# MJIIT Newsletter

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**INSIDE THIS ISSUE:**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MJIIT SPORT FESTIVAL 2015</td>
<td>2</td>
</tr>
<tr>
<td>THE 9TH ANNUAL JAPAN LANGUAGE FESTIVAL</td>
<td>3</td>
</tr>
<tr>
<td>NEW ACADEMIC STAFF</td>
<td>4</td>
</tr>
<tr>
<td>BRIEFING ON INDUSTRIAL TRAINING</td>
<td>4</td>
</tr>
<tr>
<td>UTM RECEIVES RM3 MILLIONS TO ESTABLISH A NEW RESEARCH LAB AT MJIIT</td>
<td>5 - 6</td>
</tr>
<tr>
<td>THE 2ND ANNUAL BIO-IST EKIDEN RUN 2015</td>
<td>6</td>
</tr>
<tr>
<td>MEXT VISITS TO MJIIT</td>
<td>7</td>
</tr>
<tr>
<td>1ST MALAYSIA-JAPAN WORKSHOP ON RADIO TECHNOLOGY</td>
<td>7</td>
</tr>
<tr>
<td>MJIIT ORGANIZED 10TH ASIAN CONTROL CONFERENCE</td>
<td>8</td>
</tr>
<tr>
<td>FUDOOKA SENIOR HIGH SCHOOL SHORT VISIT</td>
<td>8</td>
</tr>
<tr>
<td>INTRODUCTION TO I-KOHZA: COMMUNICATION SYSTEMS AND NETWORKS RESEARCH LAB</td>
<td>9 - 10</td>
</tr>
<tr>
<td>UPCOMING EVENTS</td>
<td>12</td>
</tr>
</tbody>
</table>
The annual Malaysia-Japan International Institute of Technology sports festival took place between the 20th April and 9th May organized by the association of Electronic System Engineering (ELECSYS) under the theme “talent win games, but teamwork wins championships”. The program was led by the brother of Faizuddin Bin Ahmad Roslan with Amirol Azahar Bin Mohd Puad of 3SMJE and a member of the supreme council ELECSYS assisting. There were approximately 400 participants with 50 staff also actively participating in the program. The main purpose of this festival sport was to enhance the relation and teamwork among students and staff faculty. The objective of this program is to produce students who adopt a healthy lifestyle in addition to inculcate the spirit of sportsmanship among the students and staff MJIIT.

Some of the major activities were football, volleyball, netball, tennis, badminton, table tennis, tug of war and tele-match. In MJIIT there are three major associations of Electronic System Engineering (ELECSYS), Mechanical Precision Engineering (PREMECH) and Chemical and Process Engineering (CHEMPRO). Each course is divided into year 1 to year 4, so the number of in each activity to be more than 10. In addition, a team of staff and post-graduate students were invited to enliven the festival and provide competition to the other team. This objective is to evoke the spirit to completion win overall championship trophy.

Throughout the program, each team demonstrated their prowess in various events, despite the rainy weather which led to many interruptions in the schedule.

During the final day the official closing ceremony was conducted by Dr. Shahrum Shah b. Abdullah, head of ESE department. Participants who came 1st, 2nd and 3rd in their were awarded a medal and hamper. In conclusion, the results of the hard work of each member of the supreme council ELECSYS and full support of the staff and students of the faculty MJIIT led to the festival having a positive impact and achieved excellence. We now look forward to the 2016 festival.
The 9th Annual Japan Language Festival

On 10th May 2015, the 9th Japanese Language Festival was held at the MJIIT compound. This yearly event is organized by The Japanese Language Society of Malaysia (JLSM) and Malaysia Japan International Institute of Technology, UTM, as a co-organizer. The event is supported by The Embassy of Japan in Malaysia, The Japan Foundation Kuala Lumpur, and Ministry of Education Malaysia. This year a total of 1,300 Japanese language learners and 100 teachers from 34 schools, 3 institutions of higher learning and the general public participated in the festival. Besides that, there were about 100 volunteers from university students including MJIIT students, and 80 cultural workshop instructors, most of whom are Japanese.

This one day event was divided into four parts. The first part had options of more than forty (40) cultural workshops, such as Origami, Kirigami, Yukata, Kendo, Takoyaki, etc. The second part was a cultural demonstration of Origami and Kendo. The third part was a Japanese Language Market where food, beverage and books were available for purchase, as well as information on the academic program in Malaysia and Japan. The final part was a Japanese Culture and Language Contest, where participants competed in story telling, painting according to song lyrics, calligraphy, Soran Bushi Dance, choral speaking etc.

