



KERANA TUHAN UNTUK MANUSIA



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

UNIVERSITI TEKNOLOGI MALAYSIA

innovative • entrepreneurial • global

Update 28022019

Faculty of Science Management Team

Vision

To be a world renowned faculty in the advancement of science and mathematics



Prof. Dr.
Fadhilah Bt. Yusof

DEPUTY DEAN
(Academic & Student Affairs)



Prof. Dr.
Abdull Rahim B. Mohd Yusoff

DEAN



Assoc. Prof. Dr.
Zaiton Bt. Abdu Majid

DEPUTY DEAN
(Research, Innovation, Development & Alumni)

Mission

To lead in the development of holistic talents and knowledge through teaching and learning, research and innovation for universal well-being



Dr.
Abd. Khamim B. Ismail

DIRECTOR
(Physics)



Assoc. Prof. Dr.
Shajarahunnur Bt. Ismail

DIRECTOR
(Chemistry)



Assoc. Prof. Dr.
Sharidan B. Shafie

DIRECTOR
(Mathematical Sciences)



Assoc. Prof. Dr.
Shafinaz Bt. Shahir

DIRECTOR
(Mathematical Sciences)



Dr.
Mohd. Bakri B. Bakar

ASSISTANT DEAN
(Continuing & TNE)



Dr.
Ezza Syuhada Bt. Sazali

ASSISTANT DEAN
(External & Global Engagements)



Assoc. Prof. Dr.
Normah Bt. Maan

ASSISTANT DEAN
(Quality & Strategy)



Dr.
Alina Bt. Wagiran
LAB MANAGER



Hj. Azhari B.
Ahmad @ Salleh
IT MANAGER



Mdm.
Hj. Nor Azlinda
Bt. Abu Bakar
DEPUTY REGISTRAR



Mr.
Azahari B. Ayob
SENIOR
ASSISTANT REGISTRAR



Mdm.
Syahidah Fadilla Bt. Moktar
SENIOR
ASSISTANT REGISTRAR



Mdm.
Hamidah Bt. Mat Arif
SENIOR
ASSISTANT REGISTRAR

FAKULTI SAINS

PENTADBIRAN & PSM

A - PENGURUSAN PERJAWATAN

- Proses Pelantikan Staf
- Laporan Diri Staf Baru
- Perangkaan Staf
- Bajet Perjawatan

B - PERKHIDMATAN

- Pengurusan Gaji dan Emolument
- Perisytiharan Harta
- Peperiksaan Perkhidmatan
- Penilaian Prestasi Tahunan (eLPPT/eLNPT)
- Kompetensi Indeks Staf (CIS)
- Pengesahan Jawatan
- Pemberian Taraf Pekerja Berpencen
- Penanggungungan dan Pemangku Kerja
- Kenaikan Pangkat
- Pelantikan Pentadbir Akademik
- Pertukaran/Pinjaman Staf/Attachment
- Pengurusan Cuti
- Gantian Cuti Rehat
- Penamatan Staf
- Pengurusan Persaraan

C - LATIHAN STAF AKADEMIK

- Latihan anjuran UTM
- Latihan anjuran luar UTM

D - PEMBANGUNAN PROFESIONAL STAF

- Cuti Belajar
- Cuti Sabatikal
- Latihan Ikhtisas/Industri
- Skim Post-Doktoral Dalam & Luar
- Latihan

AKADEMIK - PG

- Memastikan proses VIVA pelajar berjalan dengan lancar dalam tempoh waktu yang ditetapkan
- Memastikan proses Disertasi pelajar Mod Campuran berjalan dengan lancar dalam tempoh waktu yang ditetapkan
- Memastikan pelajar mengisi Progress Report
- Peperiksaan Akhir Kursus
- Surat Pengesahan Pelajar
- Anugerah Akademik Pelajar
- Pengijazahan Pelajar

AKADEMIK - UG

- Peperiksaan / Penganugerahan
- Pendaftaran Program / Kursus
- Analisis Kursus / Keputusan Peperiksaan
- Latihan Industri / PSM
- TECS / PSC
- Surat Akuan Mahasiswa
- Penawaran Kursus
- Penyediaan Jadual Waktu
- Data beban tugas staf akademik setiap semester

PENYELIDIKAN

- Menyelaras Data MyRA untuk audit semakan pencapaian fakulti
- Menyelaras Data Pencapaian KAI Penyelidikan Fakulti Sains
- Menyelaras aktiviti dan mesyuarat penyelidikan
- Menyelaras data Kumpulan Penyelidikan (RG) *Single Discipline*
- Mengemaskini web dibawah Tab "Research" di laman web rasmi fakulti

KEWANGAN

- Anggaran Perbelanjaan
- Akaun
- Pembelian
- Pembayaran
- Inventori
- Tabung Amanah

FS Functional Organizational Structure

FAKULTI SAINS

PENGURUSAN IT

- Pengurusan ICT di Fakulti
- Pembangunan Laman Web, Wordpress, Joomla
- Helpdesk Untuk Aduan Berkaitan ICT
- Perolehan Alatan ICT
- Sistem Aplikasi E-Learning, Turn It In, Sistem Kehadiran Khas
- Pengurusan Server
- Latihan/Perundangan (Kelas Website Personal)
- Mengaplikasikan sistem UTM
- mengurus email staf fakulti
- Membuat hebahan maklumat dan info terkini di Web Fakulti
- Menguruskan sistem aplikasi fakulti
- Membantu penyelenggaraan, membaik pulih, pemasangan pc dan pemasangan perisian yang bersesuaian dan antivirus pada computer.
- Penyelenggaraan WIRED rangkaian di bangunan fakulti.
- Membantu menentukan konfigurasi alat-alat rangkaian komputer seperti router, access point, switch, rack internet dan lain-lain.
- Menyelia Bilik, Dewan Kuliah
- Pinjaman Peralatan ICT
- Pelupusan Peralatan ICT
- Menyelia Network Point
- Inventori Peralatan
- Pemantauan CCTV/Access Door
- Penyelenggaraan
- Helpdesk
- Sistem Wifi

PENGURUSAN MAKMAL

- Menyelaras keperluan staf dan peralatan untuk kerja ujkaji/latihan praktik di makmal;
- Mengurus pembelian dan menyelenggara peralatan dan bahan kimia makmal;
- Mengurus harta tetap, inventori dan stok (rekod harta);
- Memastikan tahap keselamatan makmal adalah mematuhi polisi dan peraturan OSHE UTM;
- Menjalankan Audit Dalaman Keselamatan secara berjadual;
- Melaporkan semua kerosakan dan kehilangan serta isu-isu keselamatan kepada Jawatankuasa Keselamatan Fakulti;
- Merancang dan menyelia beban kerja dan pembangunan kerjaya staf makmal;
- Merancang dan menyelia beban kerja akademik dan latihan kompetensi alat bersama Pengarah Program.
- Menjadi ahli dalam Jawatankuasa Teknikal Universiti;
- Melaksanakan tugas yang diarahkan dari semasa ke semasa.

