a strong footing in the theoretical concepts of civil engineering. The program supported my development of an area of expertise which in combination with new insights and confidence ultimately led to career advancements far beyond that I originally envisioned. I was given the chance to be an exchange student under the USM-UniSA (University of South Australia) International Program during my final year. The short time spent abroad has not only given me a set of skills but also helped me to understand my fields of interest and my academic strengths and weaknesses. The desire to delve deeper into this subject prompted me to pursue an MSc degree in Transportation Engineering at Chulalongkorn University, Thailand under the joint program of USM with AUN/Seed-net. I am now working on my PhD in Technische Universität München, Germany, to pursue a career in research and teaching area which promised experience, excitement and satisfaction of being at the forefront of this vast expanding field. All the opportunities I gained these years originate at PPKA, the starting point of my journey to become the person I always dreamed of. So I am very indebted to PPKA for making me go this far.





## REFLECTIONS FROM FORMER STUDENTS

**ANWARUL ADZIZI** (Graduated 2004)

**With** an engineering degree from USM, I face no difficulty to get employed. So I decided to begin my career as an engineer, working in the construction site. Being new to the business, it was indeed a great venture for me. Nevertheless, the knowledge, skills, intellectual discourse and passion for engineering that I acquired from PPKA lecturers, kept me going. I am now being entrusted to lead a section in the Malaysian Public Works Department. The time spent at PPKA was the most enjoyable ever in my life. That is why I am so indebted to PPKA academia. On one occasion, my former lecturer, Professor Dr. Nor Azazi, now Director of REDAC, came to my workplace to deliver some lectures. It was rather nostalgic, reminding me sitting in his lectures during my days at PPKA. I also fondly remember Professor Dr. Wan Hashim, who is currently Engineering Faculty Dean, Universiti Malaysia Sarawak, for his able guidance in my final year project such that I got the best grade. Apart from these two, I express my appreciation to all other lecturers who have always been my source of inspiration. Thank you very much. It is such an honour to be your former student. Keep up the good work and may Allah bless you all.



**AZINOOR AZIDA ABU BAKAR  
AND  
MUHAMMAD KHAIRUDIN KHALIL**  
(Graduated 2000)

Azinoor and Muhammad Khairudin are both PPKA graduates, got married a year after graduation and now pursuing their doctorate degrees at Nagaoka University of Technology, Japan in hydrometeorology engineering. The wife is a UiTM lecturer while the husband an engineer with the Department of Irrigation and Drainage.

**Azinoor Azida** affectionately reflected: "I grinned everytime I recall my days at USM Tronoh. Though engineering wasn't my first choice, I appreciate the course after exposure to an interesting curriculum. I panicked when once asked to present a paper based on my final year project to the AWAM2000 conference, yet that incident gave me the confidence in public speaking and I remember the amiable atmosphere during the conference. The tranquil environment at Tronoh was ideal for studying. I enjoyed the cordial relationship with PPKA lecturers and still keep in touch".



**Muhammad Khairudin bin Khalil** contemplated: "USM had educated me all the way from matriculation in a comprehensive way. I learned not only about academics but how to get on with life. I engaged in many extra curricular activities and played hockey for the SUKAD game. Such ventures make life more interesting in the rather socially dull town of Tronoh!"



## THE AWANGS @ PPKA

Azahar (the elder brother), Aswaruddin (the brother) and Rosmanida (the younger sister) are three siblings of Pak Awang. They were all educated at PPKA. Their choice for PPKA was not a coincidence but based on its reputation. Interestingly, all three focused on highway and traffic engineering. Historically, their father used to work on the East-West Highway in the 1970's and this makes their study focus more meaningful to the family. Their mum and dad must be proud of them all.

### *Azahar has never thought that a research job would give such satisfaction*

It was ten years ago when Azahar graduated from PPKA, then at the Perak Campus. The thoughts of continuing his studies at graduate level never crossed his mind. But his destiny took a different course. He reflected, "I spent a good 5-year as a project engineer with a reputable construction firm in north Malaysia and then 4 years in Melbourne, Australia indulging in various kinds of jobs". Yet Azahar was still on the look out for an ideal job which he envisioned as the one which promises challenging tasks, full of exciting milestone to venture yet flexible and fulfilling. So he embarked upon a career as a research officer with the HITEG group at PPKA. It took him some time before he decided to pursue an MSc degree in highway capacity. As a graduate student and research officer, he enjoyed every moment spent on exploring the horizon of knowledge. He observed, "There's a lot more knowledge to unravel in the area of highway capacity particularly in the Malaysian context". *Azahar Awang*

### *Aswaruddin has acquired the complete package of an engineer @ PPKA*

Aswaruddin aka Aswa is proud to be a PPKA graduate. Currently, Aswa is working as a Civil Engineer at JKR, Putrajaya. At PPKA, he gained precious knowledge, skills and all the attributes of a good Civil Engineer. In addition, he has the opportunity to equip himself with the soft-skills such as leadership, management, teamwork and communication aptitude through his active involvement in the student activities. He thanked PPKA for equipping himself with the complete package to be a capable Civil Engineer. He remarked, "I cherish so many moments at PPKA, they are unforgettable and invaluable". *Aswaruddin Awang*

### *A dream comes true for Rosmanida*

Inspired by her two elder brothers, Rosmanida commenced her journey in Civil Engineering studies by registering for a certificate and diploma courses at a polytechnic. To be a PPKA undergraduate student is like a dream comes true for her. Although her intake into PPKA was based on her diploma, she never felt being sidelined by PPKA and stands on equal footing with the rest. She appreciates the relevancy of the syllabus to the industrial requirement. During her industrial training, she got the opportunity to apply the knowledge and technical skills learnt in the classrooms and laboratories. The industrial training field work raised her confidence level to face the real world of Civil Engineering. As a final year student, she conducts research on expressway capacity. She admitted, "I am proud to be a PPKA graduate soon and looking forward to face the challenges faced by a Civil Engineer". *Rosmanida Awang*



