



Our Research, Publication and Commercialization

“With the strength of 162 academic and 93 support staff, UTM-FKA stands tall in the various fields of Teaching and Learning, Research, Consultancy and Publications related to Civil Engineering. “

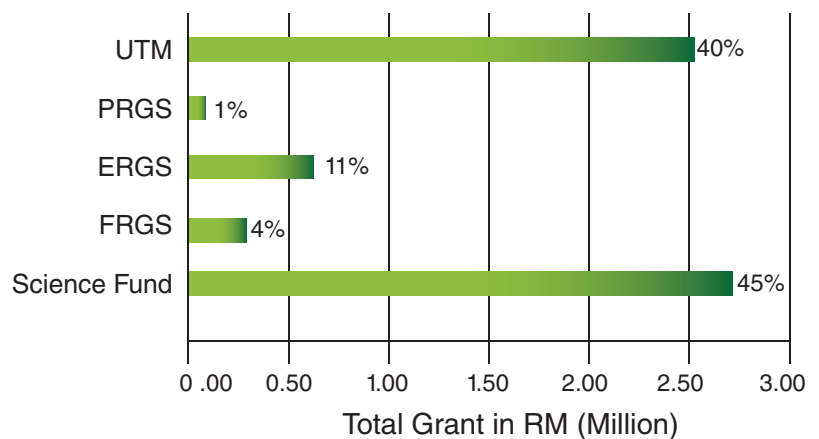
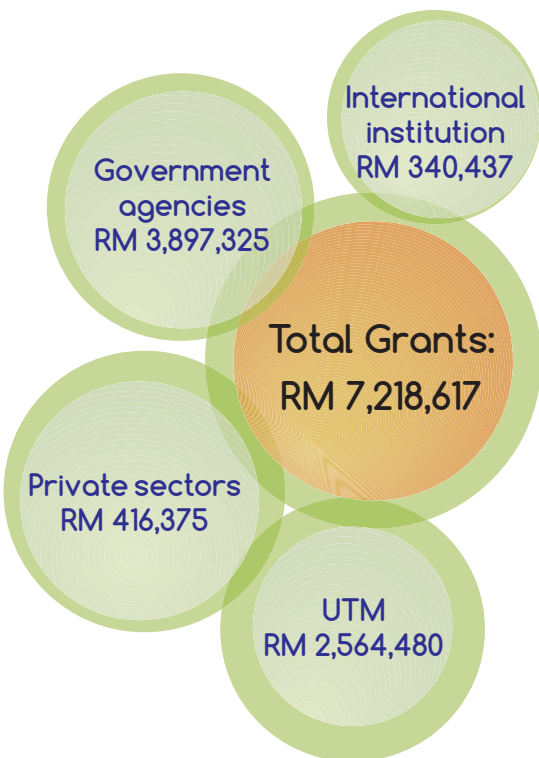
OUR RESEARCH, PUBLICATION AND COMMERCIALIZATION

Research Project

UTM-FKA has a broad research base with global appeal that is enhanced by extensive collaboration with other universities and organisations. It ensures that all research and development project run by the staff fall into the niche areas, called Research Alliance (RA) identified by the faculty in order to utilize the strength of its pool of expertise and physical facilities available. Consequently, we continue to break new grounds in R & D and smart application using technologies to tackle problems with pulsating results that resonate resoundingly home and abroad.

Under the Ninth Malaysia Plan (2011 - 2015), the Ministry of Science, Technology and Innovation (MOSTI) offered 3 research grants: TechnoFund and ScienceFund. In addition, the Ministry of Higher Education (MoHE) initiated the Fundamental Research Grant Scheme (FRGS).

Throughout 2012, research grant applications were approved by MOSTI and MoHE for various projects. Other research grants approved in 2012 were from IRGS and R&D fund for new PhD staff and foreign academic visitors. The total research grant approved was RM 4.26 million which has enabled the Research Alliance to organize a number of research activities in 2012.