KUALITI DAN STRATEGI

- Merancang dan memastikan standard serta pematuhan kualiti akademik, penyelidikan dan perkhidmatan.
- Memastikan pengemaskinian data dan dokumentasi berkaitan strategi, kualiti dan tadbir urus.
- Memastikan pematuhan polisi pengurusan risiko.
- Menjadi pakar rujuk keperluan akreditasi dan penghubung dengan badan akreditasi dalam dan luar universiti.
- Menyelaras aktiviti kualiti dan akreditasi di semua jabatan dalam fakulti.
- Merancang pembangunan dan pengawasan kualiti akademik prasiswazah dan pasca siswazah.

HUBUNGAN LUAR DAN GLOBAL

- Merancang dan mengurus jaringan industri, institusi pendidikan/ penyelidikan, NGO dan masyarakat peringkat kebangsaan dan antarabangsa.
- Merancang dan melaksana program penjenamaan fakulti di peringkat global.

PENDIDIKAN BERTERUSAN DAN TRANSNASIONAL

- Menyelaras penawaran kursus pendek, seminar bagi program pembelajaran sepanjang hayat.
- Merancang penawaran program akademik berbentuk TNE dan merentas bidang.
- Menyelaras Program Asasi di Fakulti.
- Mengenalpasti pasaran baharu dan potensi rakan kerjasama.
- Melaksanakan pemasaran program akademik dan perkhidmatan lain yang ditawarkan oleh Fakulti.

**FS Functional
Organizational Structure**
Continuation.

..

FACULTY OF SCIENCE

... DECISION OF TASK BY LOCATION

innovative • entrepreneurial • global

MAIN'S – BLOCK C



- Main Administration
- Academic
- Management UG: Department of Physics, Chemistry, Science & Mathematics
- UTM-CIAM



BLOCK T05

- Administration of TNE - Assistant Dean Continuing & TNE)
- PG FS Academic Management
- UTM Laser Center



BLOCK T02

- Academic Management UG: Department of Biosciences
- Research and Publication Administration
- ISI-ISIR & CS Nano

...⁵ where great minds are nurtured

Departments

CHEMISTRY

- Analytical
- Inorganic
- Organic
- Physical

MATHEMATICAL SCIENCES

- Algebra and Analysis
- Applied Mathematics
- Numerical and Computational
- Operation Research
- Statistics

PHYSICS

- Instrumentation
- Laser and Electro-optics
- Materials
- Nuclear

BIOSCIENCE

- Environmental Biotechnology
- Industrial Biotechnology
- Plant Biotechnology
- Animal Biotechnology
- Proteins And Bioinformatics

4 Department

- Chemistry
- Mathematical Sciences
- Physics
- Bioscience



3 Research Center

- CS Nano
- Laser Centre
- UTM-CIAM
- 18 Research Group

156 Academic Staff

- 10 Professors
- 28 Associate Professors
- 113 Senior lecturers
- 5 Lecturers
- 4 International Staff



113 Academic Staff
72.44% DS 51/52

1282 Undergraduate Student

- 8 Programmes
- 4173 Service Student
- 29 International Student
- Double Degree University of Kent : 1



567 Postgraduate Student

- 14 Programmes
- 158 International Students
- Pesisir:
 - Taibah University – 7 students



Faculty of Science

Academic Programmes

8 UNDERGRADUATE PROGRAMMES

- BSc. (Chemistry)
- BSc. (Industrial Chemistry)
- BSc. (Mathematics)
- BSc. (Industrial Mathematics)
- BSc. (Physics)
- BSc. (Industrial Physics)
- BSc. (Biology)
- BSc. (Industrial Biology)

14 POSTGRADUATE PROGRAMMES

MIXED-MODE

- MSc. (Chemistry)
- MSc. (Forensic Science)
- MSc. (Mathematics)
- MSc. (Engineering Mathematics)
- MSc. (Physics)
- MSc. (Biotechnology)

RESEARCH

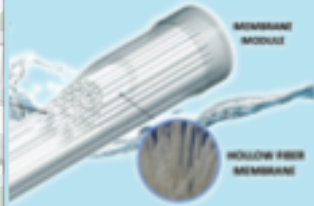
- MPhil (Chemistry)
- MPhil (Mathematics)
- MPhil (Physics)
- MPhil (Bioscience)

RESEARCH

- PhD (Chemistry)
- PhD (Mathematics)
- PhD (Physics)
- PhD (Bioscience)

Five (5) niche areas to support national priorities

Frontier
Materials



Resource
Sustainability



Health and
Wellness



Innovative
Engineering



Smart Digital
Community



Developing expertise and talent capabilities across UTM

Our Research Goals
excellence, relevance and impact

...providing fundamental strength for a sustainable future



RESEARCH *Six New Institutes (Super CoE)*

- 1 Research Institute for Sustainable Environment (RISE)
- 2 Institute for Vehicle Systems and Engineering (IVeSE)
- 3 Ibnu Sina Institute for Scientific and Industrial Research (IBNU SINA ISIR)
- 4 Institute for Smart Infrastructures and Innovative Construction (ISIIC)
- 5 Institute of Human Centered Engineering (IHCE)
- 6 Institute of Future Energy (IFE)

RESEARCH *Facts & Figures*



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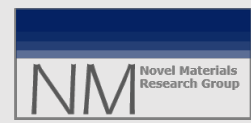
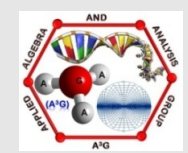
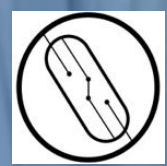
RESEARCH

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RESEARCH GROUP

<https://science.utm.my/research-groups/>

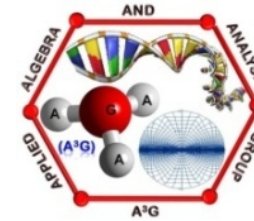
1. Applied Algebra and Analysis Group (AAAG)
2. Dynamical System Modelling (DSM)
3. Research Group on Mathematical Optimization (RGMO)
4. Statistical Modelling (STAM)
5. Fluid Mechanics Group
6. Industrial and Scientific Computation (ISC)
7. Climate Change Research Group (CCRG)
8. Green Chemistry Research Group (Gchem)
9. Separation Science and Technology Group (SepSTec)
10. Natural Product (NatPro)
11. Novel Materials
12. Environmental Chemistry
13. Applied Optic Research Group (AORG)
14. Scientific Computing and Instrumentation (SCNI)
15. Nuclear & Radiation Physics Research Group
16. Advanced Optical Materials Research Group (AOMRG)
17. Environmental Biotechnology (EnVBiotech)
18. Cancer & Infectious Diseases (CAID)



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Applied Algebra And Analysis Group (AAAG)

Group leader : Assoc. Prof. Dr. Nor Muhainiah Mohd Ali



Members :

1. Prof. Dr. Nor Haniza Sarmin
2. Prof Dr Ali Hassan Mohamed Murid
3. Assoc Prof Dr Mukhiddin Muminov
4. Dr Fong Wan Heng
5. Dr Hazzirah Izzati Mat Hassim
6. Dr Mohd Ali Khameini

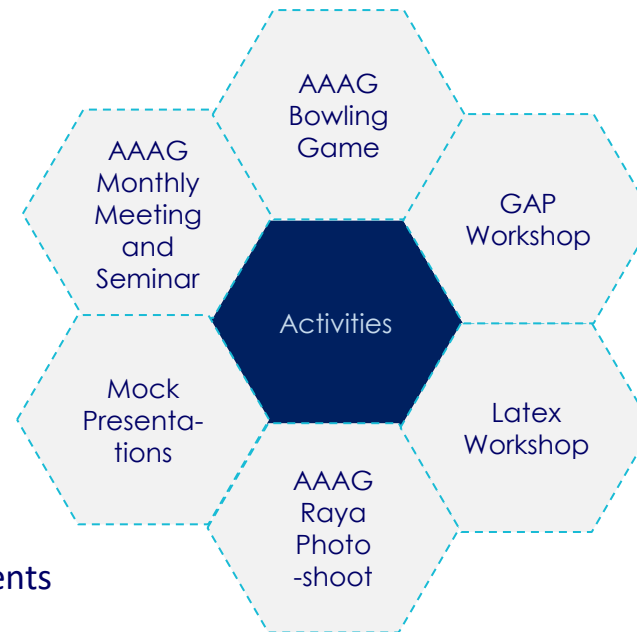
<https://science.utm.my/aaag/>

Contact person: Assoc. Prof. Dr. Nor Muhainiah Mohd Ali

Email: normuhainiah@utm.my

Research Core Area :

1. Algebra, Functional Analysis, Group Theory, Graph Theory
2. Formal Language Theory & Splicing Systems
3. Complex Analysis & Numerical Analysis



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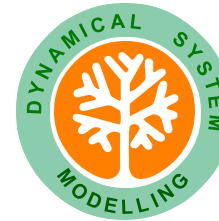
Postgraduate Students

9

Undergraduate Students

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Dynamical System Modelling (DSM)



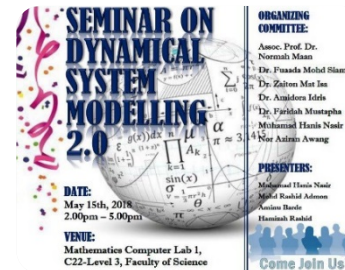
<https://science.utm.my/dynasm/>

Contact person:
Assoc. Prof. Dr. Normah Maan
Email: normahmaan@utm.my

Group leader : Assoc. Prof. Dr. Normah Maan

Members :

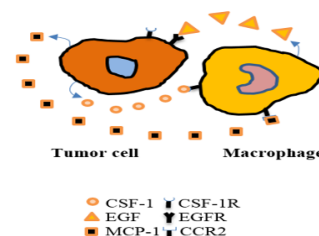
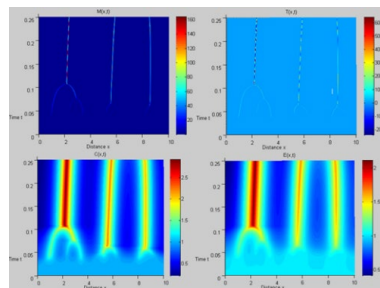
1. Prof Tahir Ahmad
2. Dr. Fuaada Mohd Siam
3. Dr. Faridah Mustapha
4. Dr. Amidora Idris
5. Dr. Zaiton Mat Isa



Research Core Area :

1. Theoretical and computational modeling of complex systems that arise from life science and engineering.
2. Visualization, monitoring, prediction and psychometric evaluation of human physiological and behavioral changes such as tumor growth, brain science and intelligence.

This group was involved in research and developments for more than ten years and had successful in developing personnel and researchers who are competent in the related areas of mathematical and fuzzy modeling, high performance and computational modeling. Some of the current research areas of the group include brain science, tumor growth modeling, the effect of ionizing radiation to cells, delay differential system, fluid flow in porous media by advection-diffusion transport equation and control for industrial applications.



Research Group on Mathematical Optimization (RGMO)

Group leader : Dr. Nur Arina Bazilah Aziz

Members :

1. Assoc. Prof. Dr. Zaitul Marlizawati Zainuddin
2. Dr. Syarifah Zyurina Nordin
3. Dr. Farhana Johar
4. Dr. Hang See Pheng
5. Tn. Hj. Ismail Kamis
6. En. Wan Rohaizad Wan Ibrahim

Research Core Area :

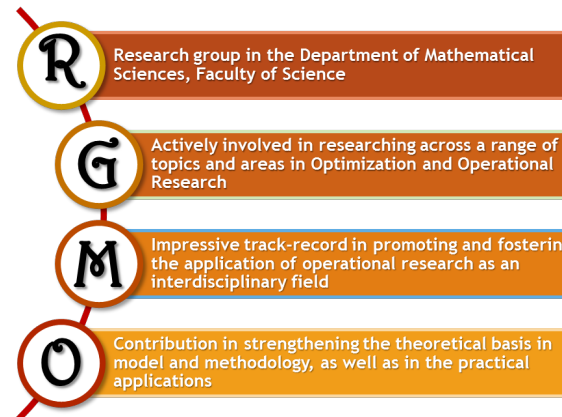
1. Algorithms for linear and nonlinear optimization
2. Location/allocation Analysis
3. Scheduling
4. Inventory Routing
5. Vehicle Routing
6. Multi-objective Decision Making
7. Financial Mathematics
8. Game Theory
9. Network Routing
10. Discrete Event Simulation
11. Optimal Control



<https://science.utm.my/mathopt/>

Contact person: Nur Arina Bazilah Aziz

Email: nurarina@utm.my



Much of the work done by the group focuses on the development, analysis and implementation of OR and Optimization algorithms



The outcome of the researches would be efficient, reliable and mathematically sound tools (algorithms) which can be used in the industries to improve their problem situation.

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Statistical Modelling (STAM)



<https://science.utm.my/stam/>

Contact person: Dr. Zarina Mohd Khalid
Email: zarinamkhalid@utm.my

Group leader : Dr. Zarina Mohd Khalid

Members :

1. Prof. Dr. Muhammad Hisyam Lee
2. Dr. Haliza Abd Rahman
3. Dr. Noraslinda Mohamed Ismail
4. Dr. Nur Arina Bazilah Kamisan
5. Dr. Arifah Bahar (Associate)

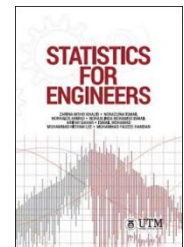
Research Core Area :

1. Linear Models
2. Multivariate Analysis
3. Time Series
4. Survival Modelling
5. Longitudinal Data Analysis
6. Joint Modelling
7. Missing Data
8. Bayesian Estimation
9. Robust Regression
10. Stochastic Modeling
11. Generalized Linear Models
12. Statistical Analysis

The Statistical Modelling (STAM) research group is interested in the application of statistical theory and modelling in a wide range of context. The research interest of the group include, but not limited to, the applications of survival analysis on medical and social science data, stochastic models on biology and bioinformatics, multivariate analysis on engineering data and time series analysis.

Recent Projects :

1. ISMI-ICTAS 2018 (Chaired by Dr. Arifah Bahar)
2. "Statistics for Engineers", UTM Press, 2019.
3. Development of a new mortality table for current Malaysian population (in progress).



STATISTICAL TABLES
for Engineering & Science Students

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Fluid Mechanics Group

Group leader: Assoc. Prof. Dr. Sharidan Shafie



<http://science.utm.my/fluidmech/>

Contact person:
Assoc. Prof. Dr. Sharidan Shafie
Email: sharidan@utm.my

Members:

1. Assoc. Prof. Dr. Ong Chee Tiong
2. Dr. Anati Ali
3. Dr. Zuhaila Ismail
4. Dr. Mohd Ariff Admon
5. Dr. Ahmad Qushairi Mohamad
6. Dr. Nurul Aini Jaafar
7. Dr. Muhammad Najib Zakaria
8. Pn. Wan Rukaida Wan Abdullah

Research Core Area :

1. Boundary layer flow: Heat and mass transfer in Viscous and Non-Newtonian fluids
2. Nanofluids
3. Microgravity
4. Biomagnetic fluid dynamics
5. Biofluids dynamics



Algorithm of the Boundary Layer Flow in Viscoelastic Fluid (BLFV)

Achievement:

1. FRGS – MRSA 2019
2. Anugerah GREx 2019 (1 Gold Medal)
3. Best Presenter - ICOWOBAS 2019 (1 Student)
4. Anugerah Kecemerlangan & Penghargaan UTM 2019 (Total: 2 Staff)
5. Anugerah PERSAMA 2018 (1 paper)
6. Anugerah BPGSA dan Anugerah Alumni 2018 (1 PhD Student)
7. Gold Medal for Algorithm of the Boundary Layer Flow in Viscoelastic Fluid (BLFV) (MTE 2014)
8. The Best Award for Algorithm of the Boundary Layer Flow in Viscoelastic Fluid (BLFV) (MTE 2014)
9. Bronze Medal for Algorithm of the Boundary Layer Flow in Viscoelastic Fluid: Cylinder (INATEX 2013)

Industrial Scientific Computation (ISC)

Group leader : Assoc. Prof. Dr. Yeak Su Hoe

Members :

1. Dr. Shazirawati Mohd Puzi
2. Dr. Mohammad Izat Emir Zulkifly
3. Dr. Ahmad Fadillah Embong
4. Dr. Mohammad Faizal bin Mohd Basir
5. Dr. Noraihan Afiqah Rawi
6. En. Ibrahim Jais

Research Core Area :

1. Numerical Analysis or Numerical Computational Methods (Algorithms)
2. Wireless sensor
3. Numerical Simulation and Visualization
4. Molecular Dynamics and Computational Quantum Mechanics
5. Fluid Mechanics – Unsteady Convection



Industrial Scientific Computation

<https://science.utm.my/isc/>

Contact person: Assoc. Prof. Dr. Yeak Su Hoe

Email: s.h.yeak@utm.my

Climate Change Research Group

Group leader : Prof. Dr. Fadhilah Yusof

Members :

1. Assoc. Prof. Dr. Ani Shabri
2. Dr. Norhaiza Ahmad
3. Dr. Shariffah Suhaila Syed Jamaludin
4. Dr. Muhammad Fauzee Hamdan
5. Dr. Norazlina Ismail
6. Dr. Nor Eliza Alias
7. Dr. Norzaida Abas
8. Dr. Samira Albati Kamaruddin
9. Dr. Siti Mariam Norrulashikin
10. Dr. Siti Rohani Mohd Nor

Research Core Area :

1. Statistical Downscaling
2. Flood Modeling
3. Functional Data Analysis
Hydrometeorological Data
4. Rainfall Modeling
5. Support Vector Machine/ Regression
6. Timeseries/ Forecasting Modeling
7. Multivariate Analysis (Clustering)

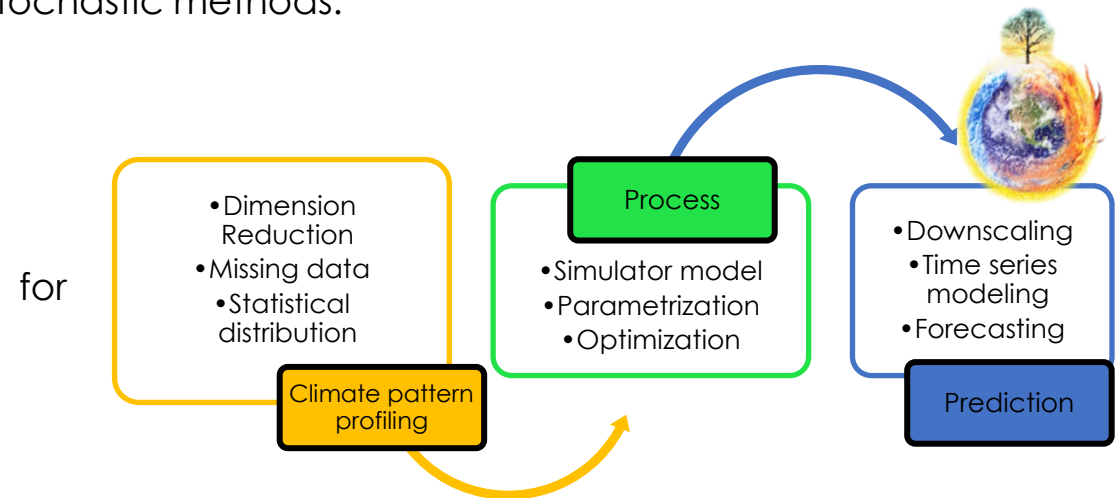


<https://science.utm.my/ccrg/>

Contact person: Prof. Dr. Fadhilah Yusof
Email: fadhilahy@utm.my

The Climate Change research group addresses real problems related to climate and environment by using mathematical and statistical tools.

Objective of the research group : Profiling, developing and modeling climate systems using statistical and stochastic methods.



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Green Chemistry Research Group (Gchem)

Group leader : Dr. Juan Matmin

Members :

1. Dr. Susilawati Toemen
2. Dr. Siti Aminah Setu
3. Dr. Fazira Ilyana Abdul Razak
4. Dr. Sheela Chandren
5. Dr. Mohamad Afiq Mohamed Huri
6. Dr. Mohamad Shazwan Shah Jamil

Green Chemistry Group (Gchem) mainly focused on the catalytic reactions and the evaluation of new processes towards environmental impact. This group specifically emphasize on 'Green' initiatives, such as the invention and application of novel catalyst materials combined with the development and use of environmentally safe chemicals for various reactions and processes.



<https://science.utm.my/gchem/>

Contact person: Dr. Juan Matmin

Email: juanmatmin@utm.my

Research Core Area :

1. Methanation catalyst
2. Photocatalysis
3. Biodiesel
4. Colloid and Polymers
5. Organometallic Synthesis
6. Computational studies
7. Material sciences
8. Surfactants
9. Microfluids
10. Deacidification
11. Demetallization



FIELD TRIAL FOR
METHANATION
PROJECT AT TNB
(CONNAUGHT BRIDGE)



ULTRA OXIDE FOUL
REMOVER
PRODUCT



AWARDS

Separation Science and Technology Group (SepSTec)



Group leader : Dr. Aemi Syazwani Abdul Keyon

Members :

1. Assoc. Prof. Dr. Azli Sulaiman
2. Dr. Hasmerya Maarof
3. Dr. Rosmahaida Jamaludin

Research Core Area :

1. Separation Science
2. Chromatography, Electrophoresis
3. Green Analytical Chemistry Extractions
4. Hybrid Materials, Nanocomposites, and Biocomposites in Separations
5. Chiral Separations
6. Modelling, Chemometrics
7. Chemometrics



Figure 2: Synthesis of Fe_3O_4 -POAC and Fe_3O_4 -POAC-PPy adsorbents and the extraction using MSPE method.