ROSMANIDA



ASWARUDDIN

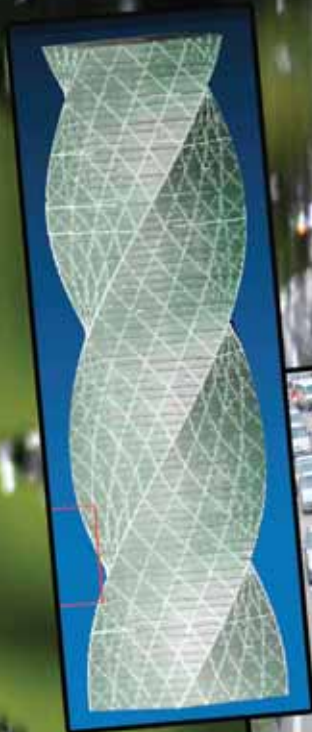


AZAHAR





# RESEARCH GROUP PROFILE





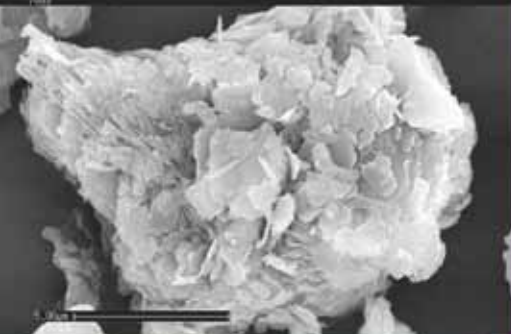
## STRUCTURAL ENGINEERING

**The** structural group within PPKA covers various research areas, which integrate advances in computational methods, and laboratory and field experimentation. We aim for a fundamental understanding of the structures and materials that form the foundation of civil engineering, and to apply this knowledge in order to find solutions to important engineering problems. Structural engineering focuses on the built environment, including structural design and analysis, advanced construction materials, lightweight structures, construction management, and seismic hazards.

A substantial amount of promising research has been, and continues to be, conducted by the structural group. In the area of advanced construction materials, such as the use of mineral admixtures in concrete, the durability and performance of concrete, high strength and high performance concrete, it was found that a material called metakaolin, produced from a local source of kaolin, could be potentially used as a mineral admixture to enhance the properties and performance of concrete. Studies carried out on the deformation characteristics of Malaysian fired clay-bricks for masonry structures were used to assist in the development of MS76:1972. Moreover, the scientific correlation between unit type, mortar type and geometry type was determined, along with the acquisition of scientific principles in predicting the deformation of masonry structures. The inclusion of wastes in the construction material, such as ceramic tiles, fired-clay bricks, crumb rubber, rice husk has been studied. Such study has resulted in an alternative products for construction use such as pedestrian block, rubberized concrete, lightweight fired-clay brick (Oryben) have been developed. Through research involving non-linear inelastic responses of reinforced concrete buildings due to earthquake ground motion excitation angle, the development of a new procedure was initiated in defining the seismic performance of buildings using incremental dynamic analysis by taking the effect of horizontally bi-directional ground motion and near-field effect. An estimator was established to define the critical angle of ground motion for non-linear inelastic time history analysis. Research in the area of bio-mimicry with the aim of developing novel forms for shell and spatial structures which are structurally efficient and architecturally aesthetic is also actively pursued. One such study deals with the mechanics of shell-like surface with folds found in nature where the load transfer characteristics of the leaf of *Johannesteijsmannia altifrons* plant has been investigated.

Structural Health Monitoring (SHM) research concerns the development of analytical methods, numerical models, and algorithms for condition assessment of structures based on NDT methods, using infrared thermography and acoustic techniques, and remote sensing using radar, and image and signal processing, in order to increase the accuracy and reliability of assessments for structural performance. An important aspect of this research is to transfer technology from the laboratory to practical applications.

Other studies by the structural engineering group involve industrialised building systems (IBS), the use of Fiber Reinforced Polymer (FRP) composites in strengthening of reinforced concrete structures.





## ENVIRONMENTAL ENGINEERING

**Environmental** engineering is a large field that covers and caters to every aspect of human needs. Sustainable life begins with a complete and well-maintained environment. In order to achieve this, the environmental engineering work group plays a vital role, not only within USM and PPKA, but more importantly, throughout the community, as the effects of good environmental management should also be felt by every human being and all other living creatures. For many years, our expert environmentalists at PPKA have been involved in and provided good research, consultancy and industrial testing services to different areas including solid waste management in Landfill Technology, Composting, Water and Wastewater Treatment, Industrial Wastewater Treatment, Solid Waste Management, Environmental Impact Assessments (EIA), Air Quality Studies, Water Quality Studies, Sludge Management, Noise Pollution Control, and Water Quality Modelling.

Many researches has been focused on alleviating the problems associated with industrial wastewater discharge, solid waste management via landfilling, especially on leachate treatment, air and noise pollution. Among the past and on going project include, study on solid waste management in the holy city of Makkah, joint research work between USM, Ummu Qura' University and King Abdul Aziz University, Saudi Arabia; Environmental Risk Management in the JSPS-VCC Program on Environmental Science, Engineering and Ethics; projects on Comparative Health Risks Evaluation due to the Micro Environmental Pollutants, which was an International Cooperation Study between Japan, Malaysia (USM), and India; Development of a pilot plant for removing heavy metals from wastewater using low cost media; the use of natural polymer as an alternative coagulant and coagulant aid for wastewater treatment; development of an environmental data acquisition system for use in an Intelligent Transportation System (ITS); Development of a physio-chemical semi-aerobic landfill leachate treatment system at Pulau Burung Landfill Site; development of an appropriate air nozzle and pilot plant studies of dissolved air flotation; study on the alternative nitrogen and phosphorus removal for algae bloom control; composting of municipal solid waste; development of a new material for municipal solid waste leachate treatment; study on bioremediation of crude oil hydrocarbons in coastal sediments; development and recovery of a new material of municipal solid waste leachate treatment; Study to investigate and model the oxides of nitrogen and their transformation into secondary pollutants (ozone) in urban environment in Malaysia; modelling and predictions of air pollutant concentrations in selected cities in Malaysia; Development of Regional Asthmatic Morbidity Profiles using GIS and Statistical Analysis; Investigation of past climate, hydrological regime, and changing water pollution history using the deposited sediment record in reservoir: case study of Tasik Merah and its catchment areas in Perak.

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Our  
Mark  
for  
A  
Sustainable  
Tomorrow*

The research group have developed the treatment system consist of a combination of biological and physical-chemical treatment of leachate in which the latter plays a very significant role in removing organic matter and heavy metal. The treatment system that has been examined in the laboratory and in the field was proven capable of removing all constituents in the leachate up to the standard level as compared to the conventional treatment system. The design was based on the comprehensive laboratory studies with supporting field model conducted at various landfill sites in Malaysia. The plant is the first of its kind in the region.





## WATER RESOURCES ENGINEERING

**Research** in water resources at PPKA commenced as early as 1994 with the advent of new academic staff eager to push the frontiers of knowledge upon completing their PhD theses and also expatriate staffs. The initial research areas were in the areas of hydrology, hydraulics and water resources engineering. Over the years, the research areas have grown to encompass specialization areas that include hydrodynamics, water supply, hydrology, urban and rural hydrology, hydroinformatics, remote sensing, GIS and project management application.

International research exposure was obtained from the international linkages such as UK ODA Cell 14 (with University of Newcastle Upon Tyne; Thames Water; University of Bradford, University of Aberystwyth, University of Liverpool), Australian IADP program (Queensland University of Technology, University of New South Wales, etc) and Ecole Polytechnic of Lausanne, Switzerland.