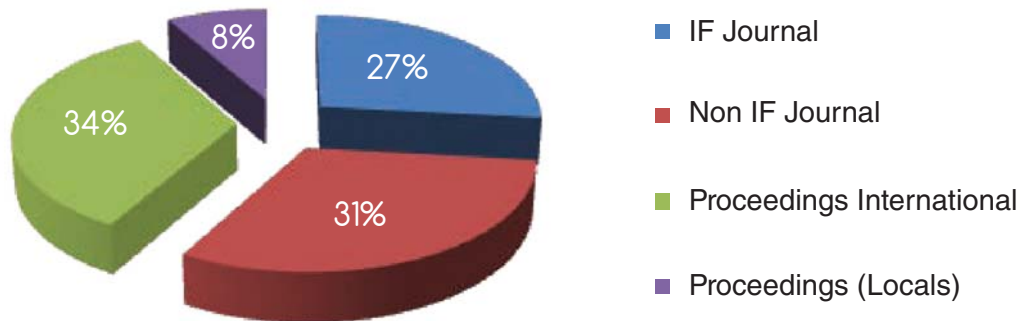
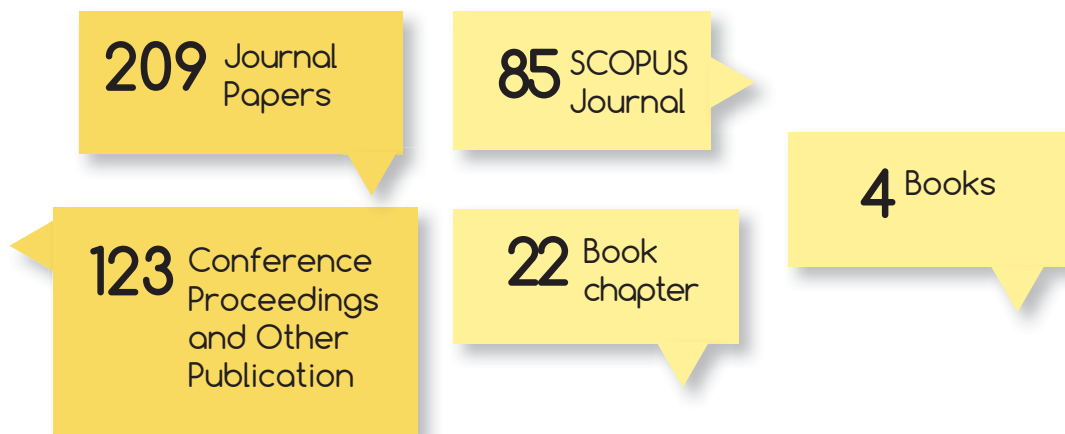
Resources of research grants for 2012
(details in Appendix 9.1)

Research grants from the government for 2012

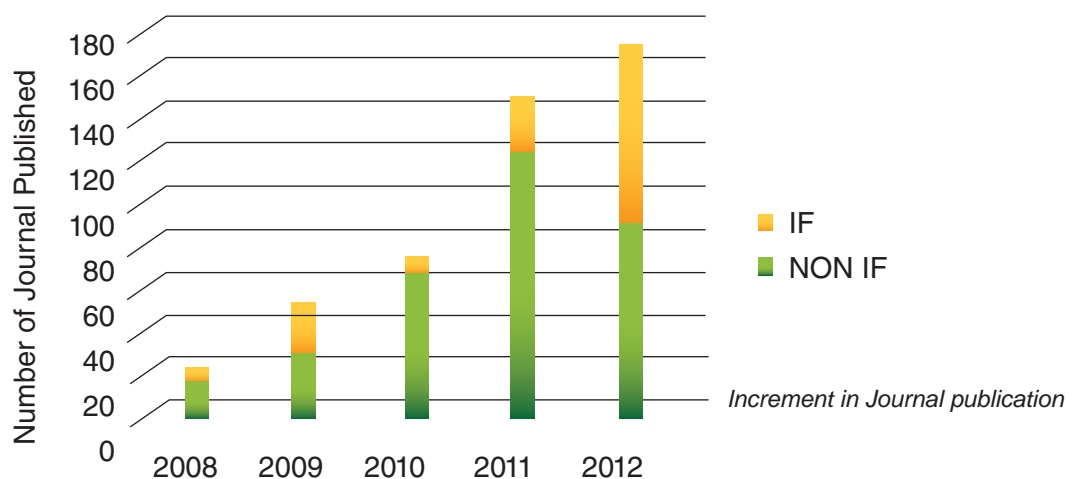
Publication

Guided by the vision and mission of the university, staff of UTM-FKA have been actively involved in research publications both in national and international levels. The publications were in various forms, such as, books, journal articles and conference and seminar proceedings. A total of 209 journal papers were published in 2012. From this amount, 78 papers were published in ISI journals.

In 2012, significant changes can be observed in the publication trend; focuses are made on the journal papers especially on ISI journals. Publication ratio this year is shown in Figure 9.3. Numbers of journal publication in 2012 are higher than the previous years as shown in Figure 9.4. 9 books were being published this year.



Publication in 2012 (details in Appendix 9.2)

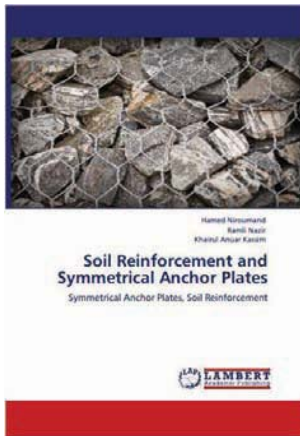


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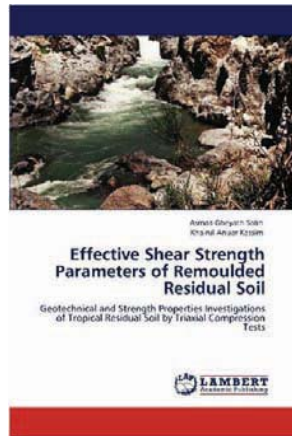


Participation in international conferences (details in Appendix 9.3)

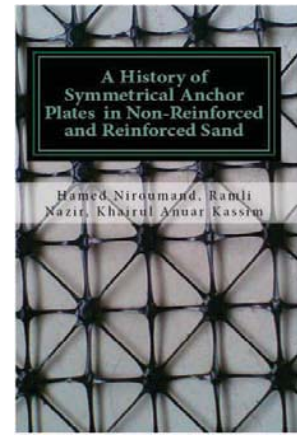
Books:



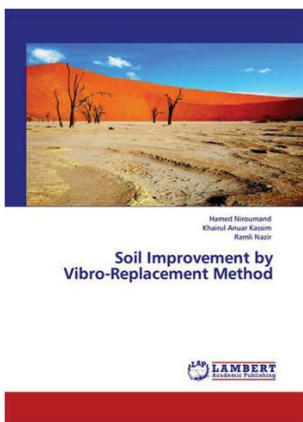
Soil Reinforcement and Symmetrical Anchor Plates by Professor Dr. Khairul Annuar Kassim



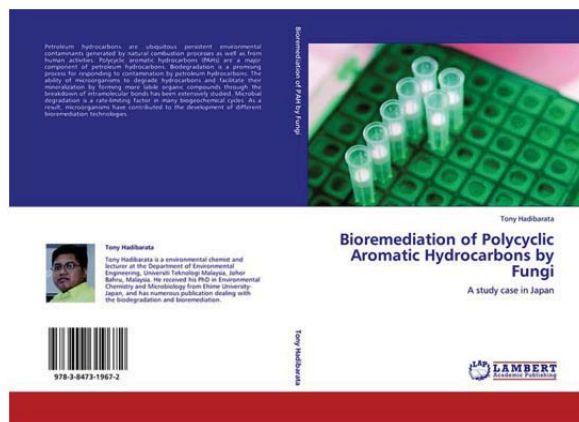
Effective Shear Strength Parameters of Remoulded Residual Soil by Professor Dr. Khairul Annuar Kassim



A History of Symmetrical Anchor Plates in Non-Reinforced and Reinforced Sand by Professor Dr. Khairul Annuar Kassim



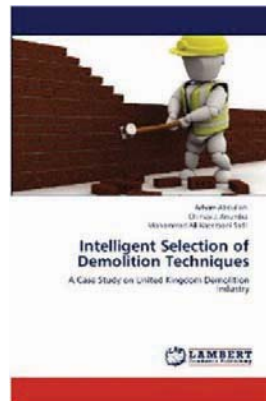
Soil Improvement by Vibro-Replacement Method by Professor Dr. Khairul Annuar Kassim



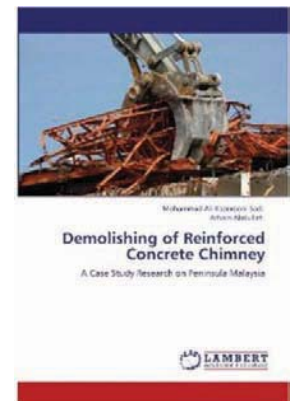
Bioremediation of Polycyclic Aromatic Hydrocarbons by Fungi by Dr. Tony Hadibarata



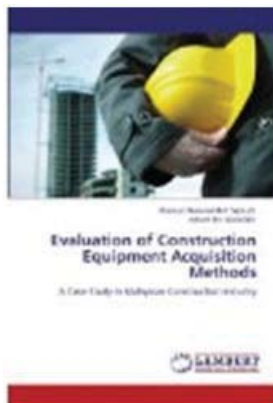
*Open-Ended Laboratory
by Dr. Zaiton Haron*