The closing and prize giving ceremony was held in the afternoon attended by Mr. Shoichi Toyoda, Director of Japan Foundation Kuala Lumpur and Mr. Nishikawa Fumiteru, Second Secretary, Japan Information Service, Embassy of Japan. - Hasparina
NEW ACADEMIC STAFF

Prof. Dr. Mikio Miyake
Professor (EGT)
Head of iKohza : Chemical Energy Conversions & Applications (ChECA)

I came from Japan Advanced Institute of Science and Technology (JAIST) near Kanazawacity, where is a beautiful place rich in traditional Japanese cultures and variety of sea foods. I have joined MJIIIT on 13th April 2015. I deeply appreciate for kind supports by the staffs and want to contribute for the further development of MJIIIT through my experience and knowledge of applied chemistry.

STUDENT AFFAIRS

BRIEFING ON INDUSTRIAL TRAINING

Industrial Training (IT) is a student placement in an industry or outside organization (locally or abroad) for a period of twelve (12) weeks. The word ‘industry’ here includes the whole of engineering activities such as consultancy, research and development, manufacturing etc. The training serves as an exposure to the real work environment so that the student can relate theories learned in class and apply them in the workplace to prepare them for their future career as a professional engineer. The IT is designed for a student to practice knowledge gained at university in the workplace as part of the fulfilment of the Bachelor Degree Award. It is compulsory for every MJIIIT undergraduate student to undergo Industrial Training for a specified period of time under the course code of SMJG 3206.

The primary objective of the IT is to strengthen and broaden the students’ understanding of current practice and knowledge of the latest developments through exposure to a real-working environment and obtained during the training period. In addition, the students are also expected to relate and apply their theoretical knowledge to solve real problems, understanding the requirements of clients and society as a whole. Subsequently, the knowledge gained during IT is expected to be useful for the students to undertake life-long learning as well as to give them sufficient knowledge useful in obtaining employment upon graduation. There are two (2) models of IT adopted at MJIIIT:

- Model 1 : 12 weeks in Industry in Malaysia.
- Model 2 : 12 weeks in Industry in Japan.

On 21 May 2015, a briefing session was organized to all MJIIIT students who are going to do their Industrial Training from 15 June 2015 to 4 September 2015. The briefing was held at Jumaah Hall, UTM Kuala Lumpur.

The program has 2 parts. The first part was for all students while the second part was for selected students who will go to Japan. The program started with briefing from Dr. Nurulbahiyah Bt Ahmad Khairuddin as Coordinator of Industrial Training, who explained how to report for duty, general rules and regulation set up by MJIIIT, evaluation and assessment and report.

Then, a talk from Prof. Dr. Masafumi Goto about Safety and Health took place. He talked about general rules and local rules while working in the industry. Other than that, Mr. Hikaru Shozawa continued with special briefing for students who will do their internship in Japan while Ms. Nurulhana explained about do and don’t while being there.

The event also invited 2 students who were selected to do their industrial training in Japan last year, Mr. Boon Chin Yap and Mr. Mohd. Nashrul bin Ramli to share their experience regarding work environment and social life including source of halal food for Muslim students. The session ended with Q&A.
MEXT VISITS TO MJIT

On 10 June 2015, MJIT received a courtesy visit from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, led by Mr. Sadayuki Tsuchiya, Deputy Minister, accompanied by Mr. Shoichiro Sakaguchi, Director of International Science and Technology Affairs Division and Ms. Ayaka Imamura.

The visit was warmly welcomed by Prof. Datin Dr. Rubiyah Yusof, Dean of MJIT, with a short briefing on MJIT and the planning on the establishment of Disaster Management Center at MJIT. The delegation was then introduced to the facilities at MJIT by visiting two i-Kohzas at MJIT, the Ecological Engineering Laboratory and Tribology and Precision Engineering Laboratory. - MJIT Website

1ST MALAYSIA-JAPAN WORKSHOP ON RADIO TECHNOLOGY

The Malaysia-Japan Workshop on Radio Technology 2015 (MJWRaT 2015) was held on 15 June 2015 at Malaysia-Japan International Institute of Technology (MJIIT), Universiti Teknologi Malaysia Kuala Lumpur (UTMKL). 100 electrical engineering researchers and postgraduate students from Malaysia and Japan participated in this workshop with 11 presentations of working papers on related topic.