The research grants obtained since 1994 include IRPA Research Grants, IRPA EA Research Grants and USM short term grants. The research capabilities in river engineering culminated in the establishment of the River Engineering and Urban Drainage Research Center (REDAC).

Water resources research and development at PPKA will expand into new areas and consolidate existing areas which will place it as a credible research group as we celebrate the PPKA 20th Anniversary.



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RESEARCH GROUP PROFILE



## GEOTECHNICAL ENGINEERING

**The** vast development in the construction industry in Malaysia is undeniable. It can be seen, especially in recent years, as major cities in the country develop rapidly along with the country's vision. Hence, more researchers and consultants are needed to improve the quality of the industry, in order to maintain its credibility. Problems related to the construction industry need to be solved, and new ideas are needed to improve the industry as well. Universiti Sains Malaysia, through PPKA, has risen to the needs of the community, as well as the country, in all areas related to the construction industry. As part of PPKA, the Geotechnical Engineering Research Group (GEOTREG) is all set to carry on the excellence achieved by PPKA over the last 20 years. Although the group is still new to the industry, the players behind it are already well known. Consisting of the newest and most experienced researches in the field, GEOTREG is always ready to take on the challenges of the industry.

Some of the areas related to geotechnical engineering that are covered by the group members include slope stability, foundation engineering, soil stabilization, etc., and many other topics that are always related to the community's needs. The beauty of GEOTREG lies not only on its capability to design and analyse the field problems, but also to have the support of a fully equipped laboratory. As such, the group also takes care of what most consultants are unable to do, laboratory testing. Other than that, GEOTREG is also involved in current research, particularly in areas related to sustainability. This is important, especially when the country is looking towards sustainability for the betterment of the future. GEOTREG's admirable track record is not only evident from its many studies and reports, but also from several prestigious awards earned in and out of the country.

The success of the group will continue in the future, as cooperation and understanding remain key qualities among the group members. It is hoped that PPKA will persist in providing the utmost in quality to the community and to the country, and that GEOTREG will also be invaluable to PPKA and to the industry in the years to come.

*Making  
Our Mark for A  
Sustainable Tomorrow*





## HIGHWAY AND TRAFFIC ENGINEERING

*The* Highway and Traffic Engineering Group (HITEG) provides expertise in consultancy, research and advisory services in the field of transportation and highway engineering. With professionalism as the thrust, HITEG has successfully evolved from its humble beginnings to its present state of excellence. The group primarily thrives on consultancy from various sources, and through advisory and testing services for various clienteles. Over the years, a number of customised short courses on asphalt technology and traffic impact assessment have been conducted by the group.

In November 2007, the Highway Planning Unit (HPU) of the Malaysian Ministry of Works, awarded the group two research contracts amounting to RM2.6 million to continue with the Malaysian Trip Generation Study (Phase IV) and the Malaysian Highway Capacity Study (Inter-Urban). In the previous phases, the HPU awarded the group a total sum of RM4.3 million for both projects. The outcome includes manuals and guides that become mandatory for consultants to use. The current Trip Generation Study aims to improve technical matters regarding the quality of the Malaysian trip generation manual. The study also seeks to execute and firm up the institutionalization of the Malaysian trip generation studies, the first of its kind in the world. The current on-going Malaysian Highway Capacity Study focuses mainly on uninterrupted flow facilities such as expressways and rural/suburban highways. The study investigates the important relationship, parameters, adjustment factors and other related matters for expressway and urban and suburban highways and subsequently analyses and develops models to determine relationships and their related matters and parameters, for the various conditions and situations prevailing for each transport facility to suit the conditions in Malaysia. The group's expertise in Traffic Impact Studies is also highly regarded by the industries. The group has developed its own methodology to professionally evaluate the potential impacts of new development on transportation and traffic systems on its surrounding areas.

The highway engineering section of HITEG focuses on sustainable issues related to bitumen and asphalt technologies. Bitumen, from which asphalt is produced, is a derivative of crude oil. The need for sustainable asphalt is imperative in view of the escalating price of bitumen (despite the current price drop of crude oil). Consequently, research on asphalt at PPKA focuses on sustainable issues to ensure survival of the industry. A lot of energy input is required to produce asphalt in the quarry.

### *Making Our Mark for A Sustainable Tomorrow*

The use of warm mix asphalt enables production temperature reduction of up to 20°C without compromising mix properties. Typically, the design life of asphalt surfacing is approximately 10 years, beyond which, pavements are either overlaid or milled. Milled asphalt waste can be recycled. The use of 30% recycled asphalt can add to a cost saving of more than 20%. Many natural asphalts, other than the famous Trinidad Lake Asphalt, are available such as gilsonite and asbuton. These natural asphalts are significantly cheaper than conventional bitumen. Preliminary research results on asphalt mixes incorporating 10% asbuton indicates that only between 2.0% to 2.5% conventional bitumen is needed to produce mix properties that meet local specifications. Many waste materials are available for the asphalt industries. One such example is steel slag. Being an engineered material, both dense and porous mixes incorporating steel slag was found to exhibit more superior properties compared to conventional mixtures incorporating granite aggregates. Sustainable asphalt also includes the development of quiet pavements. The best candidate material for silent road is the double layer porous asphalt, which is able to reduce traffic noise at source by 6dB(A). Extensive characterization of this open material has been conducted at PPKA for more than 10 years.





## GEOMATIC ENGINEERING

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Tomorrow*

**Geomatic** engineering is a generic term that refers to an integrated engineering approach for the measurement, analysis, and management of earth-based data. This is very fundamental in civil engineering disciplines, and is necessary for producing engineers who are well trained and exposed to the various aspects of measurements related to the engineering field. PPKA has experienced academic professionals in the field of geomatic engineering, and has been greatly involved in research and consultancy work since the early 1990's, within the areas of Engineering Survey, Geographical Information Systems (GIS), Monitoring Systems, Global Positioning Systems (GPS), and Digital Mapping and Spatial Analysis. The group has managed to acquire a considerable amount of funding through several research projects. Among the outstanding geomatic research work conducted by the group over the years are: the Preparation of Survey Data and Land Information Systems for Seri Iskandar New Township, Perak [1991], GIS-Based Watershed Management System for Non Point Source Pollution Modelling [2003], Development of University Campus Wide Information System (UCWIS) using Integrated GIS map and Database Management [2005], and Formulating Optimisation Process in Spatial Site Selection [2007]. The geomatic engineering group is also involved in several consultancy projects, such as the National Geographic Information Systems (GIS) Feasibility Study, Malaysia [1993], Computerised Testing Tutorial System for Road and Transport Department, Malaysia [1993], Feasibility Study and Detail Design of Flood Mitigation and Drainage Improvement for J.P.S Pulau Pinang [1999], Improvement on Water Quality for USM Lake maintenance and sustainability [2003] and Slope Stability and Mitigation Study in USM [2004]. Other research areas presently carried out by the group are on underground utility practices in Malaysia, development of Geoinformation Standards, the application of Field-to-Finish (F2F) concept in the Malaysian cadastral survey practice and its effectiveness in the national e-Cadastre and e-Tanah initiatives. Through the involvement of the academic staff from PPKA in the various national and international committees, such experiences gained will be invaluable in the dissemination of knowledge and future research engagements.