<https://science.utm.my/sepstec/>

Contact person: Dr. Aemi Syazwani Abdul Keyon

Email: aemi@utm.my

Blockbuster Projects :

International grant from Organization for the Prohibition of Chemical Weapons (OPCW) (Euro 8126)

➤ **Palm Oil Activated Carbon- Based Nanocomposite As Magnetic Solid Phase Extraction Sorbents For Rapid And Efficient Separation Of Polar Organochlorine Pesticides**

Oil palm biowaste (oil palm empty fruit bunch - OPEFB) was developed and applied for efficient extraction of organochlorine pesticides from environmental water samples

Natural Products Research Group

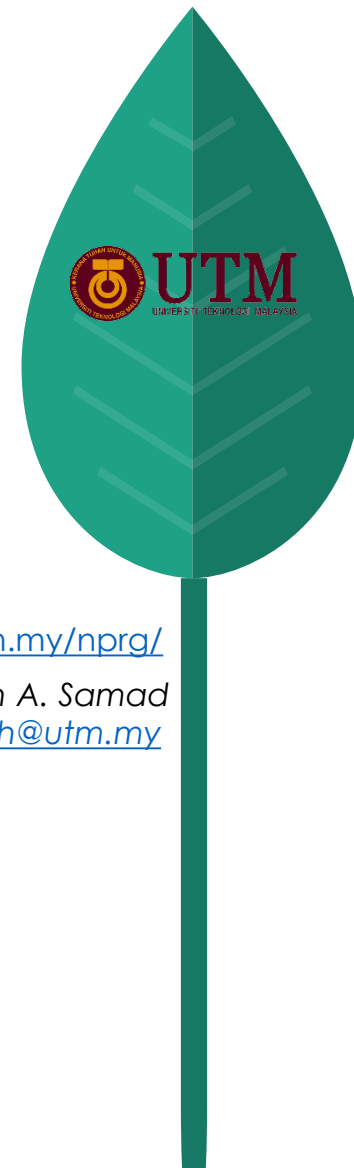
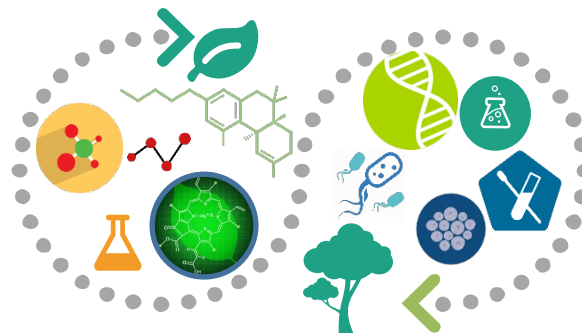
Group leader : Dr. Abdul Fatah A. Samad

Members :

1. Assoc. Prof. Dr. Shajarahtunnur Jamil
2. Dr. Norazah Basar
3. Dr. Mohd Bakri Bakar
4. Dr. Joazaizulfazli Jamalis
5. Dr. Siti Ernieyanti Hashim
6. Dr. Alina Binti Wagiran
7. Dr. Azman Abd. Samad
8. Dr. Razauden Mohamed Zulkifli

Research Core Area :

1. Phytochemistry and Bioactivity of Plants
2. Synthesis of Bioactive and Nature-inspired Compounds
3. Plant Breeding, Tissue Culture and Mapping
4. Plant Molecular Biology and Genetic Transformation
5. Anti Ageing, Anti-Inflammatory and Anti-Cancer Related Diseases



<https://science.utm.my/nprg/>

Contact person: Dr. Abdul Fatah A. Samad
Email: abdulfatah@utm.my

Novel Materials Research Group

Group leader : Dr. Che Rozid Mamat

Members :

1. Dr. Abdul Rahman Tamuri
2. Dr. Nursyafreena Attan
3. Dr. Rohul Hayat Adnan
4. Dr. Mohd Fuad Mohamad
5. Dr. Nurul Hidayah Salamun

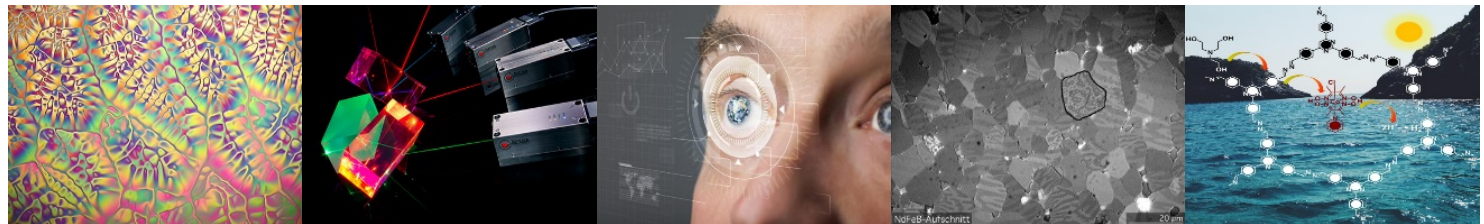
Research Core Area :

1. Liquid Crystals
2. Laser and Photonics
3. Biosensors
4. Magnetically Aligned Materials
5. Photocatalysis
6. Synchrotron



<https://science.utm.my/nm/>

Contact person: Dr. Che Rozid Mamat
Email: cherozid@utm.my



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Environmental Chemistry

<https://science.utm.my/ec/>

Contact person: Dr Faizuan Abdullah

Email: faizuan@utm.my

Group leader : Dr. Faizuan Abdullah

Members :

1. Prof. Dr. Abdull Rahim Hj Mohd Yusoff
2. Assoc. Prof. Dr. Razali Ismail
3. En. Hashim Baharin
4. Dr. Mohd Akmali Mokhter

Research Core Area :

1. Water Quality Analysis
2. Water & Wastewater Treatment
3. Soil Analysis
4. Decontamination Process
5. Detoxification Process
6. Environmental Sensors
7. Air Monitoring & Analysis

Blockbuster Projects :

1. Molluscure® (Bivalve Molluscs Toxic Metals Removal Systems)
2. Scientific Committee For Pasir Gudang Air Disaster



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Applied Optics Research Group (AORG)



Group leader : Dr. Raja Kamarulzaman Raja Ibrahim

Members :

1. Assoc. Prof. Dr. Hazri Bakhtiar
2. Dr. Roslinda Zainal
3. Dr. Nabilah Kasim
4. Dr. Nor Ain Husein
5. Dr. Maisarah Duralim
6. Dr. Husni Hani Jameela Sapinji
7. Dr. Fairuz Diayana Ismail
8. Dr. Muhammad Arif Jalil

<https://science.utm.my/aorg/>

Contact person: Dr. Raja Kamarulzaman Raja Ibrahim

Email: rkamarulzaman@utm.my

Research Core Area :

1. Applied optics: laser-matter interaction, optical fibre sensors, Fibre lasers and optical spectroscopy analysis for solid, liquid and gas (FTIR, OES, laser)
2. Plasma physics: Non-thermal plasma technology and applications

Blockbuster Projects :

1. All-optical fibre sensor and analysis for real-time quality monitoring of stingless bee honey
2. Stingless bee honey profiling and quality assessment using a complementary chemicals and optical techniques.

