



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA



Annual Report **2014**

**FACULTY OF COMPUTING**  
UNIVERSITI TEKNOLOGI MALAYSIA



**FAKULTI KOMPUTERAN**  
*Faculty of Computing*

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**FACULTY OF  
COMPUTING**

# FOREWORD

## BY THE DEAN

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UTM • Faculty of Computing

Annual Report 2014



All praise is due to Allah, and Allah's Peace and Blessings be upon His Final Messenger, his pure family, his noble Companions, and all those who follow them with righteousness until the Day of Judgment. With His permission we are given the opportunity to acquire knowledge, especially in the field of computing for the benefit of mankind.

First of all, welcome to the Faculty of Computing, UTM.

I am hereby pleased to present our 2014 Annual Report of Faculty of Computing, Universiti Teknologi Malaysia. This report highlights the progression of tasks, activities and event undertaken by the faculty in its effort to achieve its goal as a premier institute of higher learning in ICT. In many ways, the statistical figures that appear in this report stand as a testimony to how the faculty has continued to evolve over the years. Moreover, the scholarly achievements are indicators of success that reflect the talents, commitment and dedication of the staff and students in the faculty.

On this note, I would like to express my appreciation and thank you to all members of our community – our devoted staff, talented students and dynamic partners – for helping us to remain fully committed in our roles to support the university's aspirations of becoming a recognised world-class centre of academia and technological excellence. My appreciation also extends to the editorial board members who have been diligently invested their time and effort into realizing this report. Appreciation also extends to all those who are involved indirectly in making the publication of the annual report.

I am hoping that with the accomplishments outlined in this report serves as an encouragement as to why we can march into the future with much reassurance, confident that we in this faculty will persist in our quest for greater excellence.

Finally, I would like to thank all FC staffs earnestly perform their responsibilities as well as the success of all activities planned and organized by the departments and faculty. Hopefully the cooperation of all parties continued to ensure that our faculty performance and achievement are at the highest level.

Professor Dr. Mohd Aizaini Maarof  
**Dean**  
**Faculty of Computing**  
**Universiti Teknologi Malaysia**

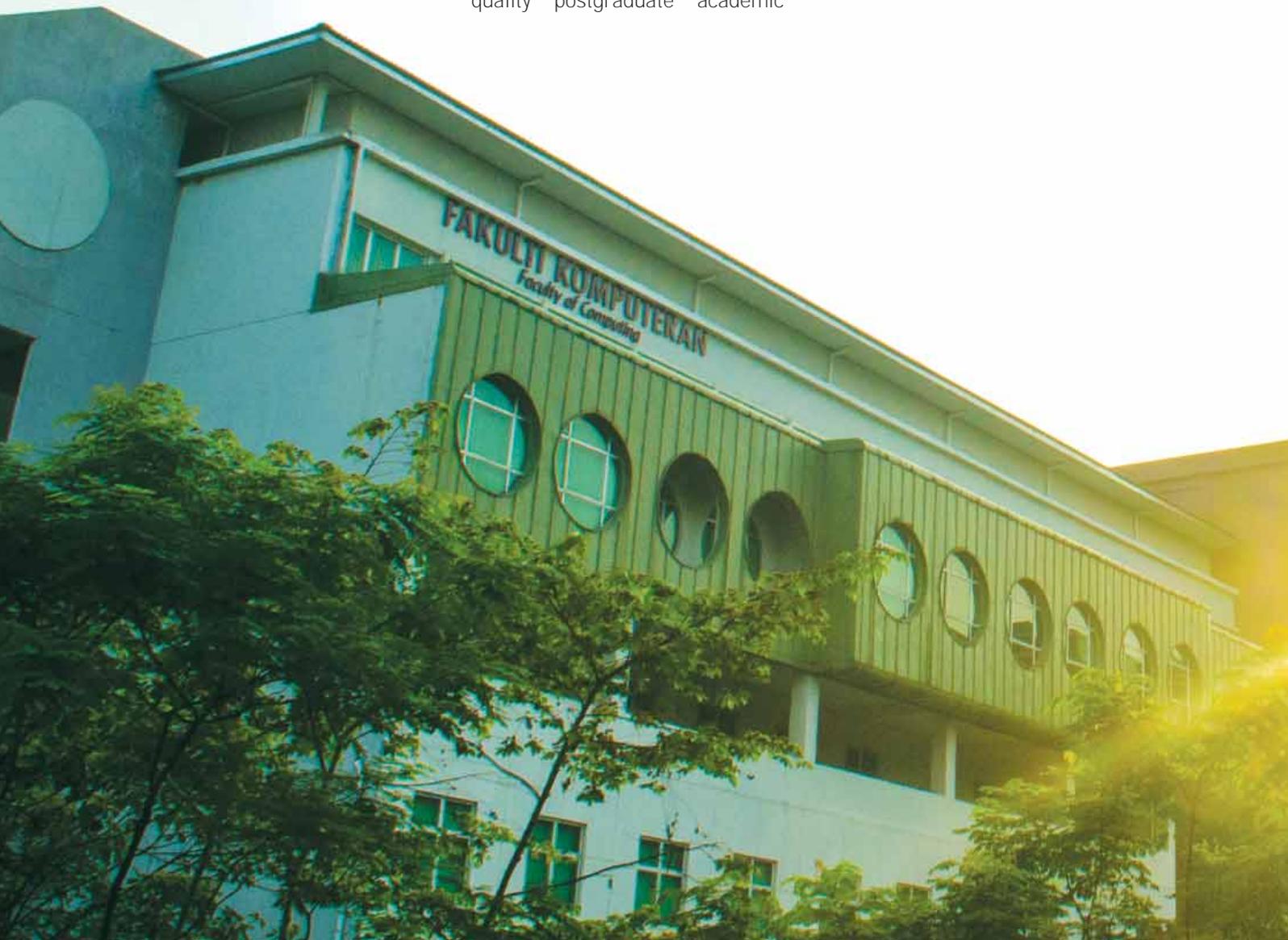
# FACULTY PROFILE

The history of Faculty of Computing (FC) began in 1981 when it was known as Department of Computer Science, under the wings of Faculty of Science. This department began its operation at UTM Gurney Road Kuala Lumpur where it received its first intake of Computer Science Integration Programme. This programme integrated the programme of Diploma with Bachelor of Science (BSc) of Computer Science. In 1984, the department was established as Institute of Computer Science that consisted of Academic Unit and Administrative Computing Unit.

In 1991, the Institute was separated from the Administrative Computing Unit and be elevated to a faculty status known as Faculty of Computer Science and Information Systems. This year also marked the first intake of Master of Science (MSc) and Doctor of Philosophy (PhD) of Computer Science. The establishment of new faculty, increasing student and staff populations, and demands for facilities has resulted in a move to the UTM main campus in Skudai, Johor in 1995.

As the years go by, the faculty has seen a significant increasing number of students due to the popularity of its high quality postgraduate academic

programmes. The number of postgraduate students and staff, and demands for more sophisticated facilities has resulted in additional 5-storey building in 2012 to provide a conducive environment for teaching, learning and research. In January 2013, once again the faculty made a significant stride by rebranding the faculty's name to Faculty of Computing. Branding the organisational restructuring and strengthening the academic programmes as well as the faculty researches will hopefully make it in line with the university vision to be recognised as a world-class centre of academia and technological excellence.



## VISION

To be a recognised world-class centre of academic and technological excellence in Information and Communication Technology

## MISSION

To be a leader in the development of high quality human capital, innovation and services in ICT that will contribute to the nation's wealth creation

## OBJECTIVES

- Promote activities and efforts towards internationalization of the faculty
- Produce excellence IT Professionals and graduates to fulfil the need of Information Technology industry, particularly for the Multimedia Super Corridor (MSC) and Cyberport
- Increase research and consultancy activities which are focused, relevant and of high quality
- Develop specialized programs to promote IT culture in society
- Increase activities to promote innovation, commercialization and entrepreneurship in the field of software and content development
- Manage the faculty efficiently and effectively

**HUMAN RESOURCE &  
ADMINISTRATION  
2014**



# ADMINISTRATION TEAM

7

UTM • Faculty of Computing  
Annual Report 2014

Associate Professor  
**Dr. Wan Mohd Nasir Wan Kadir**  
Deputy Dean (Development)

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Professor  
**Dr. Mohd Aizaini Maarof**  
(Dean)

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Associate Professor  
**Dr. Siti Zaiton Mohd Hashim**  
Deputy Dean (Academic)

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# ADMINISTRATION

## TEAM



Madam Murni Hariyanti Muslim  
Assistant Registrar



Mr Ganesan A/L Andimuthu  
Deputy Registrar



Associate Professor  
Dr. Muhammad Shafie Abd Latiff  
Academic Manager (Undergraduate)



Associate Professor  
Dr. Subariah Ibrahim  
Academic Manager  
(Postgraduate)



Associate Professor  
Dr. Mazleena Salleh  
Academic Coordinator (Research)



Dr. Anazida Zainal  
Academic Coordinator  
(Coursework)



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Associate Professor  
Dr. Azizah Abdul Rahman  
Head of Department (Information Systems)



---

Associate Professor  
Dr. Dayang Norhayati Abang Jawawi  
Head of Department (Software Engineering)



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Professor Dr. Habibollah Haron  
Head of Department  
(Computer Science)



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Dr. Hishamuddin Asmuni  
IT Manager

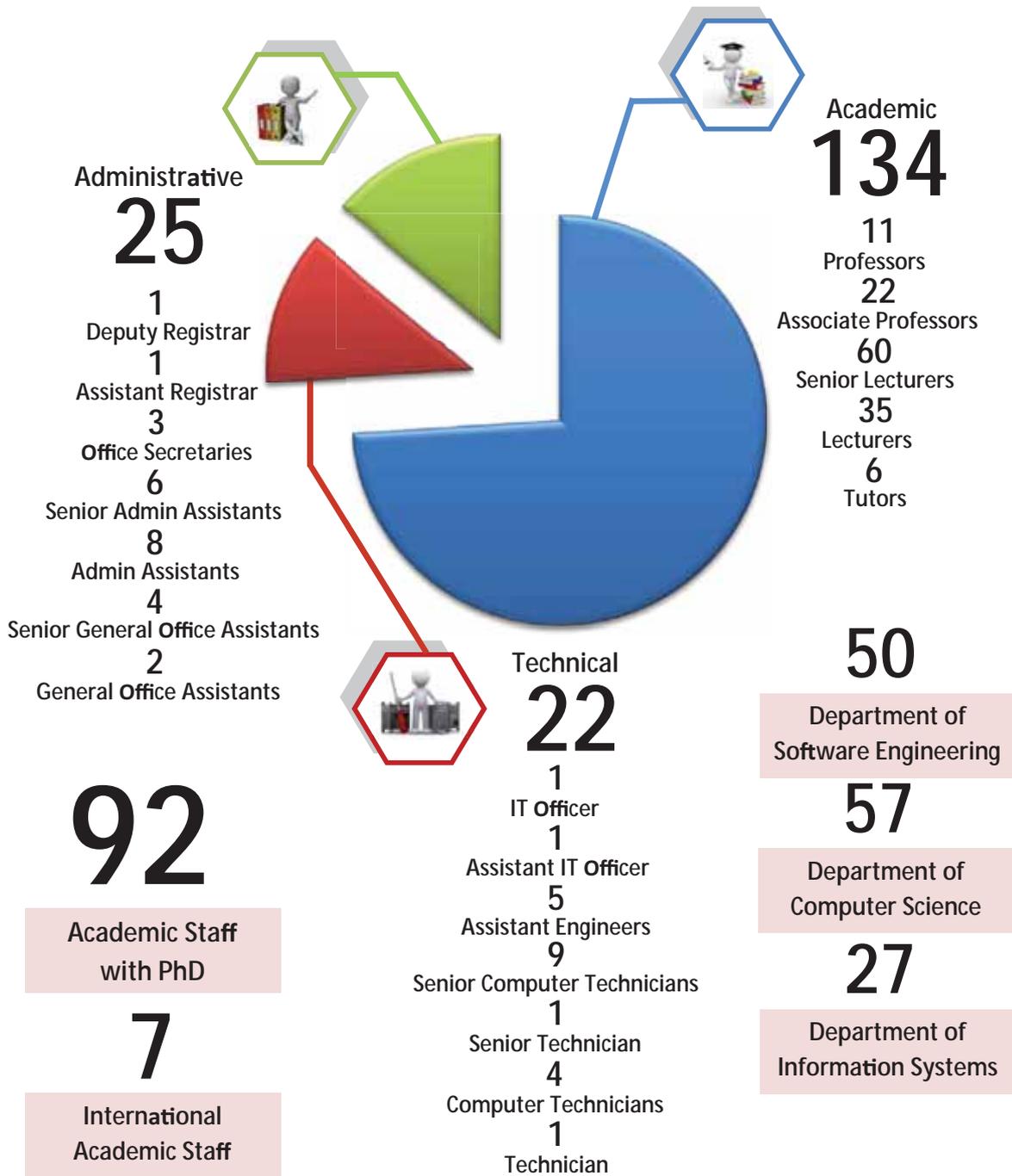


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Dr. Haza Nuzly Abd Hamed  
Laboratory Manager

# HUMAN RESOURCE

The Faculty of Computing has a total strength of 196 personnel comprising of academic, administrative and technical support staff.





The Department of Software Engineering is dedicated to support the faculty in teaching, equipping and preparing students to be high quality graduates and software practitioners in the area of Software Engineering, Computer Graphics and Multimedia, and Bioinformatics.

Software Engineering programmes at the department are continuously updated in accordance with the recent Information and Communications Technology (ICT) trends, research, best practices, and software development issues. In addition, the Computer Graphics and Multimedia programme has been the pioneer in offering such area among Malaysian public universities.

The department has been supporting the faculty's goal in computing field by offering unique undergraduate and postgraduate programmes continuously since its establishment. All the programmes address analytical and practical skills in software development that give emphasis on a systematic and disciplined approach to meet the growing needs and demands in both ICT industry and the society.

The department comprises fifty dedicated academic staff. The staff members actively and continuously organise events such as conferences, research seminars, and short trainings

as the platform for the staff and students to support the faculty in achieving its annual target and performance. Majority of academic members are also active in their research innovations in the area of software, graphic and multimedia in line with the latest innovations and ideas in ICT field.

In tandem with the university's vision to be recognised as a world-class centre of academia and technological excellence, Software Engineering Department is committed in the development of human capital and innovative computing technologies in the related areas to achieve the vision.

# DEPARTMENT of COMPUTER SCIENCE



The Department of Computer Science was recently formed in 2013, when the former Faculty of Computer Science and Information System (FSKSM) was rebranded as the Faculty of Computing (FC). It is a home to more than 50 local and international academic staff with expertise in various aspects of computer science. Currently, the department offers a full range of degree programmes in computer science – BSc, MSc and PhD. The department has also attracted a great number of international students from various parts of the world to enrol in the undergraduate and postgraduate programmes, in addition to local students.

The curriculum of our Bachelor's degree programme has been designed to prepare students

for advanced careers within the computer industry. The Master's degree programmes are offered in two modes – mixed (taught courses plus research) and research. The Master and PhD programmes train students to undertake research in various areas in computer science, supervised by faculty members with research interests in the following fields: Soft Computing, Pervasive Computing, Information Assurance and Security, and Operation and Business Intelligence.

For undergraduate students, the department provides academic staff to teach computer science courses so that the graduates are equipped with the ability to undertake research in those areas and become a computer scientist or IT professionals.

For postgraduate students, the department provides academic staff to teach and supervise postgraduate students working in researches on the above four areas. For staff, the department provides opportunity for the faculty members in advancing the knowledge in those four areas through various ways, such as facilitating collaborations with other academic institutions, local and abroad, companies and research institutions.





Department of Information Systems is a department that focuses on Information Systems field. The department offers one undergraduate program: Bachelor in Computer Science (Database Systems) and three postgraduate programmes: PhD Information Systems, MSc. IT (Management) and MSc. IT (Entrepreneurship). It emphasizes on planning, management, development, use and evaluation of information systems and technology in organizational and societal contexts in order to give firms' competitive advantage, prosperous and sustainable living in today's information era.

The department also emphasizes on planning, managing, developing and furthermore

using the information system and technology according to organizational context in order to give competitive advantage in today's information era. Our main research areas include planning and managing information system, information retrieval, IT entrepreneurship, knowledge management, database modelling and management, data mining, decision making, social network and collaborative environment, enterprise information systems

and application, as well as business computing technology.

The department's vision is to be recognized as the premier Information Systems department in the region, known for its innovation, leadership and commitment in delivering high-quality, industry-responsive, technically relevant education, research and services to help fulfil the needs of the country and beyond.



# FAKULTI KOMPUTERAN

*Faculty of Computing*



N28 a  
LEVEL 1  
KLARIFIKASI  
SISWA  
POST GRADUATE



The background is a solid dark red color. A bright white beam of light enters from the left edge, tapering as it moves towards the center. Below this beam, there are several overlapping, semi-transparent geometric shapes in various shades of orange and red, creating a layered, abstract effect.

**ACADEMIC**

# PROGRAMMES

## PROFILE

### UNDERGRADUATE

The Faculty of Computing offers Bachelor of Computer Science degree with five different majors to accommodate the requirement of nation on professionals in the specific field. The duration of the degree course is four years.

#### BACHELOR OF COMPUTER SCIENCE (BIOINFORMATICS)

Bioinformatics specialization aims to produce computer scientist who are able to utilize computer science techniques in managing and analysing biological data and problems, as well as developing and discovering new findings in the field of biology. The study exposes the students to algorithms and software for simulations of biochemical processes and the analysis of molecular biology data.

#### BACHELOR OF COMPUTER SCIENCE (DATABASE SYSTEMS)

This program is focusing on producing the ICT professionals in database fields. The specialization in the database field offers the students with the combination of computer science, database technology and information technology for the use of organization. The students will be supplied with the solid computer science basics and knowledge on the suitability of technology and database system for an organization.

#### BACHELOR OF COMPUTER SCIENCE (SOFTWARE ENGINEERING)

This program is focusing on producing the ICT professionals in database fields. The specialization in the database field offers the students with the combination of computer science, database technology and information technology for the use of organization. The students will be supplied with the solid computer science basics and knowledge on the suitability of technology and database system for an organization.

#### BACHELOR OF COMPUTER SCIENCE (COMPUTER NETWORK & SECURITY)

Bioinformatics specialization aims to produce computer scientist who are able to utilize computer science techniques in managing and analysing biological data and problems, as well as developing and discovering new findings in the field of biology. The study exposes the students to algorithms and software for simulations of biochemical processes and the analysis of molecular biology data.

#### BACHELOR OF COMPUTER SCIENCE (GRAPHICS & MULTIMEDIA SOFTWARE)

This program is aiming to produce professional ICT programmer in two-dimensional (2D) and three-dimensional (3D) graphics as well as multimedia and web application. The course exposes students to the world of computer graphics, computer and video games, animation, image processing and sound multimedia as well as virtual reality. This program follows the Association for Computer Machinery (ACM) and Multimedia Super Corridor (MSC) recommendation and standard.



## POSTGRADUATE

The Faculty of Computing offers Master of Science and Doctor of Philosophy programmes with different tracks (taught course and full research) in order to accommodate with the requirement of nation on professionals in the specific fields.

### DOCTOR OF PHILOSOPHY (COMPUTER SCIENCE)

This program allows students to conduct an independent research in an area of computer science, under the supervision of a member staff with related expertise. Assessments are by semester progress reports and a thesis examination (viva voce). A student will be expected to present his/her proposal to a panel of examiners in the third semester for Doctoral programme. At the end of every semester, students are required to report and present the progress of their research.

### DOCTOR OF PHILOSOPHY (INFORMATION SYSTEMS)

The main aim of this program is to educate professionals and academic research scholars to perform high quality information systems research. They will be able to apply the Information Systems and Technology theories in analyzing and solving real organizational problem innovatively. This program is designed in such a way that students will be guided in developing the technical and empirical research skills.

### MASTER OF SCIENCE (SOFTWARE ENGINEERING)

This is a full guided research Master program designed for candidates who wish to obtain knowledge, skills and expertise in software engineering theories and able to apply them to produce high quality software and to propose new or improved software engineering techniques, methods and tools. Program will train graduate to produce creative ideas and critical thinking to advance knowledge and share them with other researchers, academicians and industry.

### MASTER OF SCIENCE (INFORMATION TECHNOLOGY ENTREPRENEURSHIP)

This is a joint venture program implemented on a full-time and part-time basis, which are initiated by Universiti Teknologi Malaysia (UTM), Majlis Amanah Rakyat (MARA) and International Business School (IBS) respectively. Its main objective is to produce IT entrepreneurs or IT technopreneurs at the postgraduate level. This is an effort to increase the number of highly skilled local IT technopreneurs as the developers of hardware, software and creative content.

### MASTER OF SCIENCE (INFORMATION TECHNOLOGY MANAGEMENT)

This program is designed for candidates who wish to obtain knowledge of applying information technology in variety of contexts, such as management, education, library & information services, manufacturing and others. This program aims at producing responsible, innovative and creative graduates with skills in planning, organizing, designing and managing variety of ICT-based solutions to different kind of organizations.

### MASTER OF SCIENCE (COMPUTER SCIENCE)

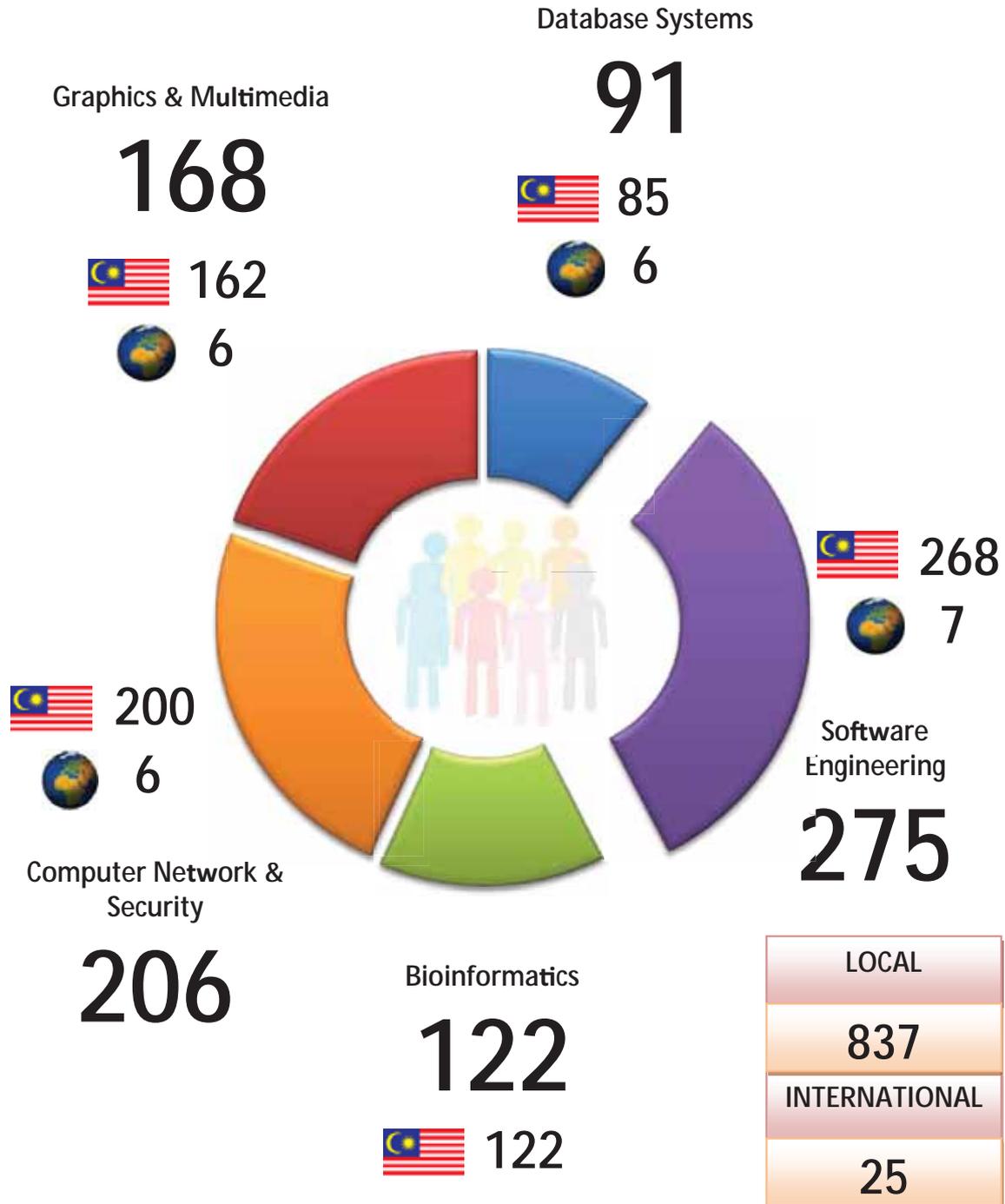
This program is designed for candidates who wish to obtain more knowledge and skills in the area of computer science and to become an academician or researcher. Graduates from this program will have necessary ground to pursue Doctor of Philosophy (Computer Science). There are two types of programmes: Mainstream Program (Program Perdana) and Part-Time Program. The programmes are usually conducted at UTM Johor Bahru campus.

### MASTER OF SCIENCE (INFORMATION SECURITY)

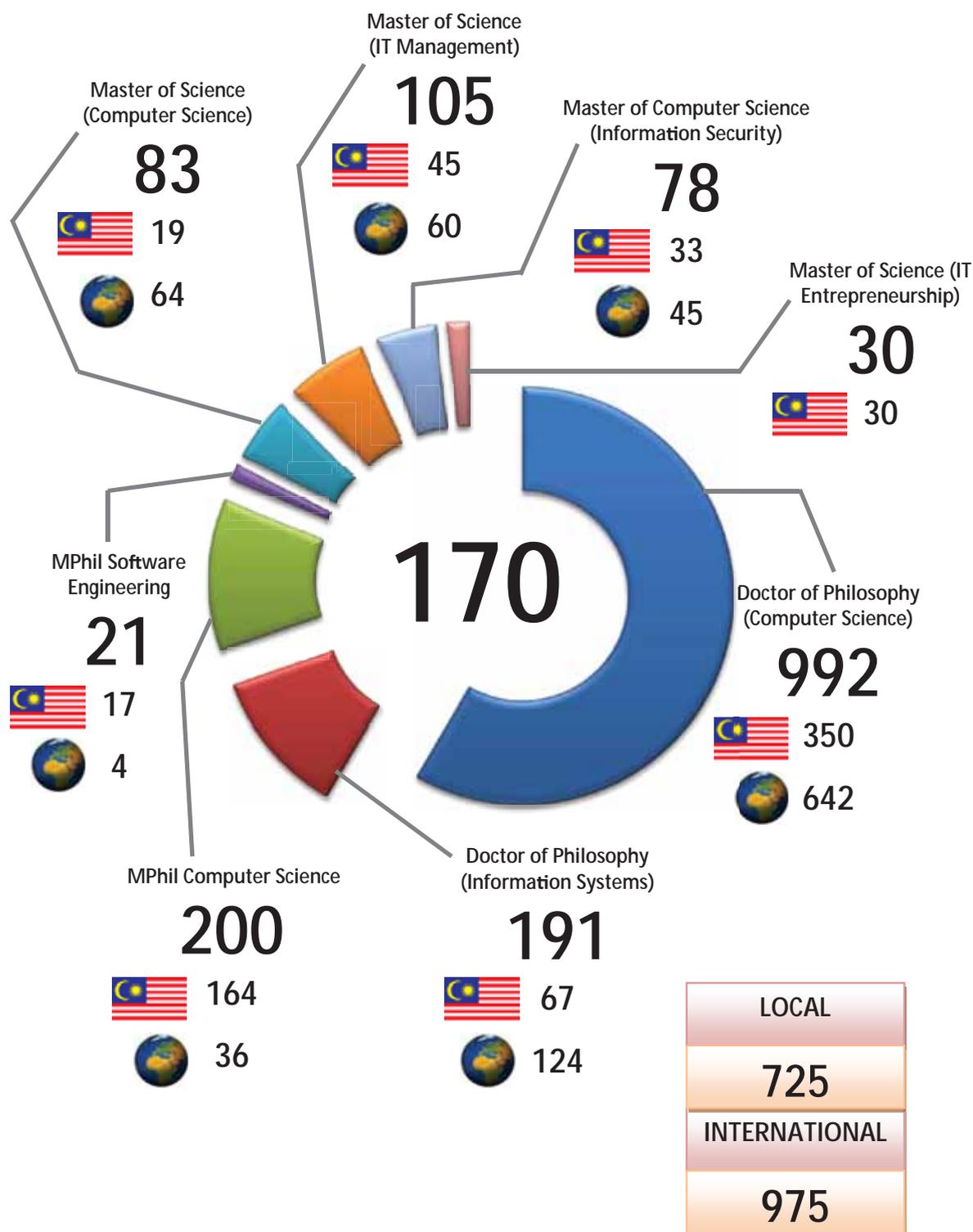
This program is designed to produce professional, dedicated and ethical information security engineers who will effectively plan, design, manage and maintain organization and information security mechanism based on international security standards, thus supporting national vision to secure the information of the organization.

# ENROLMENT

## UNDERGRADUATE



## POSTGRADUATE



# STUDENTS' DISTRIBUTION



**MALAYSIA**  
**1562**

LOCAL
<b>1562</b>

INTERNATIONAL
<b>1000</b>



ALGERIA  
4



BANGLADESH  
3



CAMBODIA  
2

CHINA  
4



DJIBUOTI  
2



EGYPT  
8



FRANCE  
2



GHANA  
2



INDIA  
4

INDONESIA  
88



IRAN  
253



IRAQ  
144



JORDAN  
31



KAZAKHSTAN  
4



KENYA  
2

KUWAIT  
6



LIBYA  
9



MALDIVES  
1



MAURITIUS  
1



NIGERIA  
101



OMAN  
6

PAKISTAN  
90



PALESTIN  
12



SAUDI ARABIA  
28



SOMALIA  
14



SUDAN  
87



SYRIA  
2

TANZANIA  
6



THAILAND  
9



TURKEY  
1



UGANDA  
1

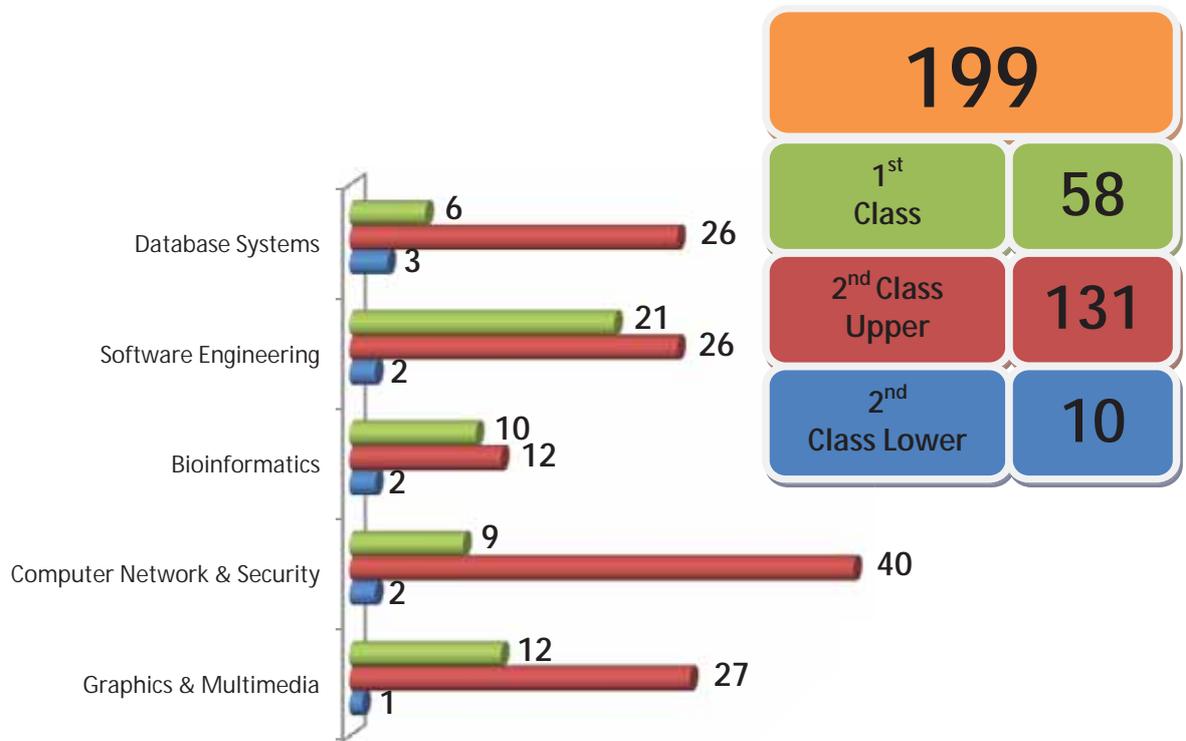


UNITED ARAB  
EMIRATES  
31

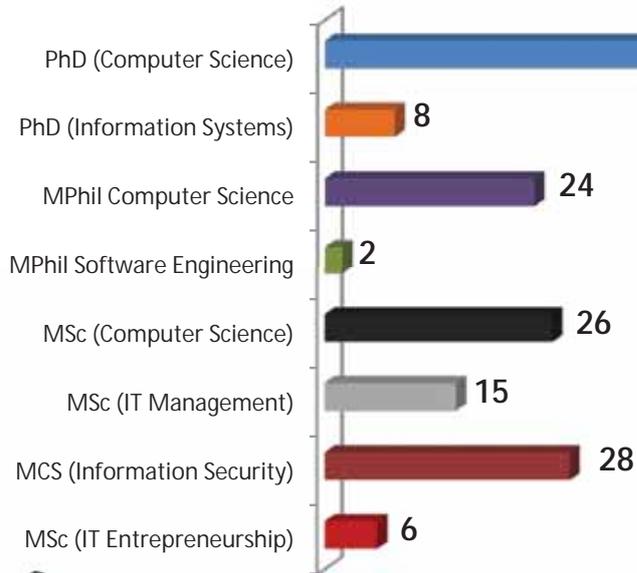


YEMEN  
42

**UNDERGRADUATE**



## POSTGRADUATE





**RESEARCH &  
PUBLICATION**

# RESEARCH GROUPS

## ARTIFICIAL INTELLIGENCE AND BIOINFORMATICS RESEARCH GROUP (AIBIG)

Formed in September 1999, AIBIG research group - formerly Artificial Intelligence and Bioinformatics Laboratory (AIBIL) - is being active in several scientific research areas especially Artificial Intelligence and Bioinformatics. AIBIG is a research group under Infocomm Research Alliance and Software Engineering Department, Faculty of Computing, Universiti Teknologi Malaysia (UTM). At AIBIG, we have researchers and students from local and international. All our postgraduate students have been sponsored from our research group grants, Malaysian Ministry of Higher Education, Malaysia Ministry of Science, Technology

and Innovation, etc. We also have collaborators at national and international levels such as from Japan, Spain, Australia, USA, Indonesia, etc. Sometime, our staff and students go to abroad for research attachment and academic activity. Our group has also implemented a proactive ecosystem for research environment and culture so that all staff and students can be successful and excellent in their study and research.

### Research interest

- Artificial Intelligence in timetabling/scheduling, image processing, pattern recognition,

manufacturing, wireless networks, web, etc.

- Bioinformatics and Computational Biology in synthetics biology, systems biology, genomics, and proteomics for application of biomedical, cancer, brain, agriculture, and biotechnology.
- Software Engineering in software requirement, software modeling, software reusability, etc.

### Contact

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## VIRTUAL, VISION AND VISUALIZATION RESEARCH LAB (UTM ViCubeLab)

Universiti Teknologi Malaysia has established the Virtual, Vision and Visualization Research Lab (UTM ViCubeLab), a cross-disciplinary research group in computing whose primary focus and activities revolves around the design, implementation and application of human computer interaction (HCI), computer graphics, vision and virtual environment, simulation and immersive visualization theories.

### Research interest

- Computer graphics and visualization
- Mixed reality / augmented reality
- Virtual environment
- Natural interaction
- Image processing
- Creative content technology

### Contact

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Dr. Nor Azman Ismail  
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<http://comp.utm.my/vicubelab>

## SOFT COMPUTING RESEARCH GROUP (SCRG)

Soft Computing Research Group has been established for almost 19 years in UTM (1996 – present). SCRG core business is in research and education that leads to the prosperity of human civilization. With the increasing number of members in the field of Machine Learning and Soft Computing both fundamentally and practically, the image of the group will be uphold due to soaring, unique and bizarre intellectual skill of the members while preserving the dignity and modesty accordingly. The philosophy of SCRG research start from the fundamental knowledge to the applications, and the trend will always be preserving to encapsulate sound and solid end-product upon using

the machine learning and soft computing algorithms. Diversities expertise of SCRG members have spark creative and unique research environment as well as establishing mutual trust and understanding towards excellent research output for knowledge and human civilization.

### Research interest

- Fundamental knowledge in machine learning and soft computing methods
- GPU computing for machine learning and soft computing
- Big data mining, text summarization for big data, modeling and forecasting for big data
- Database and data mining
- Applications of artificial intelligence and soft computing

- Meta-heuristics and hyper-heuristic optimization
- Pattern recognition and biometric systems
- Intelligent membrane computing
- Soft computing for supply chain management
- Intelligent machining technology
- Intelligent surface reconstruction and geometric modeling

### Contact

Associate Professor  
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## INFORMATION ASSURANCE AND SECURITY RESEARCH GROUP (IASRG)

Information Assurance and Security Research Group aims to address the broad issues involved in the protection of information and communications services and infrastructure systems.

### Research interest

- Data and computer security
- Network security
- Security management
- Unified threat management
- Security information hiding and forensics

### Contact

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# RESEARCH GROUPS

## INFORMATION SERVICE SYSTEMS AND INNOVATION (ISSI)

Information systems are the means for people and organizations create, gather, process, store, use and disseminate information through computer mediated technologies in the digital ecosystem. A service system is a configuration of technology and organizational networks designed to deliver service that satisfy the needs, wants, or aspirations of customers. The Information Service Systems and Innovation

(ISSI) Research Group conducts research, development and commercialization of innovative information and service system solutions for business, public and social purposes.

### Research interest

- Policy and strategy for knowledge economy
- Info-structure and knowledge economy competitiveness
- Product-services innovation and improvement through the application of ICT

- Knowledge economy driven management and organization
- Sustainability and social aspects of knowledge economy

### Contact

Dr. Mohammad Nazir Ahmad  
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<http://smartdigitalcommunity.utm.my/issi>

## SOFTWARE ENGINEERING RESEARCH GROUP (SERG)

The Software Engineering Research Group is one of the most vibrant research groups in this region. It actively involves in the research efforts that aim to improve the techniques, methods, processes and tools for development and maintenance of the large and complex software systems. The contributions of our research activities extend over various software engineering knowledge areas with the focus on certain research themes.

### Research interest

- Software modelling and specification
- Software verification and testing
- Software maintenance and evolution
- Software quality and testing
- Software process improvement
- Dependable embedded real-time systems
- Software as service
- Intelligent software systems
- Model-driven architecture and ontologies
- Component based software engineering (CBSE)
- Software usability and reusability

### Contact

Associate Professor  
Dr. Wan Mohd Nasir Wan Kadir  
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<http://smartdigitalcommunity.utm.my/serg>

## PERVASIVE COMPUTING RESEARCH GROUP (PCRG)

Pervasive Computing Research Group (PCRG) was established in 2010. Members of PCRG are doing research and development in the area of pervasive computing. The technology is moving beyond the personal computer to everyday devices. This is made possible due to the progress in embedded technology and connectivity, and computer devices are becoming progressively smaller but more

powerful. The goal of pervasive computing is to create an environment where the connectivity of devices is embedded in such a way that the connectivity is unobtrusive and always available.

### Research interest

- Computer communication and network
- Cloud computing
- Grid computing

- Network security
- Mobile ad hoc network
- Vehicular ad hoc network
- Wireless sensor network

### Contact

Professor

Dr. Abdul Hanan Abdullah

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## OPERATIONS & BUSINESS INTELLIGENCE (OBI)

Operations and Business Intelligence Research Group (OBI) intends to bring together researchers and academicians from various disciplines namely Operations Research, Management Science, Decision Science, Artificial Intelligence, Computational Intelligence and Enterprise Information System, who have a common interest towards supporting decision makers to make well-informed, effective and timely decisions.

### Research interest

- Operations research for complex decision making
- Computational intelligence for operations research problems
- Decision support and business intelligence technologies

### Contact

Professor

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# CENTRE OF EXCELLENCE

## UTM-IRDA Digital Media Centre Media and Game Innovation Centre of Excellence (MaGIC-X)



Creative industries are among the fastest growing industries in the world with a total market size of \$30 trillion. In Malaysia, the creative industry has recorded revenue of RM7 billion in 2012 and has accounted for RM1.9 billion to the Gross Domestic Product (GDP). Iskandar Malaysia plays an important role as it is the country's southern economic region puts the creative industries as one of the main pillars of the economic development. As a public university located in Iskandar Malaysia, Universiti Teknologi Malaysia (UTM) is committed to fully support the development of creative industries in Iskandar Malaysia. Therefore, in collaboration with the Iskandar Malaysia Regional Development Authority (IRDA), UTM-IRDA Digital Media Centre has been set up.

### Objectives

- To become a reference point for digital media and games specialist within a conducive academic environment and ecosystem in generating creative and innovative ideas.
- To create high quality and original intellectual property and innovative product through industry and academia strategic expertise synergies.
- To produce highly skills human capital in digital media and game industry.

- To create research, development and innovative cross-discipline programs for post-graduate level

### Key Focus Area Enrich of digital content

- Game, Edutainment & Simulation
- Ecosystem for Creative Industry
- Info-structure
- Infra-structure

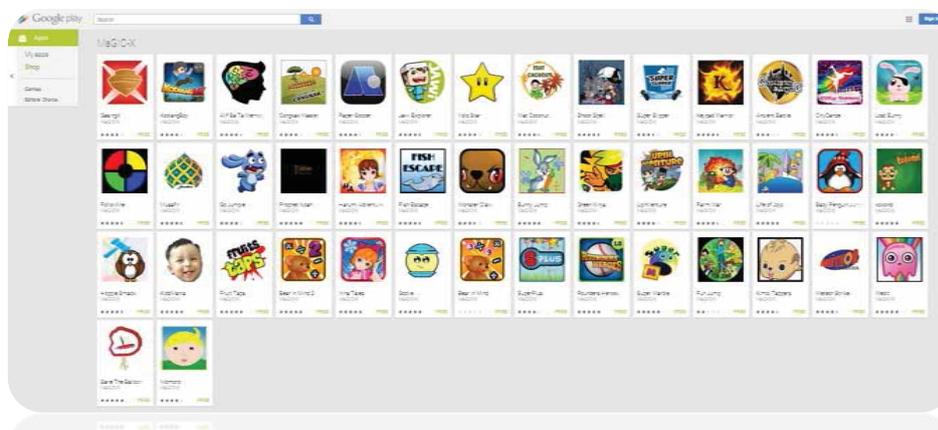




### MaGICXpert

- Assoc. Prof. Dr. Mohd Shahrizal Sunar (Director)
- Prof. Dr. Ghazali Sulong
- Prof. Dr. Ali Selamat
- Assoc. Prof. Dr. Mohd Shafry Mohd Rahim
- Assoc. Prof. Dr Shukor Abd Razak
- Dr. Mohd Yazid Idris
- Dr. Farhan Mohamed
- Dr. Satria Mandala
- Dr. Hoshang Kolivand

### Products



### Contact

Associate Professor  
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 Director of UTM-IRDA Digital Media Centre  
 MaGIC-X  
 Institute of Human Centred Engineering  
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 Universiti Teknologi Malaysia  
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# CENTRE OF EXCELLENCE

## UTM BIG DATA CENTRE

Recently, big data tsunami has hit our nation, and this phenomenon has awakened the academy communities to aggressively address the hindsight, and ahead challenges to ensure Malaysia will be the leader for big data science, as well as big data analytics. Big data terminology has been introduced implicitly since 1944 by Fremont Rider, who was a Librarian of the Wesleyan University in Middletown, Connecticut where he wrote a book on The Scholar and The Future of the Research Library. In his book, he estimated that libraries in American universities would expand to over 200,000,000 volumes by 2014. Today, Yale Library alone has approximately 12.5 million volumes across 20 buildings on campus.

In a simple word, big data is datasets, which size is beyond the ability of typical database software to store, manage, and analyze

together with its three basic personalities: Volume, Velocity, and Variety. These personalities require new architecture, techniques, algorithms, and analytics to uncover the golden and hidden knowledge from information obesity (infobesity) to generate a new information economy (infonomics).

UTM Big Data Centre is established to achieve these objectives; to intersect the core of Big Data Analytics into big data science, big data computing and big data engineering, as well as to provide the right information at the right time, which enables data analysts, data scientist, data engineers or managers to make informed business decisions. Our centre gives the taste of the breadth and depth of data-driven research currently being carried out at UTM Big Data Centre and the Faculty of Computing Universiti Teknologi

Malaysia. Our research includes big data analytics for space data processing, machine learning big data framework and analytics for big data problems, the role of intelligent web pre-caching for big data scale, e-learning big data computing and many more.

UTM Big Data Centre, is looking forward to work with you to develop big data future for the nation and human wealth creation in the era of new information economy.

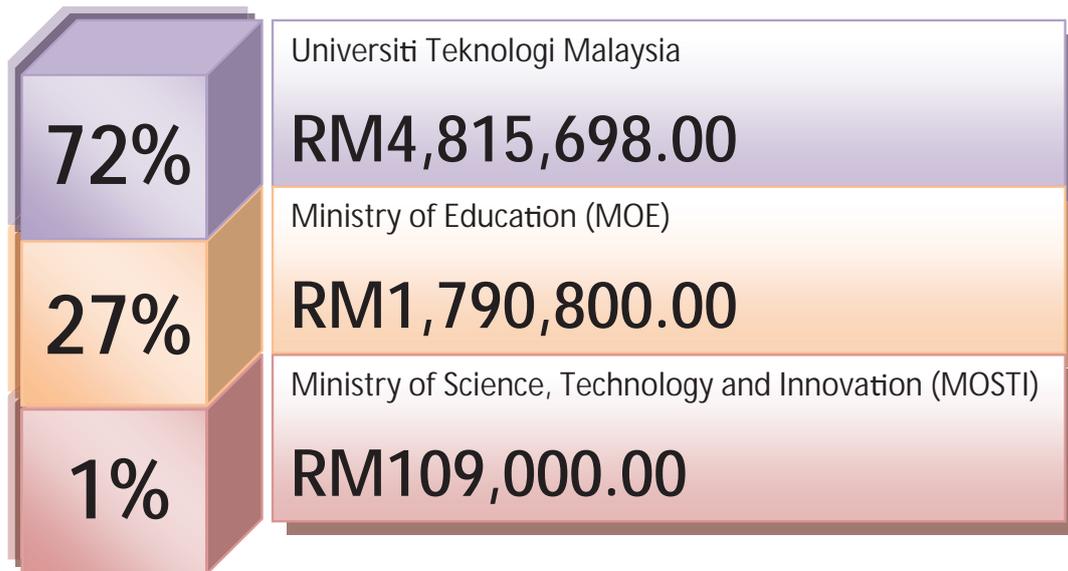
Contact:

Professor

Dr Siti Mariyam Hj. Shamsuddin  
Director of UTM Big Data Centre  
Ibnu Sina Institute for Scientific  
and Industrial Research  
Universiti Teknologi Malaysia  
<http://smartdigitalcommunity.utm.my/utmbigdata>

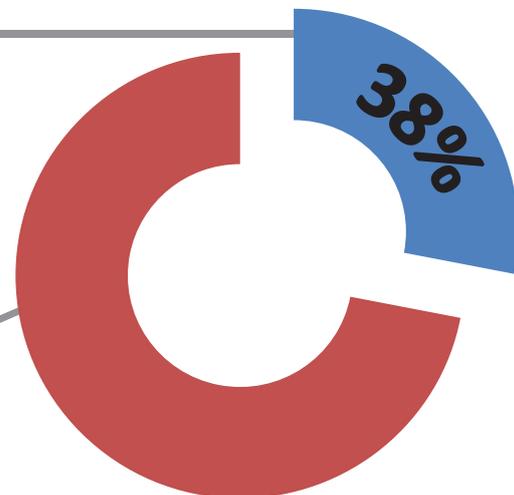


## Total amount of Approved Grants in 2014



Total Amount of **Approved**  
Grants in 2014  
**RM6,715,498.00**

Total Amount of **Active**  
Grants in 2014  
**RM17,231,183.00**





## INTERNATIONALIZATION

Universiti Teknologi Malaysia (UTM) has long participated in a wide variety of collaborative relationships with universities, other institutions and individuals in many countries.

This cooperation has been valuable to the university and provides exposure to new ideas and new perspectives.

## GLOBAL OUTREACH PROGRAM (GOP)

An academic based program to experience various cultures in other countries. It includes immersion elements such as research and academic activities, social responsibility, cross cultural activities and international event participation. The program may involve 5 to 20 students for 7 to 14 days.



## INTERNATIONAL INVITATION PROGRAM (IIP)

Students participating in program organized by international institutions / organizations with the following themes:

- (i) Academic programs
- (ii) Seminar, conference, paper presentation, student project competition
- (iii) Cultural: cultural exhibition and conference, historical and cultural tour
- (iv) Student development activity

## STUDENT OUTBOUND MOBILITY PROGRAMS



Students spend one or two semesters at universities abroad, take courses in a regular semester with credit transfer. Students must registered as an active student at UTM, has at least completed study at UTM for one year or two semesters, obtained CGPA min 3.00 out of 4.00, as well as possess a good personality and maturity.



Outbound to Korea



### SUMMER SCHOOL PROGRAM

Students participated in a program which designed to provide educational opportunities during summer holiday. It has a wide-application related to the environment, local community, heritage and tradition. The courses incorporate theory and practice, blended with the local culture and social activities.



Outbound to Australia

# STUDENT INBOUND MOBILITY PROGRAMS



## ACADEMIC VISIT

A group of students can spend 1 to 7 days in UTM to experience the unique Southeast Asian cultures, to study the global issue or to get access to extraordinary learning opportunities.

Visit from Politeknik Negeri  
Ujung Pandang, Indonesia



## STUDENT EXCHANGE / NON-GRADUATING PROGRAM

UTM welcomes students from international institutions to join UTM as our Non-Graduating Student under the following programs:

- (i) Study Abroad / Student Exchange
- (ii) Internship

Inbound Students from Universitas  
Sriwijaya, Indonesia



## SUMMER SCHOOL IN UTM

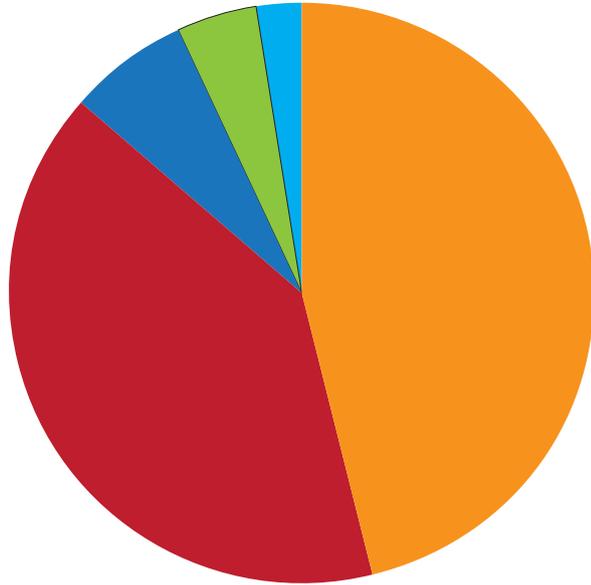
This two or three-week program offers a number of interesting courses. It has a wide-application related to the environment, local community, heritage and tradition. The courses incorporate theory and practice, blended with the local culture and social activities.

### STUDENT OUTBOUND PROGRAM

➤ Global Outreach	- 74
➤ International Invitation	- 65
➤ Student Exchange	- 11
➤ Summer School	- 7
➤ Internship Abroad	- 4

Total Number of Students Involved in Outbound Program

**161**

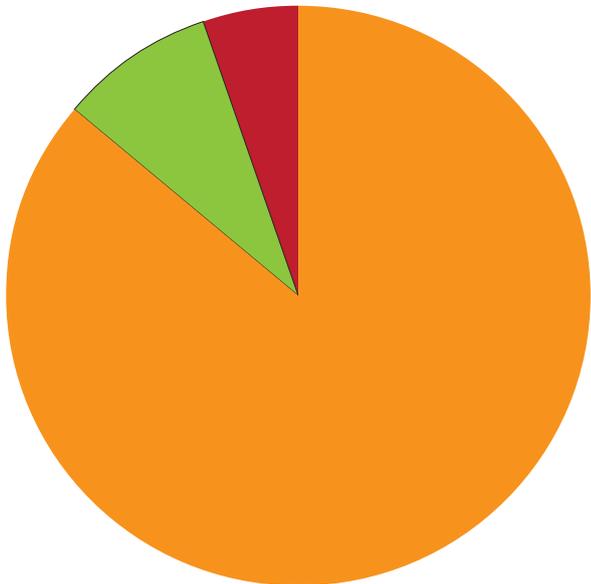


### STUDENT INBOUND PROGRAM

➤ Student Exchange	- 149
➤ Academic Visit	- 15
➤ Internship	- 9

Total Number of Students Involved in Inbound Program

**173**



### VISITING PROFESSORS

- Prof. Dr. Horst Lichter, RWTH Aachen University, Germany
- Prof. Dr. Ajith Abraham, VSB Technical University of Ostrava, Czech Republic
- Dr. Siva Kumar Dorairaj, Software Education, New Zealand
- Prof. Dr. Muhamad Aslam Uqaili, Mehran University, Pakistan
- Prof. Dr. Bhawani Shankar Chowdhry, Mehran University, Pakistan

## ACTIVE PARTNER UNIVERSITIES

- Mehran University, Pakistan
- RWTH Aachen University, Germany
- Kyushu Institute of Technology, Jepun
- University of Plymouth, United Kingdom
- Universitas Sriwijaya, Indonesia (UNSRI)
- Sudan University of Science and Technology (SUST)
- Mahidol University, Thailand
- Kookmin University, South Korea
- Chulalongkorn University, Thailand
- Rochester Institute Technology (RIT)



The background features a dark red upper section and a lower section composed of several overlapping, angular shapes in various shades of orange and yellow, creating a dynamic, geometric pattern.

# INDUSTRY & COMMUNITY ENGAGEMENT

## ACTIVE PARTNER INDUSTRIES/INSTITUTIONS

- Lembaga Kemajuan Johor Tenggara (KEJORA)
- Malaysia Software Testing Board (MSTB)
- BC Synergy Sdn. Bhd.
- Hewlett-Packard (M) Sdn. Bhd.
- Technology Education Leader Sdn. Bhd.
- Pusat Pendidikan Hidayah Bhd.
- Cisco Sytems.Inc.
- Multimedia Development Corporation (MDeC) Sdn. Bhd.



# COMMUNITY ENGAGEMENT



MODAL INSAN, INFORMATIK PENDIDIKAN,  
KEMAHIRAN DAN KERJAYA LUAR BANDAR (MINDA 2014) CARNIVAL



SMART ROBOKAR  
PROGRAMMING



ICARE WORKSHOP – UTM-KEJORA ROBOT  
LEAGUE

**ICARE MY ENGLISH (IME) USING IPAD MINI AND  
ICARE MY ENGLISH (IME):  
TOWARDS TERTIARY EDUCATION**



**IFTAR WITH RUMAH  
AMAL RAUDHATUL MARYAM**



**CHARITY PROGRAM WITH RUMAH  
ANAK YATIM / MISKIN PAYASUM**



TEACHING/TUTORIAL LAB



LECTURE HALL /ROOM

# FACILITIES AND STUDENT SUPPORT



PG RESEARCH LAB



CCNA LAB



FC MART



PRAYER ROOM



DISCUSSION AREA



# AWARDS AND ACHIEVEMENT



**Anugerah Penerbitan Karya Asli**  
Dr. Mohd Shahizan Othman



**Anugerah Khidmat Masyarakat**  
Associate Professor  
Dr. Shahida Sulaiman



**Anugerah Penyelidikan**  
Professor  
Dr. Naomie Salim



**Anugerah Penulis Jurnal Berindeks**  
Professor  
Dr. Naomie Salim



**Anugerah Penulis Jurnal Berindeks**  
Professor  
Dr. Siti Maryam Shamsuddin



**Anugerah Penulis Jurnal Berindeks**  
Professor  
Dr. Abdul Hanan Abdullah

- **Anugerah Webometric - Winner**
- **Anugerah Kualiti Akademik – Finalist**
- **Anugerah OSH - Finalist**

• **Anugerah Perkhidmatan Cemerlang  
(Staf Cuti Belajar)**

Dr. Afnizanfaizal Abdullah  
Dr. Mohd Adham Isa  
Dr. Syed Zainudeen Mohd Shaid

• **Anugerah Perkhidmatan Cemerlang**

Associate Professor Dr. Shahida Sulaiman  
Dr. Aryati Bakri  
Dr. Hishamuddin Asmuni @ Hasmuni  
Dr. Ismail Fauzi Isnin  
Dr. Noorminshah A.lahad  
Dr. Nor Azizah Ali  
Dr. Nor Bahiah Hj. Ahmad  
Dr. Nor Erne Nazira Bazin  
Dr. Suhaila Mohamad Yusuf  
En. Ibrahim Khalid  
En. Mohd Amiludin Mohd Idris  
En. Mohmad Azmi Latonak @ Ismail  
En. Yusoff Ab. Rauf

# FACULTY QUALITY AWARD

## • Sijil Kecemerlangan Perkhidmatan

Professor Dr. Abdul Hanan Bin Abdullah  
 Professor Dr. Ghazali Bin Sulong  
 Professor Dr. Habibollah Bin Haron  
 Professor Dr. Mohammad Ishak Bin Desa  
 Professor Dr. Mohd Aizaini Bin Maarof  
 Professor Dr. Naomie Bt Salim  
 Professor Dr. Siti Mariyam Bt. Hj. Shamsuddin  
 Associate Professor Madya Dr. Wan Mohd Nasir Bin Wan Kadir  
 Associate Professor Dr. Azizah Binti Abdul Rahman  
 Associate Professor Dr. Dayang Norhayati Bte Abang Jawawi  
 Associate Professor Dr. Kamalrulnizam Bin Abu Bakar  
 Associate Professor Dr. Md. Asri Bin Ngadi  
 Associate Professor Dr. Muhammad Shafie Bin Abd Latiff  
 Associate Professor Dr. Roselina Binti Salleh@Sallehuddin  
 Associate Professor Dr. Siti Zaiton Bt. Mohd Hashim  
 Associate Professor Dr. Subariah Bte Ibrahim  
 Dr. Azurah Bte A Samah  
 Dr. Mohammad Abdur Razzaque  
 Dr. Noorfa Haszlinna Binti Mustafa  
 Dr. Nor Haizan Bt Mohamed Radzi  
 Dr. Radziah Binti Mohamad  
 Dr. Raja Zahilah Binti Raja Mohd Radzi  
 Dr. Roliana Binti Ibrahim  
 Dr. Sarina Binti Sulaiman  
 Dr. Siti Hajar Binti Othman  
 Puan Murni Hariyanti Binti Muslim  
 Encik Nadzir B Hashim  
 Encik Zulkifli Bin Ahmad  
 Encik Abdullah Bin Yusof

## • Sijil Kepujian Perkhidmatan

Associate Professor Madya Dr Mazleena Bte Salleh  
 Associate Professor Madya Dr. Norazah Bt Yusof  
 Dr. Anazida Binti Zainal  
 Dr. Antoni Wibowo  
 Dr. Azlan Bin Mohd Zain  
 Dr. Hassan Chizari  
 Dr. Mohd Yazid Bin Idris  
 Dr. Mohd. Murtadha Bin Mohamad  
 Dr. Siti Sophiyati Binti Yuhaniz  
 Encik Mohamad Shamsul Fitri Bin Sulaiman  
 Encik Mohd Ayob Bin Haji Suradi  
 Encik Mohd Rohaizam Bin Mat Rashid  
 Puan Nizamra Binti Masdar  
 Encik Noranizam Bin Demin  
 Puan Azmaniza Binti Aziz  
 Encik Ferdaus Bin Md Said  
 Puan Jamilah Bte Ahmad  
 Encik Johari Bin Mohammad  
 Encik Noraziman Bin Othman  
 Cik Puan Norhani Binti Mohd Haitami  
 Puan Noridah Bte Abd Wahab  
 Puan Norshahida Bte Zainoordin  
 Cik Nurul Nadia Binti Yusoff  
 Puan Rafidah Bte Elias



- **Anugerah Inovasi Dekan**  
Dr. Mohd Yazid bin Idris  
Kumpulan Keceriaan Fakulti (Prof. Dr. Habibollah Haron, Dr. Mohd Shukor Talib, Prof. Madya Dr. Azlan bin Mohd Zain, Dr. Mahadi bin Bahari)
- **Anugerah Penasihat Akademik**  
Dr. Maheyzah binti Hj. Md. Siraj@Md Sirat  
Dr. Suhaila binti Mohamad Yusuf
- **Anugerah Khidmat Masyarakat**  
Pn. Jamilah binti Ahmad
- **Anugerah Penerbitan**  
Professor Dr. Mohd Aizaini bin Maarof  
Associate Professor Dr. Siti Zaiton binti Mohd Hashim
- **Anugerah Sukan**  
Dr. Syed Norris Hikmi bin Syed Abdullah  
Dr. Maznah Kamat
- **Anugerah Khidmat Pelanggan**
  - a) Technicians  
Pn. Norhani binti Mohd Haitami  
En. Azahar bin Abd Jalil
  - b) Academic Office  
En. Abdullah bin Yusof  
Pn. Nizamra binti Masdar
  - c) Administration Office  
Pn. Noridah binti Abd Wahab  
Cik Nurul Nadia binti Yusoff
- **Anugerah Webometrik**  
Associate Professor Dr. Norazman bin Ismail  
Associate Professor Dr. Kamalrulnizam bin Abu Bakar  
En. Mohamad Faiez bin Samsudin
- **Anugerah Pengajaran**  
Dr. Nor Bahiah binti Ahmad  
Dr. Suhaila binti Mohamad Yusuf  
Pn. Lizawati bin Mi Yusuf
- **Anugerah Kualiti Akademik**  
Prof. Dr. Habibollah bin Haron, Associate Professor Dr. Siti Zaiton binti Mohd Hashim, Associate Professor Dr. Subariah Ibrahim, Associate Professor Dr. Mazleena Salleh, Associate Professor Dr. Azizah Abd. Rahman, Associate Professor Dr. Roselina binti Salleh @ Sallehudin, Associate Professor Dr. Muhammad Shafie bin Abd Latiff, Associate Professor Dr. Wan Mohd Nasir bin Wan Kadir, Associate Professor Dr. Dayang Norhayati binti Abang Jawawi, Associate Professor Dr. Kamalrulnizam bin Abu Bakar, Dr. Raja Zahilah binti Raja Mohd Radzi, Dr. Noorminshah binti A. Iahad, Dr. Siti Hajar Othman, Dr. Anazida binti Zainal, Dr. Maheyzah binti Md Sirat @ Md Siraj, Dr. Roliana binti Ibrahim, Dr. Zalmiyah binti Zakaria, Dr. Mohd Adham bin Isa, Dr. Mohd Shukor bin Talib, Dr. Hishammudin bin Asmuni @ Hasmuni, Dr. Haza Nuzly bin Abdull Hamed, Dr. Sarina Sulaiman, Dr. Aryati Bakri, Dr. Md Sah bin Hj Salam, Cik Hazinah Kutty Mammi, Pn. Murni Hariyanti binti Muslim, En. Ganesan a/I Andimuthu, Pn. Rafidah binti Elias, Cik Nurul Nadia binti Yusoff, En. Yusof bin Ab. Rauff, Encik Zulkifli bin Ahmad
- **Kumpulan Pembangunan Makmal**  
Dr. Mohd Fo'ad bin Rohani, En. Mohamad Shamsul Fitri bin Sulaiman, En. Zahari bin Supene, En. Nadzir bin Hashim, Pn. Norhani binti Mohd Haitami, Cik Hasnah binti Musim, En. Noranizam bin Demin
- **Kumpulan OSHE Makmal**  
En Nadzir bin Hashim, En. Ibrahim bin Khalid, En. Ferdaus bin Md. Said

**I'M SCIENTIST, GET ME OUT OF HERE - WINNER  
(AN AWARD BY ACADEMY OF SCIENCES,  
MALAYSIA)**

**DR NOR AZIZAH BINTI ALI**



# FACULTY ACTIVITIES



# STUDENTS ACTIVITIES



**UTM FIRST YEAR  
EXPERIENCE  
PROGRAM**



**GOTONG  
ROYONG**



# STUDENTS ACTIVITIES



**HOW TO GET YOURSELF EMPLOYED (HTGYE)**



**IDEAS**

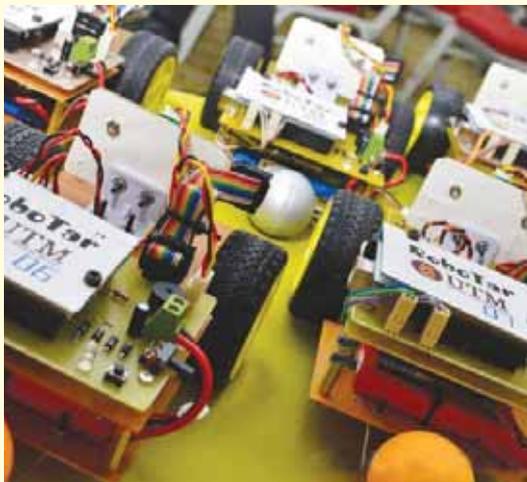


**DEAN'S AWARD CEREMONY**





**PC MAINTENANCE COURSE**



**ROBOKAR PROGRAMMING FEST**

# STUDENTS ACTIVITIES



MPP ELECTION



TECHNOBIZ

# STAFF ACTIVITIES

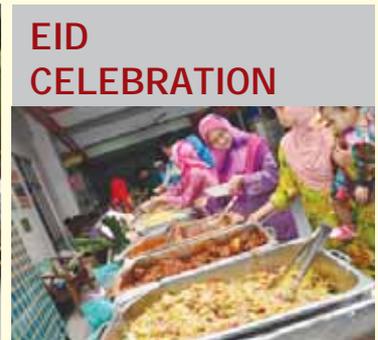


**MAJLIS DEKAN ICT (MaDICT) MEETING**



**HEALTH AND SAFETY DAY**

# STAFF ACTIVITIES



**EID  
CELEBRATION**



**VISIT FROM BINUS UNIVERSITY INDONESIA**



VISIT FROM KOLEJ KOMUNITI MASJID TANAH, MELAKA



VISIT FROM SEK MEN BUKIT KATIL, MELAKA

# STAFF ACTIVITIES



VISIT FROM UNIVERSITAS BINA DARMA INDONESIA



VISIT FROM UNIVERSITAS AHMAD DAHLAN YOGYAKARTA



VISIT FROM UNIVERSITI PERTAHANAN NASIONAL MALAYSIA



**FAKULTI KOMPUTERAN**  
Faculty of Computing

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