**'Civil engineers can be good managers but the best managers can't be civil engineers'**

**These** are the memorable words of a late civil engineer grandfather said some 20 years ago; words that still ring true to this day, and that will probably continue to be valid and spoken out by many generations to come. These words play a big role in different talks on management issues at a variety of events, to various groups of people from diverse backgrounds, including civil engineers.

For the last ten years, and perhaps even longer, management was not taught to civil engineering students at the USM. Many outstanding USM graduates, who never studied management, face challenges on a daily basis in terms of management issues; not due to the absence of management as a subject, but due to their ability to put things together as a result of the training they had undergone that made them more analytically mature.

Throughout the four-year undergraduate engineering programs at USM, the students are taught the following management courses: Engineers in Society (EUP222/3) and Engineering Management (EUP301/3). At the post-graduate level, the Engineering Management (EUP501/4) course is taught covering contemporary issues on management.

So, what is the real connection between civil engineers and management? To be able to face the challenging life, civil engineers must be able to cope and understand contemporary issues associated with management and leadership in order to obtain a true understanding of the civil engineering practice. As tasks become more sophisticated and demanding, civil engineers must understand management and leadership issues, which include such areas as contract management, project management, partnering, office management, professional practice and development, financial management, human resource management, stress management, marketing and sales, ethics, technology and innovation management, information management, continuing education, organizational theory, strategic planning, conflict management, change management, negotiating, risk management, globalisation, networking, teamwork, team building, communication, mentoring, coaching, and diversity. Civil engineers should also understand legislative and regulatory issues, corporate and public policy, and the role they can play in the political process at all levels of involvement, be it in the public sector or the private sector.

At this juncture, it is evident that those memorable words came from a man with considerable foresight, as they will always be true and could be translated into the following: the growing need for civil engineers to have management skills and, perhaps, advanced degrees in engineering management, will be a trendy yet relevant reality. The basis for this argument is that the nature of large projects undertaken by large civil engineering firms and large public enterprises requires project managers who have considerable managerial skills as well as technical expertise. The project manager in a large firm is often called upon to make client presentations, write proposals, negotiate contracts and changes, hire staff, and select sub-consultants. Consequently, civil engineers who serve as project managers need to have excellent communication skills, training in financial management, human resources, and contract law, as well as other managerial skills. In financial terms, civil engineers who choose the management career path will command higher salaries than those who stay in the technical areas. Contemporary civil engineers who do have the extra management skills will agree that high character and professional integrity blend well with their technical know-how.



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# PPKA HONOURS AND ACHIEVEMENTS



Serat sisa tandan sawit atasi hakisan



Gold Medal

1. Introduction

Many...  
Colours...  
presence...  
residues...  
dyes are...



...e dyes from aqueous solution  
...alm ash  
...uridah A.H. Asaari<sup>a</sup>, Hamidi A. Aziz<sup>a</sup>,  
...Jaya Paul A. Dhas<sup>b</sup>  
...an Samsi Malaysia, 11800 Skudai, Johor, Penang, Malaysia  
...42022, Lebuhraya Kuala Lumpur, Seremban, Malaysia  
...Pusat Industri Zon 1, 32000 Puncak, Penang, Malaysia  
...June 16 December 2006, accepted 21 February 2006  
...27 April 2006

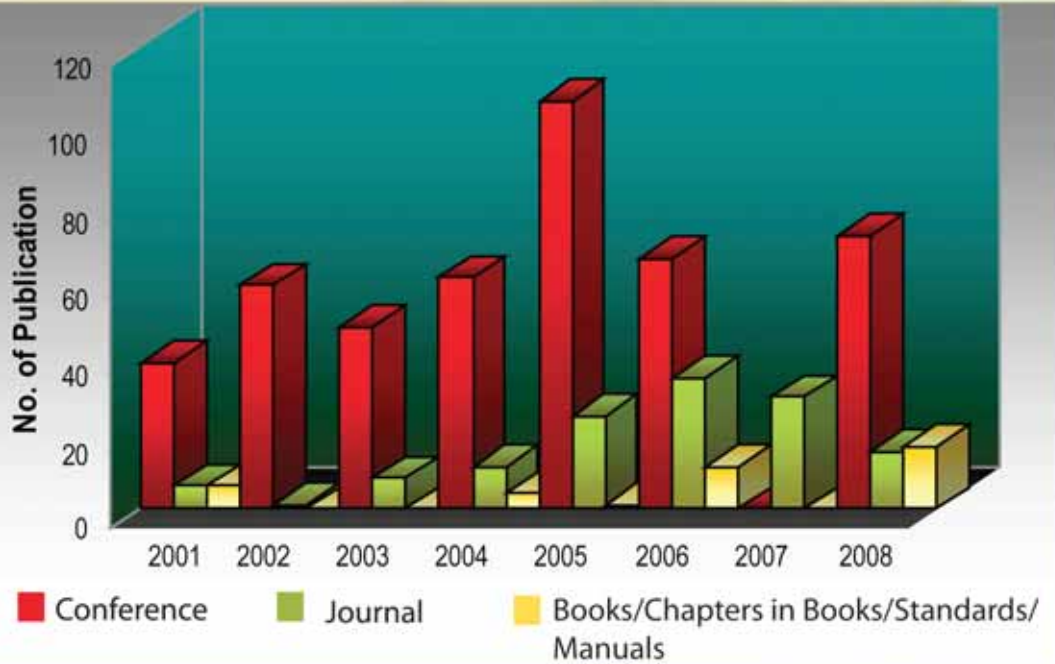


[4]. Considerable research has been done on colour removal from industrial effluents to decrease their impact on the environment. These technologies include adsorption onto inorganic or organic matrices, decolourization by photo-catalysis or photo-oxidation processes, microbiological decomposition, chemical oxidation, ozonation and coagulation.