Scientific Computing and Instrumentation (SCNI)

Group leader : Dr. Muhammad Firdaus Omar

Members :

1. Assoc. Prof. Dr. Amiruddin Shaari
2. Dr. Abd. Khamim Ismail
3. Dr. Suhaila M. Buhari
4. Dr. Yap Yung Szen
5. Dr. Razif Razali

Research Core Area :

a) Scientific Computing & Simulation

- Condensed matter physics using ab-initio (density functional theory (DFT)-based) methods, molecular dynamics (ab initio and classical) and Monte Carlo method (quantum and classical). This includes the studies on the structural, electronic, optical , magnetic, transport and thermoelectric properties of crystalline and amorphous materials.
- Nano device simulations. This includes the studies on the performance of quantum cascade lasers (QCLs), photodetectors, organic light emitting diode (OLED), single electron transistor (SET) and quantum dots (QDs).
- Electromagnetic simulation using finite-difference time domain (FDTD) method. This includes studies on ground penetrating radar (GPR), waveguides/transmission lines, gradient coils dielectric properties of mixtures.

b) Scientific Instrumentation

- PECVD reactor instrumentation, Micro-electrode fabrication, Brain signal recording and processing, Field-Programmable Gate Array (FPGA)



<https://science.utm.my/scni/>

Contact person: Dr. Muhammad Firdaus Omar

Email: firdausomar@utm.my

Nuclear & Radiation Physics Research Group

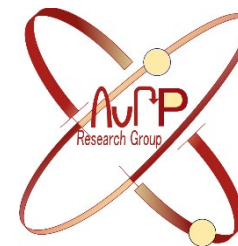
Group leader : Dr. Izyan Hazwani Hashim

Members :

1. Assoc. Prof. Dr. Suhairul Hashim
2. Prof. Dr. Nahrul Alang Khair (SKT)
3. Assoc. Prof. Dr. Muneer Abd Aziz (SKT)
4. Dr. Nor Afifah Basri (SKT)
5. Dr. Koh Meng Hock
6. Dr. Nor Ezzaty Ahmad
7. Dr. Norehan Mohd Nor
8. Dr Mohammad Syazwan Mohd Sanusi

Research Core Area :

1. Nuclear Safety/Security Assessment
2. Neutrino Physics
3. Nuclear Structure and Reaction
4. Nuclear Waste Materials
5. Environmental Radioactivity monitoring and Nuclear Siting
6. Medical Physics/Imaging by gamma and x-rays
7. Radiation Dosimetry (TLD/OSLD)



<https://science.utm.my/nurp/>

Contact person: Dr. Izyan Hazwani Hashim
Email: nurp.utm@gmail.com

Collaborative Partnership:



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Advanced Optical Materials Research Group (AOMRG)

Group leader : Dr. Ezza Syuhada Sazali

<https://science.utm.my/aomrg/>

Contact person: Dr. Ezza Syuhada Sazali

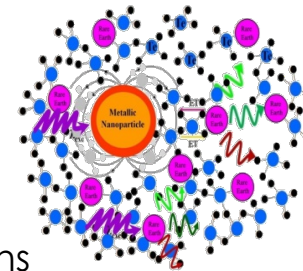
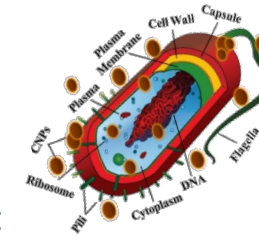
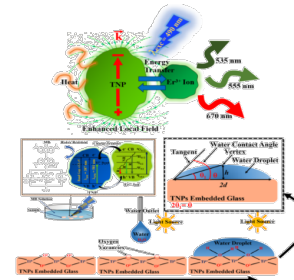
Email: ezzasyuhada@utm.my

Members :

1. Prof. Dr. Md Rahim Sahar
2. Assoc. Prof. Dr. Md Supar Rohani
3. Assoc. Prof. Dr. Ramli Arifin
4. Assoc. Prof. Dr. Sib Krishna Ghoshal
5. Assoc. Prof. Dr. Khaidzir Hamzah
6. Assoc. Prof. Dr. Wan Nurulhuda Wan Shamsuri
7. Dr. Rosnita Muhammad
8. Dr. Jasman Zainal
9. Dr. Roslida Zainal
10. Dr. Faizani Mohd Noor
11. Dr. Nurhafizah Hasim
12. Dr. Siti Salwa Alias
13. Dr. Nurhidayah Ahmad
14. Pn. Masleeyati Yusop
15. En. Wan Hairul Anuar Kamaruddin
16. En. Mohammad Nabil bin Jainal

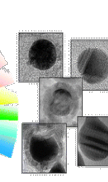
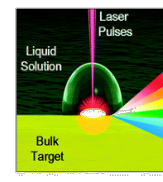
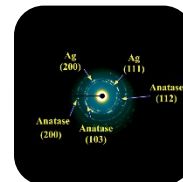
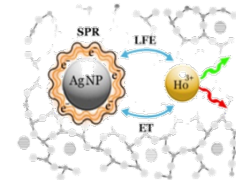
Blockbuster Projects :

1. Metamaterials
2. Perovskite-based Thin Film Solar Cell



Research Core Area :

1. Glass synthesis and characterizations
2. Crystal growth and characterizations
3. Linear and nonlinear optical properties of materials
4. Solid state laser materials
5. Nanomaterials analyses using analytical techniques
6. Electronic and optical properties of plasmonic nanoglass
7. Semiconductor nanostructures
8. Noncrystalline solids and ceramics
9. Thin film and Nanotechnology



Environmental Biotechnology (EnVBiotech)

Group leader : Dr. Adibah Yahya

Members :

1. Prof. Dr. Zaharah Ibrahim
2. Assoc. Prof. Dr. Shafinaz Shahir
3. Assoc. Prof. Dr. Madihah Md Salleh
4. Assoc. Prof. Dr. Shaza Eva Mohamad (MJIT)
5. Dr. Mohd Badruddin Mohd Yusof (SKA)
6. Dr. Norahim Ibrahim
7. Dr. Chong Chun Shiong
8. Dr. Haryati Jamaluddin
9. Dr. Mohd Firdaus Abd Wahab
10. Dr. Wan Rosmiza Zana Wan Dagang
11. Dr. Huszalina Husin
12. Dr. Zarita Zakaria
13. Dr. Fazilah Manan
14. Dr. Mohd Farizal Ahmad Kamaroddin
15. Dr. Norashikin Ihsan
16. Dr. Siti Halimah Hasmoni

Research Core Area :

WATER/WASTEWATER & OMICS

Biological water & wastewater treatment:

- Biofilm, Biofloc, Biogranule technology
- Biomaterial: macrocomposite

Biohydrogen/ electricity generation

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<https://science.utm.my/envbiotech/>

Contact person: Dr. Adibah Yahya

Email: adibahyahya@utm.my

Research Core Area :

AGRICULTURE & OMICS

Community engagement

- Biocomposting
- Organic biofertilizer, biopesticide
- Multipurpose biofertilizer
- Biofeed: multifunction animal feed supplement

ENERGY & OMICS

Petroleum Biotechnology

- Biodesulphurisation
- Microbial enhance oil recovery
- Biosurfactant production for biodegradation of rag layer emulsion
- Methanotrophs

Lignocellulose biodegradation & Renewable energy

- Oil palm biomass
- Solid state & submerged fermentation

Algae Biotechnology

Cancer and Infectious Diseases (CAID)



<https://science.utm.my/caid/>

Contact person: Dr. Saleha Shahar

Email: salehas@utm.my

Group leader : Dr. Saleha Shahar

Members :

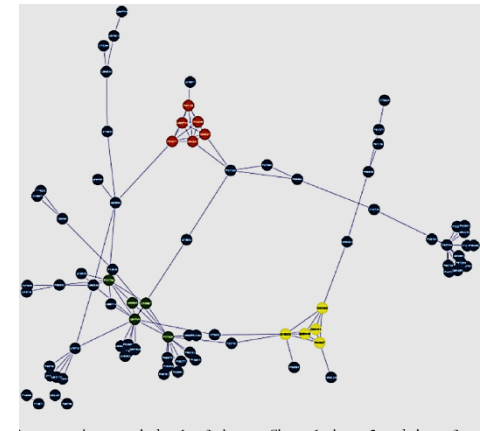
1. Prof. Dr. Shahir Shamsir Omar
2. Dr. Khairunadwa Jemon
3. Dr. Praseetha a/p Prabakharan
4. Dr. Nurliyana Ahmad Zawawi
5. En Mohd Aswad Mohd Anwar
6. Dr. Nurzila Abdul Latiff
7. Dr. Nurriza Abdul Latiff
8. Cik Farah Hanis Juhari

Research Core Area :

1. Cancer
2. Infectious Diseases
3. Bioinformatic
4. GIS
5. Health Sciences

Example of published work :

*Fard Jahromi, S. S., & Shamsir, M. S. (2013). Construction and analysis of the cell surface's protein network for human sperm-egg interaction. **ISRN bioinformatics**, 2013.*



We built the first protein interaction network of human sperm-egg binding and fusion proteins that consists of 84 protein nodes and 112 interactions. We found evidences suggesting a common pathway between tumor fusion and sperm-egg fusion. Availability of this map will assist in understanding fertilization mechanism.

GLOBAL OUTLOOK

TNE : Academic Programme

UNDERGRADUATE

BSc. (Industrial Mathematics)
Double Degree- University of Kent

University of
Kent



BSc. (Chemistry)
Royal Society of Chemistry
(RSC) International
Accreditation -ongoing



POSTGRADUATE

PhD (Physics)
Joint Degree- University of Bordeaux

université
de **BORDEAUX**

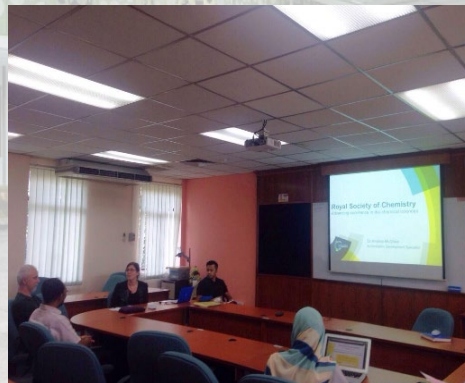
Heartiest Congratulations

Dr. Koh Meng Hock
(PhD in Physics)

First to graduate from the
UTM-Bordeaux University (France)
Joint Programme



univteknologimaysia
utm_my utmofficial




University of
Kent



université
de **BORDEAUX**



 UNIVERSITY of
TASMANIA

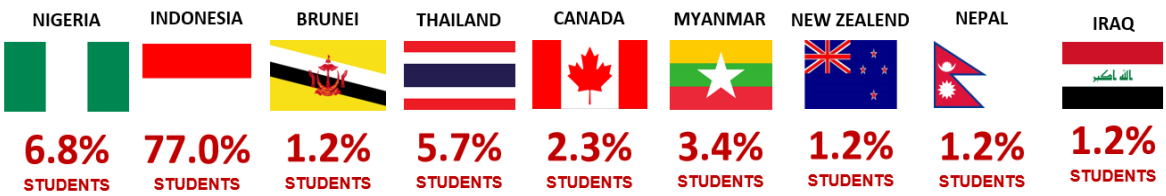


TAIBAH UNIVERSITY

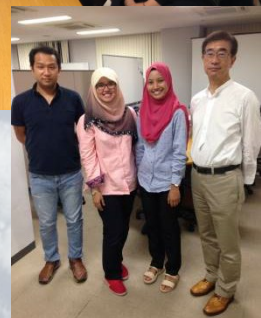
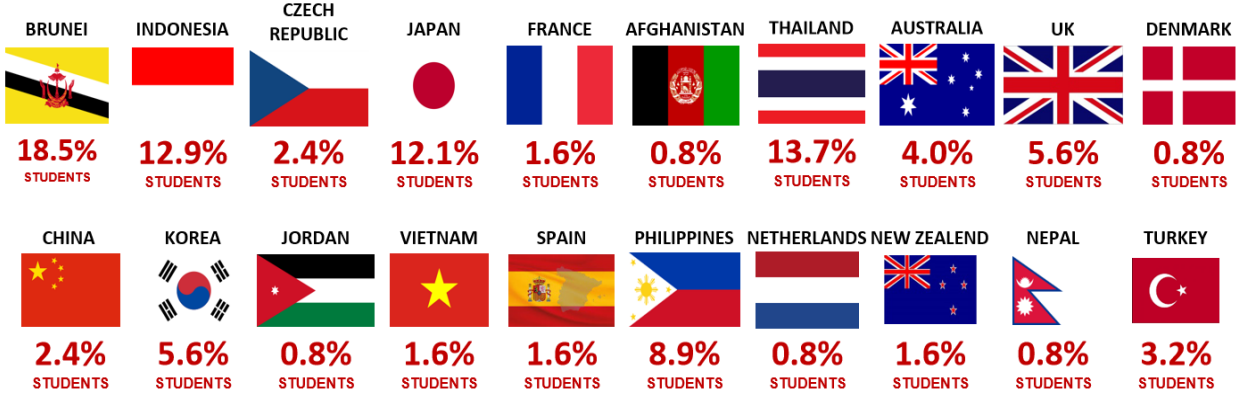
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GLOBAL OUTLOOK *International Student Mobility*

Inbound



Outbound



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STUDENT MOBILITY



OUTBOUND

Current Universiti Teknologi
Malaysia students wishing to
study overseas

Study Abroad/ Student Exchange

Study Abroad/ Student Exchange program is a program which allow student to spend one or two semesters at universities abroad and take courses in regular semester with credit transfer opportunity.

International Invitation Program

Students participate in program organised by international institutions/ organisations with the following themese:

1. Seminar, Conference or Paper presentation
2. Cultural Exhibition and Conference.
3. Student Development Activity.

Research Internship Abroad

Research internship a program which allow student to join research study or internship under the supervision of an academic staff at universities or industries abroad from all over the world.

Global Outreach Program

GOP is a 7 to 14 days academic based program to experience various cultures in other countries. It includes immersion elements such as research & academic activities, social responsibility, and cross cultural activities.

Summer School Abroad

Summer school is a program which designed to provide educational opportunities in 4 to 8 weeks during summer holiday abroad. It is related to environment, local community, heritage and tradition.



INBOUND

Students from overseas universities wishing to study in Universiti Teknologi Malaysia

UTM Student Exchange Program

UTM offers one to two semesters exchange at undergraduate and postgraduate levels. A wide range of courses on Engineering, Science and Technology, ICT, Education, and Management are taught in English.

Research Internship/ Attachment

UTM provides opportunities for students who are studying outside Malaysia to pursue cutting-edge trans-disciplinary research work for one to two semesters. Students can apply throughout the year.

Student Academic Visit

A visit of an individual or a group of students to UTM and spend 1 to 7 days to experience the unique Southeast Asian cultures, to study the global issue or to get access to extraordinary learning opportunities

UTM MyTREE Summer School

This two to three weeks program offers a number of interesting courses. The courses incorporate theory and practice, blended with the local culture and social activities.

GLOBAL OUTLOOK

TransNational Education

INBOUND Programme

19

Study Abroad/
Exchange
Summer School

17

Global Outreach
Program (GOP)

7

International
Invitation
Program (IIP)

14

Research Intern

57 Students



Newton Fund (UK-SEA-NUOF) Progress:
Visit to University of York, UK
Research team of UTM



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GLOBAL OUTLOOK

TransNational Education

OUTBOUND Programme

1 Academic Visit

19 NGS
Study Abroad

5 NGS Intern

25 Students



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University of Bordeaux



Hokkaido University
Osaka University
Kyushu Institute Technology (KYUTECH)
National Institute of Technology, Yonago College



University of Science and Technology UST
Ajou University
ASEAN Federation of Biotechnology (AFOB)
Korea



University Brunei Darussalam
Univesitas Andalas



Ministry of Higher Education
Afghanistan

Institut Pertanian Bogor
Institut Teknologi Sepuluh Nopember
SMA Pesantren Unggul Al Bayan Anyer
Universitas Islam Negeri (UIN) Sunan Kalijaga Yogyakarta
Universitas Jenderal Achmad Yani (UNJANI)
Universitas Negeri Jakarta
Universitas Negeri Malang
Universitas Negeri Semarang
Universitas Andalas
Universitas Sriwijaya
University of Brawijaya
Universitas Airlangga
Univeritas Islam Indonesia



Dresden University of Technology



The University of Manchester University
University of Reading
University of York
Loughborough University



Guru Jambheshwar University of Science & Technology
Indian Institute of Technology Delhi



King Mongkut University of Technology North Bangkok



Caraga State University



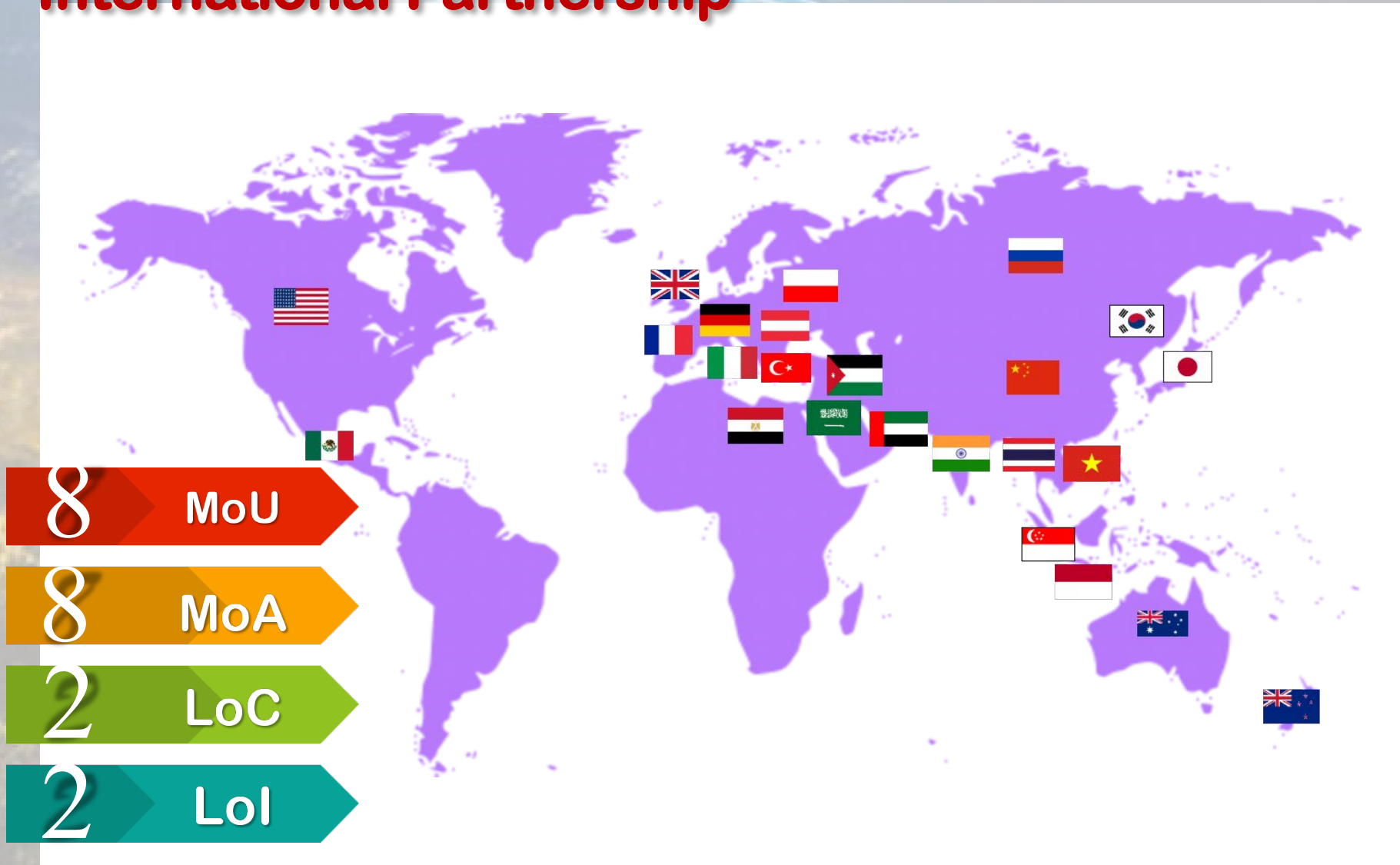
National Tsing Hua University



King Fahad Medical City

GLOBAL COLLABORATION

International Partnership



<http://science.utm.my>

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