MJWRaT is the first workshop on radio technology between Malaysia and Japan. MJWRat 2015 is jointly sponsored by IEEE AP/MTT/EMC Malaysia Chapter and the Technical Committee on Antennas and Propagation of the Institute of Electronics, Information and Communication Engineers (IEICE/AP) of Japan. This workshop is supported by Universiti Teknologi Malaysia (UTM).

The workshop is intended to provide an international forum for the exchange of information on the progress of research and development in antennas, propagation, RF/microwave and radio communication systems. Among its objectives is to enhance collaboration and networking between Malaysian and Japanese researchers. This workshop is a preliminary step in a collaborative effort between the two countries for the organization of a future Malaysia-Japan Microwave Symposium.
KOTA KINABALU, 1st June 2015 – Universiti Teknologi Malaysia (UTM) has received RM3 million contribution from Takasago Thermal Engineering Co., Ltd. (TTE) for five years to establish a new research lab.

The sponsorship worth RM600,000 (JPY20,000,000) annually, aims to establish a new Research Lab that will strengthen education and research activities at the Malaysia-Japan International Institute of Technology (MJIIT) in UTM which will be implemented through the “i-Kohza” System. “i-Kohza” is a Japanese based education which integrates a Japanese mentorship style of teaching with the innovative infusion between Japanese an Malaysian values.

The Education and Research Fund will support the establishment of a new Research Lab as well as providing grants for research and development activities to promote academic research and scientific technology in Malaysia and ASEAN.

In addition, the grant will also encourage a wide range of education and research activities in MJIIT, with a view to contributing towards industrial advances, human resources development, and strengthening of international cooperation in Malaysia and ASEAN.

The sponsorship was announced by the Executive Director of TTE, Mr Emio Taniguchi at the Memorandum of Agreement (MoA) signing ceremony between MJIIT and TTE at The Magellan Sutera Resort, Sutera Harbour Resort on 1 June 2015.

Vice-Chancellor UTM, Prof. Datuk Ir. Dr. Wahid Omar represented MJIIT and TTE was represented by its Executive Director, Mr. Emio Taniguchi. The signing ceremony was witnessed by the Minister of Tourism, Culture and environment of Sabah, YB Datuk Seri Panglima Masidi Manjun.

The signing ceremony was held in conjunction with the 10th Asian Control Conference (ASCC2015) to be held in Kota Kinabalu from 31 May to 3 June 2015.

1. **Fund for Establishment of Research Lab**

MJIIT and TTE will establish a Research Lab named “TAKASAGO Thermal/Environmental Systems (TTES) Research Lab – For Sustainable Development by Low Carbon and Energy Saving Technologies”.

The Research Lab will focus on fields of renewable energy and energy saving technologies. It will encourage education and research activities related to energy issues in Malaysia and ASEAN, by making a paradigm shift from a society dependent on natural resources, in collaboration with other Research Lab providing research, to promote the fundamental researches on the efficient usage of residues.

Research Labs at MJIIT are implemented based on a system called “i-Kohza”, which was named after Kohza, which is a Japanese word for Japanese-style research lab group comprising both postgraduate and final year undergraduate students. The emphasis is on the unique Senpai-Kohai relationship or mentor-mentee concept, encouraging strong collaboration and continuous guidance between students and academics. “TAKASAGO Thermal/Environmental Systems (TTES) Research Lab” will be positioned as one of the i-Kohza centres at MJIIT.
2. Fund for TAKASAGO Education and Research Grant
The Grant is aimed at contributing to industrial advances, human resources development, and strengthening of international cooperation among Malaysia, ASEAN and Japan.

The Grant will support education activities for the cultivation of human resources by subsidizing investigation research, science and technology research and research development by MJIIT academics, for the development of industries and economies of Malaysia and ASEAN.

It will cover a wide range of academic activities and basic research related to science/technology at MJIIT, including

1) international mutual understanding and economic cooperation,
2) protection of global environment,
3) basic research on promoting energy conservation and renewable energy,
4) healthy youth development.

The projects to be supported by the grant will be selected annually by the respective Committees with the members from both TTE and MJIIT.

MJIIT was established in 2010 as a joint venture between the governments of Malaysia and Japan to offer a Japanese-style education at the Kuala Lumpur Campus of Universiti Teknologi Malaysia (UTM).