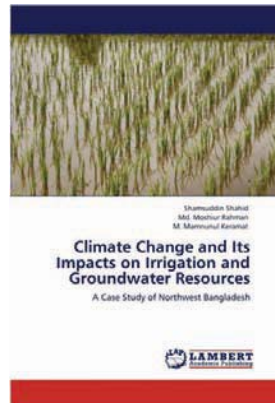
*Intelligent Selection of Demolition
Techniques by Assoc. Prof. Dr.
Arham Abdullah*



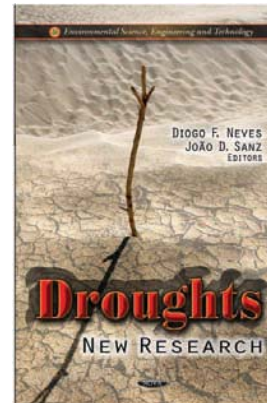
*Demolishing of Reinforced
Concrete Chimney by Assoc.
Prof. Dr. Arham Abdullah*



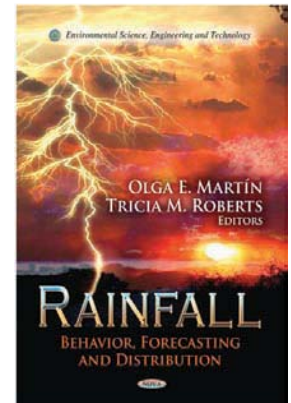
*Evaluation of
Construction Equipment
Acquisition Methods
by Assoc. Prof. Dr.
Arham Abdullah*



*Climate Change and Its
Impacts on Irrigation and
Groundwater Resources by
Dr. Shamsuddin Shahid*



*Droughts:
New Research by Dr.
Shamsuddin Shahid*

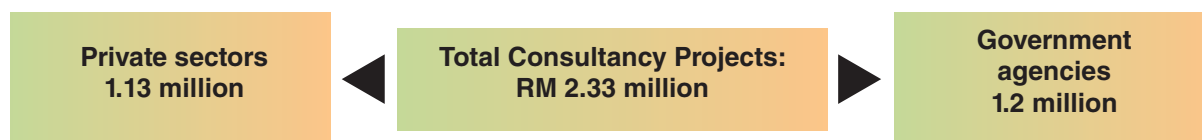


*Rainfall: Behavior,
Forecasting and
Distribution by Dr.
Shamsuddin Shahid*

OUR RESEARCH, PUBLICATION AND COMMERCIALIZATION

Consultation

43 consultancy project



Consultancy projects for 2012

Consultancy project by CoE and Research Groups

No.	Research Group / CoE	Consultancy Project	Client
1	IPASA	Detailed Environmental Impact Assessment (DEIA) For The Proposed Tin Mining At The Coast Water Off Kuala Sungai Baru, Alor Gajah, Melaka	Unit Perancang Ekonomi Negeri Melaka
2	IPASA	Kajian Sumber Air di Gugusan Felda Sahabat, Lahad Datu, Sabah	Federal Land Development Authority
3	CRC	Spring Safety Lock Tests	Schaefer Systems International Sdn Bhd
4	CRC	Stub Column Tests	Approved Forensic Sdn Bhd
5	CRC	End Connector Tests	Schaefer Systems International Sdn Bhd
6	CRC	End Connector Tests	Schaefer Systems International Sdn Bhd
7	CRC	Stub Column Tests	Schaefer Systems International Sdn Bhd
8	CRC	End Connector Tests	Schaefer Systems International Sdn Bhd
9	CRC	Experimental Investigation	Schaefer Systems International Sdn Bhd
10	CRC	End Connector Tests	Schaefer Systems International Sdn Bhd
11	CRC	End Connector Tests	Schaefer Systems International Sdn Bhd

No	Consultancy Project	Client
1.	Pembangunan Wilayah Ekonomi Pantai Timur (ECER) – Bentong ke Simpang Pelangi, Pahang	Kumpulan Ikram Sdn. Bhd.
2.	Surface & Groundwater Study for Lion Blast Sdn. Bhd. – Field Data	Jurutera Perunding Zaaba Sdn. Bhd.
3.	Kajian Sumber Air Negeri Johor (2010-2060)	SMHB Sdn. Bhd.
4.	Kerja-kerja Ujikaji Sampel Batuan di Makmal Geoteknik, Jabatan Geoteknik & Pengangkutan, Fakulti Kejuruteraan Awam	Badan-badan Swasta & Kerajaan
5.	Detailed Environmental Impact Assessment (DEIA) For The Proposed Tin Mining At The Coast Water Off Kuala Sungai Baru, Alor Gajah, Melaka	Unit Perancang Ekonomi Negeri Melaka
6.	Kajian Sumber Air di Gugusan Felda Sahabat, Lahad Datu, Sabah	Federal Land Development Authority (FELDA)
7.	Perunding DMMT	Schaefer International Sdn. Bhd.
8.	Kajian Pembangunan Indeks Prestasi Alam Sekitar (Malaysia Environmental Performance/EPI)	Kementerian Alam Sekitar dan Sumber Asli
9.	Detailed Environmental Impact Assessment (DEIA) for the Proposed Off-shore Tin Dredging Kuala Sungai Baru, Alor Gajah Melaka.	Kerajaan Negeri Melaka
10.	Pembangunan Nilai Rekabentuk Tipikal (Typical Design Values) bagi Batukapor di Persekitaran Pandan Indah/MRR II.	Cawangan Kejuruteraan Jalan & Geoteknik, JKR
11.	Testing & Characterisation of Rock Samples for Jalan Persekutuan, Laluan 8 & 9, Central Spine Road, Pembangunan Wilayah Ekonomi Pantai Timur (ECER)	Kumpulan IKRAM Sdn. Bhd. & ECER
12.	Testing & Characterising of rock samples for Foundation Design of RC Dam in Limbang & Lawas, SCORE Projects, Sarawak	Snowy Mountain Engineering Corporation (SMEC), Australia
13.	Detailed Environmental Impact Assessment (DEIA) For The Proposed Tin Mining At The Coast Water Off Kuala Sungai Baru, Alor Gajah, Melaka	Unit Perancang Ekonomi Negeri Melaka
14.	Cadangan Pembangunan Tasik Kenyir bagi Pembinaan Jeti dan Pelabuhan Babas Cukai	Lembaga Pembangunan Terengganu Tengah (KETENGAH)
15.	Environmental Impact Assessment (EIA) for Quarry Operation at Pontian, Johor	Harta Warga Sdn. Bhd.
16.	Environmental Impact Assessment (EIA) for Industrial Activity at Pasir Gudang, Johor	Johor Corporation Berhad
17.	Pelan Pengurusan Alam Sekitar di Tasik Kenyir Bagi Pembinaan Jeti dan Pembangunan Zon Bebas Cukai	Lembaga Pembangunan Terengganu Tengah (KETENGAH)

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18.	Proposed Tin Mining at Coast Water Off Kuala Sungai Baru, Alor Gajah, Melaka	Unit Perancang Ekonomi Melaka (UPEN)
19.	Engineering Inspection For Maintenance Of Slopes In MPM Building Area	Majlis Peperiksaan Malaysia
20.	Investigate Work at Mukim Jorak, Muar, Johor	Syarikat tujuh Utara Sdn Bhd
21.	SESTMIC SERVEY WORK at Lot 2436, Mukim Tebrau, Johor Bahru, Johor	Segamat Quarry Sdn Bhd
22.	Mining Scheme And Geological Evaluation (Lab Test)	Holcim Marketing Sdn Bhd

Commercialization

Products being commercialized in 2012; (need more information from CRC in order to provide brief description of the products)

- i) Educational Reinforced Concrete Analysis and Design Software (ERCAD)
- ii) Fast Track Wall System
- iii) EGB Brick (Cement Free Concrete)

Research Awards and Achievements

No.	Competition/ Event	Level (University / National / International)	Award	Participants
1	INATEX 2012	National	Silver - Innovative Partial Strength Connection on Cruciform Column Section	Dr. Shek Poi Ngian
2	ITEX/ Malaysian Invention and Design Society (MINDS)	National	Silver- Cement Free Concrete (Eco Green Brick)	Prof. Ir. Dr. Mohd Warid Hussin
3	ITEX/ Malaysian Invention and Design Society (MINDS)	National	Silver - Cement Free Concrete (Eco Green Brick)	Prof. Madya Dr. Muhammad Aamer Rafique Bhutta
4	World Competition of IDEERS 2012	International	1. Second Prize (Overall) 2. Third Prize (Most Creative Structural/Engineering Design) 3. Third Prize (Best Presentation/ Poster Award)	Nordin Yahaya Norhazilan Md Noor (Postgraduate Team RESA-FKA-UTM)
5	World Competition of IDEERS 2012	International	Quake-Resistant Certificate	Mohd Nur Asmawisham Alel Norhisham Bakhary (Undergraduate Team eSEER-FKA-UTM)