## RESEARCH AND CONSULTANCY

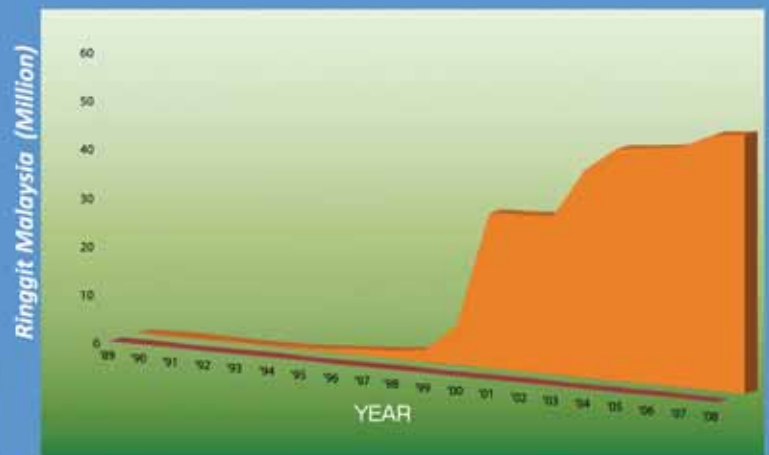
Since its establishment, academic staffs at PPKA have been actively involved in securing research funding from various sources in order to support their research works. Over the years, PPKA has gained the confidence of various funding agencies including USM, Ministry of Higher Education, Ministry of Science, Technology and Engineering (and later Ministry of Science, Technology and Innovation), Construction Industry Development Board etc.



## RESEARCH FUNDING (CUMMULATIVE)



## CONSULTANCY EARNINGS (CUMMULATIVE)







SCHOOL OF CIVIL ENGINEERING



DIPLÔME

SALON  
INTERNATIONAL  
DES INVENTIONS





# GEGERAN 8.5

UTUSAN MALAYSIA RABU 30 MAC, 2005

## LOKASI GEMPA BUMI



### TENAGA SEISMO YANG DIHASILKAN GEMPA BUMI

Skala Richter adalah unit yang digunakan untuk mengukur tenaga seismo yang dihasilkan gempa bumi.

### Researchers identify dump site

The site was only reached after the construction of a short connecting road to the dump site.



## Pergerakan plat tektonik bumi punca gegaran

Oleh ZULKIFLI JALIL

**P**ULAU PINANG 29 Mac - Gempa bumi 8.5 pada skala Richter di Pulau Sumatera tengah malam tadi, adalah disebabkan oleh pergerakan plat tektonik itu plat yang membentuk permukaan bumi untuk mencari kedudukan yang lebih stabil.

Pakar gempa bumi dan tsunami, Prof. Madya Dr. Takshiah A. Majid berkata, gempa bumi di laut utara Sumatera itu adalah hasil tindak balas plat-plat berkenaan untuk menstabilkan kembali kedudukan selapas diletakkan oleh satu tenaga yang kuat dari bawah kerak bumi pada 26



PROF. MADYA TAKSHIAH

namanya yang berlaku di perairan Aceh Desember lalu.

Beliau yang juga penasihat Pusat Pengajian Kejuruteraan Awam Universiti Sains Malaysia (USM) berkata, terdapat tujuh plat tektonik besar terdiri daripada plat-plat Eurasian, Antartika, Indo-Australia, Amerika Selatan, Amerika Utara dan Pasifik.

Tujuh plat berkenaan sentiasa bergerak kira-kira 10 sentimeter setahun tanpa disedari oleh penduduk bumi.

"Lama kelamaan pergerakan itu akan mewujudkan satu tenaga yang kuat dari bawah kerak bumi apabila ia bergeser sesama sendiri, sekali-gus meletuskan gempa bumi bawah laut atau

bagian bara, yang penempatan penduduk di kawasan itu harus dihindarkan.

Bagaimana negara tidak ripada kesan gempa bumi di Sumatera?

"Ini disebabkan adanya sempadan pergerakan plat tektonik yang aktif dan itu antara sempadan antara Amerika Utara dan Eropah barat dan pertembungan Eurasian dan Laut Filipina timur," katanya.



PENERUSI Persatuan Penduduk Flat Pro Bandaraya Kuala Lumpur (DBKL) di J. Jamaluddin Semuddin dan anggota S. Abdullah memeriksa kesan retakan akibat

### Beribu-ribu lari bertemping

KUALA LUMPUR 29 Mac - Beribu-ribu penghuni di bangunan dan kawasan tinggi bertemping.

### Need for shuttle bus service, says don



Take over bus services, CAP urges Govt

At this system, we can reduce 60 cars with a bus.

Dr. Ahmad Fauzan mendahului.

### Peneraju Inovasi

Kejuruteraan pengangkutan baik pulih sistem lalu lintas

Anggota di rumah ager bertemping di rumah mereka gegaran malam.

Sehingga menyebabkan kebanyakannya peniaga terpaksa menutup kedai mereka kerana bimbang dan tidak dapat mengimbas badan.

Bagaimanapun keadaan kembali pulih kira-kira sejam kemudian apabila pihak polis memberi jaminan bahawa keadaan di rumah pangsa tersebut selamat.

Di Sungai Petani pula, kira-kira

### Gegaran su

KUALA LUMPUR 29 Mac - Jabatan Perkhidmatan Kaji Cacas hari ini mengesan satu gegaran musulan berukuran 5.5 pada skala Richter yang berlaku di pulau Sumatera pukul 2.16 petang ini.

Menurut jabatan tersebut, gegaran itu turut dirasai oleh sebilangan penduduk di sekitar kawasan Lembah Klang termasuk kakitangan yang bertugas di bahagian Seismologi.

Penolong Pegawai Kaji Cacas Bahagian Seismologi, R. Devadas berkata, kaji cacas menunjukkan, tar-

- Jangan panik dan berkumpul di tempat yang lapang dan tutup kepala dengan tangan untuk mengelak terkena objek yang jatuh dari tempat tinggi.
- Jauh dan jangan berdiri atau duduk berhampiran terowong, jambatan, pokok, bangunan, papan tanda, kabel elektrik dan kawasan bukit untuk mengelak kemungkinan tanah runtuh.

### APA YANG PERLU DILAKUKAN SELEPAS GEGARAN

- Keluar dari rumah atau bangunan selepas memastikan semua suis elektrik dan sumber gas ditutup.
- Ragi yang tinggal atau bekerja di bangunan tinggi, jangan turun menggunakan lif tetapi gila tangga.
- Selepas keadaan pulih dan mendapat pengesahan dari pihak berkuasa seperti bomba, polis dan pihak keselamatan masuk semula ke rumah atau kawasan kerja.
- Pastikan almari, tempat tinggi dan



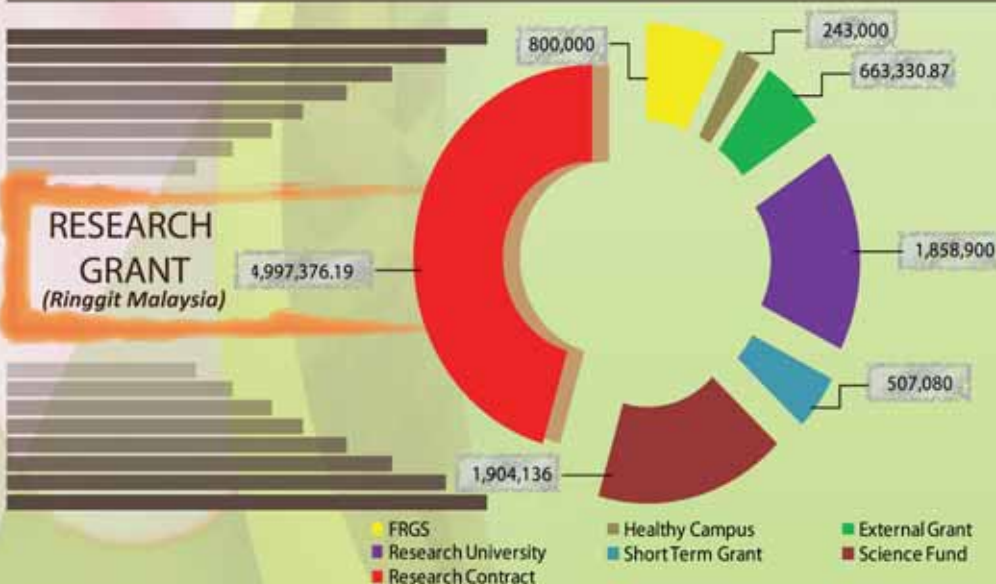






### MAIN KEY PERFORMANCE INDICATOR

MAIN KEY PERFORMANCE INDICATOR	PPKA Achievement	Research University Requirements	Compliances Status
Critical mass academic staff involved as Principal Investigators	100 %	60 %	Comply
Percentage of academic staff with PhD or equivalent	72.41 %	60 %	Comply
Publication in national/international refereed and cited journals per staff	0.345	More than 2	Not Comply
Research grants for S&T	RM 182,771/staff/yr	At RM 50,000/staff/yr	Comply
Ratio of PhDs graduated to academic staff	1 PhD : 15 staff	1 : 18 academic staff	Comply
Ratio of postgraduates to academic staff (enrolment)	5.8 PG : 1 staff	3 PG : 1 staff	Comply
Ratio of graduate to undergraduate students	1 PG : 3.85 UG	1 PG : 4 UG	Comply
Percentage of international postgraduates	21.89 %	10 %	Comply
Percentage postgraduate intake with CGPA $\geq 3.0$	69.82 %	50 %	Comply
Percentage of postgraduates fellowships / grants from prestigious bodies awarded to postgraduates via research mode	5.9 %	Not less than 10%	Not Comply





## BOOKS PUBLISHED

### AUTHOR

Hamidi Abdul Aziz

Ismail Abustan et. al.

### TITLE

Pencemaran Bunyi. Penerbit USM, 2008.

SIRIM Malaysian Standard: Guidelines for Developing and Implementing Early Action for Site Remediation, SIRIM Berhad

## CHAPTERS IN BOOK

### AUTHOR

Hamidi Abdul Aziz, Miskiah Fadhillah Ghazali, Mohd. Suffian Yusoff, Lawrence K. Wang, Nazih K. Shammass, Yung-Tse Hung, Donald B. Aulenbach

Md Azlin Md Said

### TITLE

Advanced Waste Treatment in the Process Industries, CRC Press, Chapter: Chlo-alkali industries wastes.

"EDVH3103 : Engineering Hydraulics & Hydrology"



## THESIS EXTERNAL EXAMINER

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PhD

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MSc

MSc

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FAUZIAH AHMAD

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### AWARDING BODY

Bio Inno Awards 2008, Malaysia Technology Expo 2008, Malaysian Association of Research Scientists, MARS & Malaysia Biotech Corporation, BiotechCorp

Seoul International Invention Fair 2008, Korea Invention Promotion Association, Seoul, KOREA. 11-15 Dec 2008, Korea.

Malaysia Technology Expo 2008, Malaysian Association of Research Scientists, MARS, 21-23 February 2008, Kuala Lumpur

Universiti Sains Malaysia

### AWARD

Silver Medal

Silver Medal

Gold Medal

Hadiah Anugerah Kecemerlangan Maal Hijrah

AWARD

AWARD



## CITATION INDEXED JOURNAL

A. Shamshad, M.N. Azhari, M.H. Isa, W.M.A. Wan Hussin and B.P. Parida, 2008, Development of an appropriate procedure for estimation of RUSLE E130 index and preparation for erosivity maps for Pulau Pinang in Peninsular Malaysia, International Journal, SCIENCE DIRECT – CATENA 72 (2008) 423-432.

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Joewono Prasetyo, Meor Othman Hamzah and Ning Wu (2008), 'Third Method Capacity Analysis : Mixed Traffic Flow at Unsignalized Intersection', International Journal of Logistics and Transport, Vol. 2, No. 2, October 2008.

Mohd N.N., Yahaya A.S., Ramli N.A. Abdullah MMA (2008) Estimation of missing air pollution values in air pollution data using single imputation techniques. Science Asia Vol 34, page 341-345.

Taksiah A. Majid, Shaharuddin Shah Zaini, Fadli Mohd Nazri, Mohd Rashwan Arshad, Izatil Fadhilah Mohd Suhaimi (2009) Development of Design Response Spectra for Northern Peninsular Malaysia Based On UBC 97 Code. IEM Journal, Vol. 69, No. 4, Dec 2008.

"W.M.A. Wan Hussin, 2008, Stress and the fatigue surveyor, The Malaysian Surveyor, Vol.42, No.4, ISSN 0127-4937, pp18-19."

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"W.M.A. Wan Hussin, 2008, The stress of saying NO and not saying NO, The Malaysian Surveyor, Vol.43, No.3, ISSN 0127-4937, pp35-39."



## JOURNAL PAPER REVIEWER

### NAME OF REVIEWER

### NAME OF JOURNAL

Hamidi Abdul Aziz

Chemistry and Ecology; Waste Management; Water Science and Technology; Journal of Hazardous Material; Journal of Environmental Management; Journal of Water Science and Technology; Frontiers of Environmental Science & Engineering; International Journal of Environmental Research; Environmental Technology and Applied Biochemistry and Biotechnology.

Meor Othman Hamzah

International Journal of Pavement, USA; Maejo International Journal of Science and Technology, Thailand; International Journal of Engineering, Iran.

Taksiah A. Majid

Malaysian Construction Research Journal (MCRJ); Pertanika Jurnal of Science and Technology (JST).

Megat Azmi Megat Johari

Malaysian Construction Research Journal (MCRJ).

Ismail Abustan

The Journal of Flood Risk Management; The International Journal of Environment and Waste Management (IJEWM); The Malaysian Journal of Civil Engineering.

Md. Azlin bin Md. Said

Journal Sains Malaysiana; Fakulti Sains dan Teknologi, UKM.

Nor Azam Ramli

Journal of Applied Science; Journal Environmental Monitoring and Assessment.

Mohd Sanusi S.Ahamad

Journal of Information and Communication Technology (JICT), UUM; International Journal of Environment and Waste Management (IJEWM).

Shahid Kabir

Canadian Journal of Remote Sensing; International Journal of Information Technology & Decision Making; NDT Journal.

Ahmad Farhan Mohd Sadullah,  
Leong Lee Vien

Journal for Construction In Developing Countries.

Ismail Abustan

The Institution of Engineers, Malaysia.

Md. Azlin bin Md. Said

Journal of Industrial Technology, SIRIM, The Institute of Engineers, Malaysia.

INTERNATIONAL

NATIONAL

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Associate Editor of Research Journal of Chemistry & Environment.

Guest Editor, IJEWM, Special Issue: Microbial Immobilization Technology for Wastewater Treatment.

Member of the Editorial Board, International Journal of Environment and Waste Management, Inderscience Publisher.

Member of the Editorial Board, International Journal of Environmental Engineering, Inderscience Publisher.

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Member of the Editorial Board, Integrated Academy of Management and Technology for PRANJANA International Journal, India.

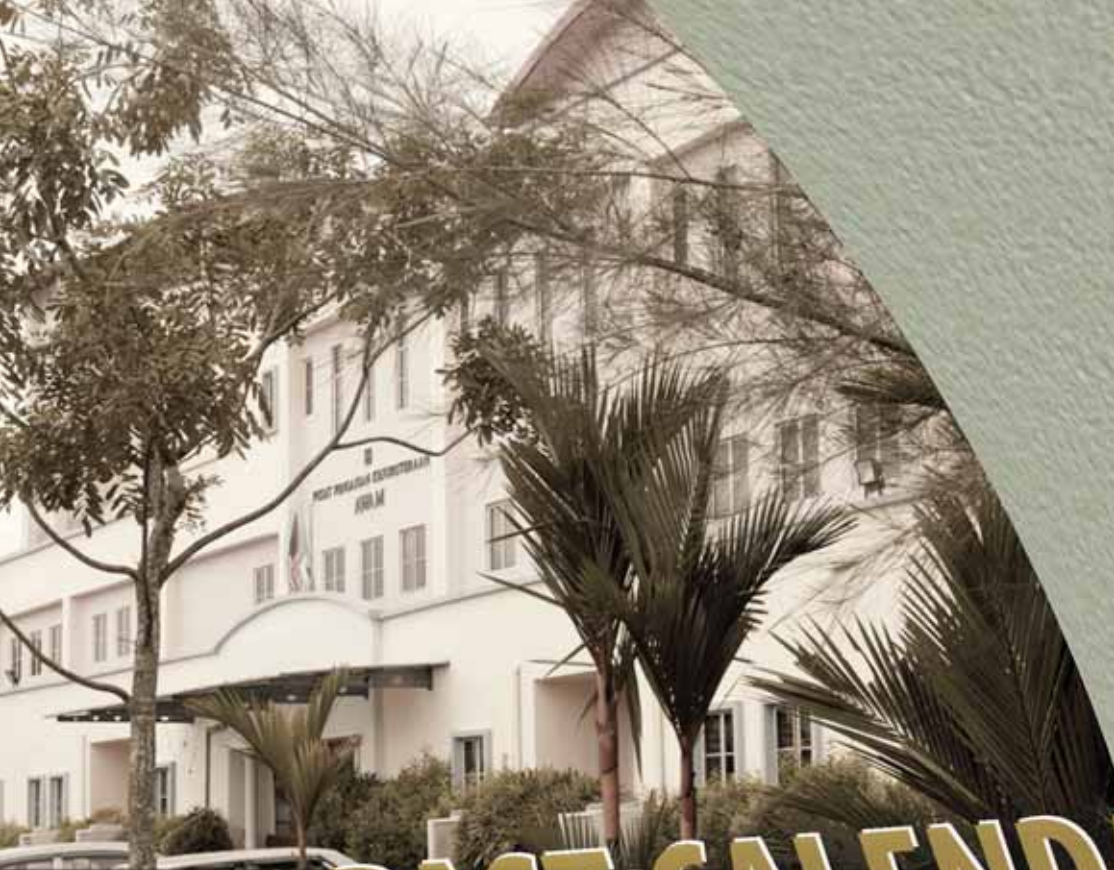
Member of the Editorial Board, The Malaysian Surveyor (The Professional Journal of the ISM Malaysia).



### INVITED SPEAKER

Choong Kok Keong	Invited Speaker at "3rd International Seminar : Development of Construction Technology for Spatial Structures", April 18 2008, Seoul, Korea.  Invited Speaker at "Workshop on Analysis and Design of Shell and Spatial Structures", October 8 2008, Kerman University, Iran.
Hamidi Abdul Aziz	Invited paper entitled 'Integrated solid waste management in developing countries: towards achieving a sustainable development', Jeddah Environmental Forum, Jeddah, JCCI, 21-23 April 2008.
Ismail Abustan	Invited Speaker for International Landslide Council Annual Meeting, ICL, 17-19 Nov 2008, Tokyo.  Invited Speaker for Dept Seminar Series, Division of Disaster Management for Safe and Secure Society, Kyoto University, 17 Oct. 08.  Invited Speaker for Division Seminar Series, Division of Disaster Management for Safe and Secure Society, Kyoto University, 21 August 08.
Md Azlin Md. Said	Invited Lectures "Introduction to Satellite Bus And Satellite Subsystems & Payloads" and "Introduction To Satellite Technology and Satellite Missions", Kursus Asas Sistem Satelit, 9 Ogos 2008, Jabatan Elektrik, Politeknik Ungku Omar
Ahmad Farhan Mohd Sadullah, Meor Othman Hamzah, Leong Lee Vien and Shafida Azwina Shafie	Invited by Jabatan Perancang Bandar dan Desa to deliver lectures on Traffic Impact Assessment for senior planners of Pejabat Projek, JPBD, Kuala Lumpur, 3-5 March 2008
Meor Othman Hamzah	Invited by MITRANS, Universiti Teknologi MARA to lecture on 'Advanced Pavement Materials I and II' to a Professional Training Programme in Highway Engineering for Officers of the Ministry of Public Works, Afghanistan, Shah Alam, April 2008  Invited by the Road Engineering Association of Malaysia (REAM) to lecture on " Porous Asphalt - Mix Design and Future Development" to the Road Asset Management Seminar, Penang, 10th November 2008  Appointed by Tuanku Sultanah Bahiyah Polytechnic, Kulim to co-ordinate and lecture to a customised Short Course on CBR and Marshall Mix Design , 27-28 August 2008
Meor Othman Hamzah, Leong Lee Vien, Shafida Azwina Shafie	Invited by Sabah Institution of Engineers lecture on topics on Asphalt and TIA to a Short Course on Hot Mix Asphalt and Traffic Impact Assessment, Kota Kinabalu, Sabah, 22-23 October 2008
Taksiah A.Majid,	Short Course on Design of Structure to Wind Load Static & Dynamic Considerations, Malaysian Structural Steel Association, Kota Kinabalu, Sabah, 25 -26 June 2008  Modelling of Plan Irregular Building Subjected to Design Response Spectra For Ipoh (Malaysia), 5th International Conference on Urban Earthquake Engineering (CUEE 08), Tokyo, 3-7 Mac 2008  Seismic Hazard Assessment of Selected Infrastructures in Malaysia, Forum on Seismic and Tsunami Hazards and Risks Study in Malaysia, Putrajaya, 15 July 2008
Wan Muhd. Aminuddin Wan Hussin	Invited speaker to a One-Day Workshop on RMK-10 Strategic Planning for Mapping Division, Department of Survey and Mapping, Kuala Lumpur, 11 December 2008.  A Holistic Approach Towards Managing Stress at the Workplace: The Teaching Profession Perspective, Sekolah Kebangsaan Seri Ampang Teachers Club, Ipoh, Perak 28 August 2008.  A Holistic Approach Towards Stress Management: An Introduction, The Rotary Club Sri Petaling, 8 October 2008.  Invited speaker to a Workshop on Root Cause Analysis and Problem Solving organised by Jabatan Kerja Raya Selangor, De Palma Hotel, Ampang, Kuala Lumpur, 28-31 October 2008.  Managing Stress for the 'Half-Centuries', SIS Annual Alumni Meeting, Renaissance Hotel Kota Bharu, Kelantan, 3 August 2008.  Managing Stress at the Workplace, National Leadership Convention 2008, PWTC, Kuala Lumpur, 1-2 April 2008.  CPD Implementation Initiatives, GLS Division ISM - PEJUTA Technical Meeting, Jabatan Ukur dan Pemetaan Malaysia, Kuala Lumpur, 16 June 2008.  Managing Stress at the Workplace: The Application of Wan Hussin 3-Dimensional Stress Management Model, (Organized by The Malaysian Association of Professional Speakers (MAPS)), Shah Village Hotel, Petaling Jaya, Selangor, 27 May 2008.  Managing Stress for Offshore Survey Personnel, Advance Technology in Offshore Survey Seminar and Exhibition 2008 (ATTOSSE 08), Palace Beach and Spa, The Mines Resort City, Kuala Lumpur, 18-20 February 2008.





# PAST CALENDAR OF EVENTS







- 1 : Opening ceremony of USM Perak Branch Campus by His Royal Highness, the Sultan of Perak
- 2 : Vice Chancellor, Dato Musa Mohamad, delivering a speech during the opening ceremony
- 3 : His Royal Highness Tuanku Sultan Azlan Shah, visiting the exhibition during the opening ceremony





6 and 7: Working visit by the Minister of Education, Datuk Dr. Sulaiman Hj. Daud to PPKA  
8 : The University Chancellor visiting PPKA





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- 9 : Memorable picture of PPKA staffs with PPKA management team  
 10 : PPKA community service project at Kampong Gajah, Perak  
 11 and 12 : Visit by external agencies to PPKA





- 13 : Farewell party for Prof. Dr. Agarwal and Assoc. Prof. Dr. Gupta  
14 : PPKA's contribution to society  
15 : Prof. Cabrera and Dr. Wainwright visiting PPKA



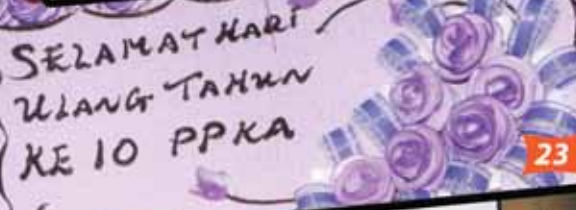


**16 and 17 :** Practical training II for 3rd year students ...exposure and adapting theory and practice via mini projects in Perak Branch Campus

**18 :** PPKA participated in the annual sighting of the new moon on the eve of the Muslim fasting month at Pantai Pasir Panjang, Manjung, Perak

**19 and 20 :** Working visit to construction site and industries





21, 22 and 23 : Opening day in conjunction with PPKA 10th Anniversary  
 24 : Farewell party for founding dean, Tuan Haji Hashim Daud  
 25 and 26 : Excellent service award at PPKA









26 : Workshop on PPKA Key Performance Indicator for academic and technical staffs at Naza Hotel, Penang

27 : USM Vice Chancellor visiting PPKA

28 : PPKA annual meeting with industrial advisory panel

29 : Engineering Accreditation Council visiting PPKA

30 : Workshop on Outcome Based Education Awareness at Taiping Golf Resort

31 : Visit by Ministry of Higher Education audit panel on laboratory equipments





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- 32 : One of the activities during PPKA PIMPIN program
- 33 : PPKA contingent during Hari Warga Kampus 2004
- 34 : PPKA family day with students
- 35 and 36 : PPKA contingent taking part in Merdeka Walk 2007 at the engineering campus
- 37 : Civil moment of friendship camp
- 38 : Sports activities during Key Performance Indicator Workshop at Naza Hotel, Penang
- 39 : PPKA contingent with new students in the senamrobik program 2008





Making Our Mark For A Sustainable Tomorrow



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### Making Our Mark For A Sustainable Tomorrow



Publication of this entertaining yet informative anniversary report will not be possible without the cooperation and passion of every editorial board member to produce the very best. As the Editor-in-Chief, I thank them all from the bottom of my heart. However, special mention must be made to Mr. Rasidi and Mrs. Zuraily Zahary for thier innovative and unconventional ideas. Also to Associate Professor Dr. Choong Kok Keong and his team members for the historical data compilation. I am also particularly indebted to all contributors. Thanks to Associate Professor Dr. Mohamad Razip Selamat for some editorial assistance and Dr. Shahid Kabir for moderating the research group profile section. We are thankful to the USM Engineering Campus Director's Office for allowing us to publish many old photographs in the past Calendar of Events section. Last but not least, credit should be given to the dean. His intimate support and motivation has alleviates what seems to be a grueling job for me to shoulder.

*Professor Dr. Meor Othman Hamzah*





# MISSION

*To Nurture and Sustain Excellence In*

- Delivering Comprehensive Education
- Imparting Knowledge
- Exploring Frontiers of Technology, and
- Providing Services To The Industry and Community at The Local and International Levels, By Applying
- The Most Advanced Knowledge and Leading Expertise
- Creating Innovative Ventures
- Being Truthful and

**UPHOLDING USM's Motto, "WE LEAD"**



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