MJIIT offers an affordable, world-class education, which aims at educating future leaders within ASEAN countries. The Malaysia-Japan International Institute of Technology is expected to play an important role in helping Malaysia become the hub of higher education in ASEAN countries.

MJIIT aims to achieve innovative research/education from the perspective of Malaysia’s conventional research and educational culture; instruction on basic knowledge of engineering, emphasis on practical/experience-oriented training, encourage student’s voluntary participation in research and educational activities, emphasis on the relationship between Senpai (Mentor, Senior) and Kouhai (Mentee, Junior) by introducing i-Kohza system and suggestion for team play/transfer of academic achievements based on the concept of the relationship. - MJIIT Website

STUDENT AFFAIRS

THE 2ND ANNUAL BIO-IST EKIDEN RUN 2015

Ekiden Run 2015 was organized by Biologically Inspired System and Technology (Bio-IST) Laboratory and held on 16 May 2015 at Taman Tasik Perdana Kuala Lumpur. With participation of 10 groups, the event was start by opening event by Prof. Dr. Tatsuo Kitajima, the head of i-KOHZA, Bio-IST. The feature teams of four runners competing in a relay race over the same race course about 1.7 – 2.0 km before finishing the race. The inaugural event aims to deliver an experience that focuses on Japanese values such as team work, performance and perseverance. - MJIIT Website
On 8th July 2015, 9 Fudooka Senior High School (SHS) students accompanied by 2 teachers visited MJIIT. Upon arrival at MJIIT, Assoc. Prof. Dr. Koji Iwamoto welcomed them and gave a brief introduction. The event was attended by Prof. Dr. Fuminori Kobayashi, Deputy Dean (Liaison & Internationalization), Assoc. Prof. Dr. Koji Iwamoto, Prof. Dr. Masataka Shirakashi, Prof. Dr. Noriyuki Kuwano, Prof. Dr. Norio Arai and Dr. Jun Ishimatsu. 5 MJIIT students (2 undergrads, 1 Master and 2 PhD students) also volunteered to guide Fudooka students.

Later Prof. Kobayashi explained about MJIIT history and how it started prior to the establishment of the Institute under Universiti Teknologi Malaysia (UTM). Then, the teacher and students explained about their school. As an appreciation, Fudooka SHS presented a special gifts made by the students by using natural and recycle products.

Then the visitors visit Masjid UTM and observed shalaat or activity of worshipping during the afternoon prayer (Dzuhr). The Masjid officer gave a brief explanation. Later they were asked to cover their head with headscarves and were shown around inside the prayer hall, the ablution area, the preparation for the dead before burial (funeral) and demonstrated how the Moslem woman covered during prayer. - Tuan Norazma

MJIIT Organized 10th Asian Control Conference

Under the able leadership of MJIIT Dean, Prof Datin Dr Rubiyah Yusof, the 10th Asian Control Conference 2015 was successfully held at the prestigious Sutera Harbour Resort from 31st May to 3rd June 2015 with the theme "Emerging Control Techniques for a Sustainable World". This is the first time ASCC is held in Malaysia under the sponsorship of the Ministry of Culture and Tourism Malaysia and the Malaysia Convention and Exhibition Bureau. The local organising Committee comprised members of the Asian Control Association and students and staff of MJIIT, Universiti Teknologi Malaysia.

The conference was officiated by YAB Datuk Seri Panglima Musa Haji Aman, the Chief Minister of Sabah. The ASCC 2015 welcomed nearly 750 participants of which 400 were international participants. Almost 800 papers from 50 countries were received for first submission and from that, 562 papers were accepted and presented during the 4 days conference event. There were four keynote speakers namely Laureate Professor Graham Goodwin from University of Newcastle, Australia, Professor Tariq Samad from Honeywell Automation and Control Solutions, Minneapolis, U.S.A., Associate Professor Marcelo H Ang Jr. from National University of Singapore and Professor Mitsuo Umezu from Waseda University, Japan. Post conference tour packages were offered to foreign participants to experience the beauty of Sabah.

Fudooka Senior High School Short Visit

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INTRODUCTION TO i-KOHZA: COMMUNICATION SYSTEMS AND NETWORKS RESEARCH LAB

Assoc. Prof. Dr. Wan Haslina Binti Hassan  
Head of Communication Systems and Networks Research Lab  
Malaysia-Japan International Institute of Technology (MJIIT)

The Communication Systems and Networks (CSN) i-Kohza is an inter-disciplinary group focusing on cutting-edge research in the development of reliable and efficient delivery of information for future Internet. It encompasses several areas of study including, but not limited to, telecommunication engineering, mobile communication, sensor networks, intelligent algorithms, network security and bio-inspired networks. The thrust of the research is in the development of intelligent protocols and architectures that offer seamless support for a variety of applications and user requirements in next generation networks. Work under this group includes algorithm design, protocol development and analysis, network programming, and prototype development.

OBJECTIVES
To establish a world-class collaborative research environment backed by strong research funding while harnessing expertise from Malaysia, Japan and abroad.

RESEARCH AREAS

- **Dynamic wireless sensor networks**  
  Wireless sensor network (WSN) consist of spatially distributed autonomous sensors to monitor physical or environmental conditions, such s temperature, sound, vibration, pressure, humidity, motion or pollutants and to cooperatively pass their data through the network to a main location. Development of wireless sensor networks was motivated by military applications such as battlefield surveillance; today such networks are used in healthcare, agriculture and surveillance.

- **Cognitive radio networks**  
  Radio spectrum is a valuable and limited natural resource. To meet the growing necessity of radio spectrum, proper usage of the radio spectrum is a must. Cognitive radio uses an open spectrum sharing technique to make more effective utilization of the spectrum and reduces the bottleneck on the frequency bands.

- **Wireless network Security**  
  Wireless security is the prevention of unauthorized access or damage to computers using wireless networks. The risks to users of wireless technology have increased as the service has become more popular. There were relatively few dangers when wireless technology was first introduced. Crackers had not yet had time to latch on to the new technology and wireless was not commonly found in the work place. However, there are a great number of security risks associated with the current wireless protocols and encryption methods, and in the carelessness and ignorance that exists at the user and corporate IT level.

- **Quality of services in wireless sensor networks (WSN)**  
  Research main consideration is enhancement of Routing to gain better Quality of Services in Wireless Sensor Network. Real time and reliable communication are two parameters to be considered. In propose study, we working on Routing, network layer of OSI model to accomplish my mentioned tasks.

- **Cognition in wireless sensor networks**  
  Radio spectrum is a valuable and limited natural resource. To meet the growing necessity of radio spectrum, proper usage of the radio spectrum is a must. Cognitive radio uses an open spectrum sharing technique to make more effective utilization of the spectrum and reduces the bottleneck on the frequency bands. The goal of this research is to apply cognition concept on wireless sensor network which can be achieved by incorporating learning and reasoning in the upper layers, and opportunistic spectrum access at the physical layer.
• **Cognitive radio networks - telemedicine**
   Wireless communications technologies are using in medical data and patient information transmission by integrating a priority setting mechanism for cognitive radio network to choose the most critical signal from cognitive terminal (CT), bio-medical sensors, BAN, bio-inspired based life supporting system where the mechanism is intelligently determine the level of critical, observing the different medical and monitoring report.

• **Cloud computing**
   Cloud computing is no more considered an emerging technology and is swiftly reshaping the way in which organizations use IT services and products. The present economic environment is also accelerating interest in cloud computing as the cloud model promises a cost effective way for businesses to acquire and use IT services. Cloud computing is also often assumed to be a form of “green computing”. Therefore an extensive research from academics incorporating the industry is still required.

• **Swarm robotics**
   Swarm robotics is a new approach to the coordination of multirobot systems which consist of large numbers of mostly simple physical robots. It is supposed that a desired collective behavior emerges from the interactions between the robots and interactions of robots with the environment. This approach emerged on the field of artificial intelligence.
UPCOMING EVENTS

MALAYSIA-JAPAN JOINT INTERNATIONAL CONFERENCE 2015
(MJJIC2015)

13 - 15 NOVEMBER 2015
at
Yamaguchi University, TOKIWA Campus
Ube, Yamaguchi, JAPAN

Background:
Annual symposia and conferences have been organized to promote further collaboration in education and research among MJIIT, JUC, industry and other ASEAN institutes.

Objectives:
MJJIC2015 is the latest event for enhancing academic research between researchers, engineers and students from related organizations

Scope:
a. Electronic System Engineering
b. Mechanical and Precision Engineering
c. Environmental and Green Technology
d. Management of Technology
e. Robotics
f. Design Engineering
g. Special Industry Session: “MOT Education in ASEAN countries”

Organized by: In collaboration with:

Supported by: