

MyHVnet

Newsletter

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MyHVnet

is the abbreviated name for Malaysian High Voltage Network – a networking group for high voltage engineering in Malaysia.

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Preparations for MyHVnet Colloquium

BATU PAHAT, 01 January 2026 – The committee members of Malaysian High Voltage Network (MyHVnet) has begun preparations for the upcoming 2026 MyHVnet Colloquium to be held at Universiti Tun Hussein Onn Malaysia (UTHM) on 17 August 2026. The colloquium is the 6th colloquium organised

by MyHVnet.

During the meeting, the organising committee has been actively coordinating the event logistics, including the selection of keynote speakers and technical sessions. Academic

(continued on page 2...)



Photo during meeting.

Hi-Tea with High Voltage Researchers

SHAH ALAM, 05 December 2025 – A high-tea event that aimed to connect, learn and share topics on high voltage engineering was organised by the Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society (DEIS)

Malaysia Chapter on 5th December 2025. The event brought together students, academics, IEEE members, and Malaysian High Voltage Network (MyHVnet) members for a full day of knowledge sharing and networking.

(continued on page 4...)



Group photo.

MyHVnet 2025-2026 Chairman's Remarks



Assoc. Prof. Ir. Dr. Mohd Fairouz Mohd Yusof, Universiti Tun Hussein Onn Malaysia

It is a great honor and privilege to be entrusted with the responsibility of leading the Malaysian High Voltage Network (MyHVnet) for the 2025–2026 term. I am reminded of how far we have come since MyHVnet was first established in 2015. This year marks our remarkable 10th anniversary, a milestone that would not have materialized without the collective effort, enthusiasm, and continuous support of all our members from both universities and industries.

MyHVnet has always served as a unique and vibrant platform dedicated to complementing each other's strengths and bridging the gap between academia and industry. As we know, academia and industry truly need each other. Universities provide fundamental and applied research and nurture the talent pool, while our industry partners help realise the economic and societal impact of that knowledge and innovation. Although there can be natural tensions between the educational focus of a university and the commercial imperatives of industry, our network proves that by working together, we can be more than the sum of our parts. Through this synergistic collaboration, we can successfully move discoveries from our high voltage labs into the real world.

Over the past years, our members have actively participated in joint research studies, provided insightful industry perspectives as Industry Advisory Panels (IAP) at universities, and mentored academics seeking industry exposure. This collabo-

ration is vital not only for our research but for our students; it provides real-world learning opportunities that enhance graduate employability and ensures we are nurturing agile graduates who are ready for the rapidly evolving sectors they will enter.

As we look forward to the next two years, we will continue to focus on the core activities that have defined our success, such as our biennial MyHVnet colloquium, technical talks, seminars, and technical visits to factories. We will also sustain our fruitful collaborations with professional bodies such as the Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society (DEIS). Furthermore, by leveraging our academic-industry partnerships, we can work as a united team to address broader global and societal challenges and help prevent regional talent drain by addressing region-specific skills gaps.

The strength of MyHVnet truly depends on each member's effort in keeping up with frontier research and collaboration works. I would like to express my sincere appreciation to our immediate past Chairman, Ir. Ts. Dr. Mohd Aizam Talib, for his dedication in leading MyHVnet through the 2023–2024 term.

I look forward to seeing MyHVnet continue to grow and be recognised both locally and internationally. I hope all members will actively participate in our upcoming events as we embark on this next chapter together.

Thank you, and I wish all of you the very best!

MyHVnet Colloquium Welcomes Submissions

(...continued from page 1)

and industrial researchers and postgraduate students are the key participants of focus to present their latest work, providing an opportunity to receive constructive feedback and engage in meaningful discussions in high voltage engineering.

The colloquium will feature several technical tracks covering topics such as lightning, insulation and electrical discharges, high voltage system, electromagnetic compatibility, conductors and grounding systems, and other high voltage related issues. The event will serve as a valuable platform for young re-

searchers to enhance their presentation skills and broaden their academic perspectives.

The organising committee is pleased to extend an invitation for potential participants to submit a one-page extended abstract to the colloquium and look forward to the active participation of the high voltage community. Further details regarding the colloquium can be found in the brochure.

Assoc. Prof. Eur. Ing. Ir. Ts. Dr. Lau Kwan Yiew, Universiti Teknologi Malaysia.

MyHVnet Newsletter's Editorial Board

Advisers: Dr. Zulkarnain Ahmad Noorden (Universiti Teknologi Malaysia), Assoc. Prof. Ir. Dr. Mohd Fairouz Mohd Yusof (Universiti Tun Hussein Onn Malaysia)

Editor-in-Chief: Assoc. Prof. Eur. Ing. Ir. Ts. Dr. Lau Kwan Yiew (Universiti Teknologi Malaysia)

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Contributors: Members of MyHVnet

MYHVNET COLLOQUIUM

17TH AUGUST 2026

UNIVERSITI TUN HUSSEIN ONN MALAYSIA (UTHM)

The 2026 MyHVnet Colloquium will be held at Universiti Tun Hussein Onn Malaysia (UTHM) on 17th August 2026. This is the sixth colloquium organized by Malaysian High Voltage Network (MyHVnet). MyHVnet currently welcomes paper submission in the form of one-page extended abstract for presentation at the 2026 MYHVnet Colloquium.

TOPIC SCOPE

- Lightning
- Insulation & Electrical discharge
- High Voltage System
- Electromagnetic Compatibility
- Conductors & Grounding System
- Other High Voltage Related Issues

IMPORTANT DATE

Submission Deadline: 17th June 2026

Notification of Acceptance: 30th June 2026

Registration Cut Off Date: 1st August 2026

REGISTRATION FEES

Presenters: RM100 per paper + RM50 per subsequent paper
 Non-presenters: RM100 including technical tutorial session
 International Participants: USD40 + USD20 subsequent paper
 Technical Tutorial Session: RM100

WEBSITE

<https://deis.ieeemy.org>



SUBMISSION

<https://bit.ly/497qjci>



ABSTRACT TEMPLATE

<https://bit.ly/3HWSlr6>



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Connect, Learn, and Share about High Voltage

(...continued from page 1)

Highlights of the event included technical talks on “High Voltage Partial Discharge” delivered by Assoc. Prof. Ir. Dr. Mohd Fairouz Mohd Yousof of Universiti Tun Hussein Onn Malaysia and “Lightning Detection Systems” delivered by Ir. Ts. Dr. Wooi Chin Leong of Universiti Malaysia Perlis. An introduction to IEEE DEIS was also presented by the Chairman of the IEEE DEIS Malaysia Section, Assoc. Prof. Ir. Dr. Norhafiz Azis of Universiti Putra Malaysia.



Assoc. Prof. Dr. Lau (right) receiving his award plaque.

In conjunction with the event, the IEEE DEIS Malaysia’s Excellence in Engineering Award 2025 was proudly present-



Assoc. Prof. Dr. Hidayat (right) receiving his award plaque.

ed to Assoc. Prof. Eur. Ing. Ir. Ts. Dr. Lau Kwan Yiew of Universiti Teknologi Malaysia and Assoc. Prof. Dr. Hidayat Zainuddin of Universiti Teknikal Malaysia Melaka in recognition of their outstanding contributions to high voltage and insulation engineering.

The event concluded with an interactive discussion session that encouraged collaboration, research exploration, and professional engagement among participants.

Dr. Nik Hakimi Nik Ali, Universiti Teknologi MARA.

IVAT Colloquium

JOHOR BAHRU, 18 February 2025 – The Institute of High Voltage and High Current (IVAT) successfully held the second IVAT Colloquium at Fraser Place, Puteri Harbour, Johor, on 17th February 2025. The event was organised specifically for IVAT’s postgraduate research students. About 37 students with different research projects participated either physically or online in the event to share their research findings. I

The main objective of the event was to share post-graduate student’s research findings and exchange ideas on future research directions. The colloquium was also a platform to build the students’ confidence before their viva voces. Additionally, the event aimed to strengthen the relationship between IVAT’s staff and student members. During the event, two students were awarded for the Best Presenter Award and the 1st Runner-up Award, namely Siti Noorhazirah Kamarudin and Salma Nurdina Mohammad Noor, respectively. Both the awards were sponsored by the Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society Malaysia Chapter (DEIS) Malaysia Chapter.



Group photo.

IVAT hopes that the event can give motivation to post-graduate and other students who want to continue their studies at IVAT. IVAT wishes to extend its sincere thanks to the IEEE DEIS Malaysia Chapter and Kelab Kebajikan Staf IVAT (KKSJ) for sponsoring the event and making the event successful.

Dr. Nur Aqilah Mohamad, Universiti Teknologi Malaysia.

Workshop Bridges Theory and Practice in Partial Discharge Testing

ARAU, 22 JANUARY 2026 – A workshop titled “Bridging the Gap Between Theory and Practice in Partial Discharge Testing” was successfully held on 22 January 2026 at Universiti Malaysia Perlis. The event brought together students, researchers, and industry practitioners to deepen their understanding of partial discharge testing through theoretical insights and practical applications.



Mr. Mohd Helmy delivering his speech.

The workshop featured engaging sessions by invited speakers Mr. Mohd Helmy Halim Abdul Majid (Managing Director of MHH Condition Monitoring Sdn. Bhd.), Mr. Ahmad Syukri Abd Rahman (Assistant Operation Manager of MHH Condition Monitoring Sdn. Bhd.), and Assoc. Prof. Ir. Ts. Dr. Mohamad Nur Khairul Hafizi Rohani (Universiti Malaysia Perlis), who shared their expertise on partial discharge principles and methodologies, including the interpretation of Phase Resolved Partial Discharge (PRPD) patterns. Their presentations highlighted the importance of integrating fundamental principles with hands-



Assoc. Prof. Dr. Mohamad Nur Khairul Hafizi sharing his experience.

on experience to ensure reliable accurate partial discharge assessments.

During the workshop, participants were given the opportunity to interact directly with the speakers, fostering meaningful discussions on current industry practices and emerging trends. The workshop also emphasised the need for continuous learning and collaboration between academia and industry to address evolving challenges in partial discharge diagnosis.

The workshop served as a valuable platform for knowledge exchange and skill enhancement, reinforcing the importance of bridging theoretical knowledge with practical implementation in the field of partial discharge testing.

Assoc. Prof. Ir. Ts. Dr. Mohamad Nur Khairul Hafizi Rohani, Universiti Malaysia Perlis.



Mr. Ahmad Syukri (far right) demonstrating his work to participants.

About IEEE DEIS Malaysia Chapter

MALAYSIA, 01 January 2026 – The IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter was established in Malaysia in May 2015 with the aims to enhance networking and stimulate research and development in the field of dielectrics and electrical insulation in Malaysia. Its field of interest is in line with that of DEIS, i.e., the study and application of dielectric phenomena and behavior and the development, characterization and application of all gaseous, liquid and solid electrical insulating materials and systems utilized in electrical and electronic equipment. Through committees, IEEE DEIS Malaysia Chapter hopes to promote the close cooperation and exchange of technical information among its members.

Those joining DEIS will have the possibility of networking with a large number of experts worldwide, including Malaysia (through IEEE DEIS Malaysia Chapter), to show the results of their research activity or remain informed in the latest developments in their field. For more information, please visit:

<http://deis.ieeemy.org/> (IEEE DEIS Malaysia Chapter)

<http://www.ieeedeis.org/> (IEEE DEIS)

News on MyHVnet

In case you missed the previous news on Malaysian High Voltage Network (MyHVnet), Issues 1 to 10 of MyHVnet Newsletter (an initiative for the dissemination of high voltage related news, with particular emphasis on MyHVnet's activities) can be downloaded from the following link:

<http://ivat.utm.my/myhvnet/news/>



IEEE DEIS Malaysia Chapter

About IEEE DEIS Malaysia Chapter

- > The Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter was established in Malaysia in 2015.
- > IEEE DEIS Malaysia Chapter's establishment stems from the need of the dielectrics community in Malaysia to enhance networking and stimulate research and development in the field of dielectrics and electrical insulation.

About DEIS

- > DEIS is interested in the study and application of dielectrics from the molecular level, through nano-structured materials, to insulation systems in industrial, commercial, and power system equipment, to emerging applications such as those at high power levels and in biological and other small-scale systems.
- > DEIS supports the entire scope of the field from advancing the basic science, to enhancing the ability of practicing engineers to use emerging dielectric materials, to the development of standards for the prudent application of existing and new insulation systems.



All kind of dielectrics are dealt within DEIS scope: solid, liquid and gaseous dielectrics

Picture courtesy of DEIS

- > The field of interest of DEIS shall be the study and application of dielectric phenomena and behavior and the development, characterization and application of all gaseous, liquid and solid electrical insulating materials and systems utilized in electrical and electronic equipment.
- > DEIS is also involved in the creation of voluntary engineering standards and the recommended practices related thereto.
- > DEIS promotes the close cooperation and exchange of technical information among its members and to this end holds meetings for the presentation of papers and their discussion.
- > Through committees DEIS stimulates research, develops appropriate studies and standards, and sponsors periodic and special publications in the field of dielectrics and electrical insulation.

DEIS Membership

- > Joining IEEE DEIS will offer you the possibility of networking with a large number of experts to show the results of your research activity or remain informed in the latest developments in your field.
- > For more information, please visit:
<http://deis.ieeemy.org/> (IEEE DEIS Malaysia Chapter)
<http://www.ieeedeis.org/> (IEEE DEIS)

TARUMT Visit to UM High Voltage Laboratory

KUALA LUMPUR, 15 April 2025 – A group of 6 final-year students from the Bachelor of Electrical and Electronics Engineering programme at Tunku Abdul Rahman University of Management and Technology (TARUMT), accompanied by 1 master student and 2 lecturers, Dr. Thien Yee Voon and Dr. Yip Sook Yee, conducted an educational visit to the University of Malaya High Voltage Laboratory (UMHVL). The visit commenced at 2:00 PM and was hosted by the Head of UMHVL, Prof. Ir. Dr. Hazlee Azil Illias, alongside their co-supervisor, Ir. Dr. Raymond Wong Jee Keen. The main objective of the visit was to provide students with firsthand exposure to high voltage engineering practices, equipment, and research activities in a professional laboratory setting.

The visit began with a warm welcome and introductory briefing by Prof. Ir. Dr. Hazlee, followed by a comprehensive



Token of appreciation presented to Prof. Dr. Hazlee (right).

exploration of the lab's facilities and safety protocols by Ir. Dr. Raymond Wong. Students were then guided through the laboratory where they were introduced to key equipment such as impulse generators, high-voltage test transformers, and high voltage cables apparatus. A significant highlight was the explanation of operation for the Marx impulse generator, alternating current (AC), and direct current (DC) generators, which helped students better understand theoretical concepts discussed in their High Voltage Engineering course. The visit concluded with a group photo session. Students found the visit to be highly beneficial as it bridged the gap between classroom knowledge and real-world applications.

Dr. Thien Yee Voon, Tunku Abdul Rahman University of Management and Technology.



High voltage equipment.



Group photo.

Universiti Malaya High Voltage Seminar

KUALA LUMPUR, 17 July 2025 – Universiti Malaya High Voltage Seminar was conducted on 15 July 2025 at the Department of Electrical Engineering, Faculty of Engineering, Universiti Malaya. The seminar was part of the preparation for candidature defence and proposal defence for several members of the Universiti Malaya High Voltage Research Group (UMHVRG), as well as a platform for sharing their recent project progress. With eleven topics presented during the seminar, all presenters gained constructive feedback from the members.



Group photo.

Prof. Ir. Dr. Hazlee Azil Illias, Universiti Malaya.

Putra Knowledge Transfer Programme Successfully Held

SERDANG, 06 May 2025 – Universiti Putra Malaysia (UPM), through its University Community Transformation Centre (UCTC), in collaboration with the Pangkor Island District Head's Office, successfully conducted the Putra Knowledge Transfer Programme (PUTRAPIL) on 6 May 2025 at 9.00 am – 1.00 pm. The programme featured 2 key knowledge transfer sessions: composting using organic kitchen and garden waste, and the application of solar technology for a Nutrient Film Technique (NFT) hydroponic system.



Assoc. Prof. Dr. Jasronita delivering her speech.

This Ministry of Higher Education (MoHE)-sponsored initiative involved 50 participants from 5 local villages and aimed to build local capacity in sustainable agriculture and environmental management. The composting session, led by Mr. Khairul Aslim Abdul Rauf from UPM's Putra Agriculture Centre, provided participants with practical guidance on compost material selection, mixing techniques, storage, and monitoring for quality fertilizer production. The second session focused on the integration of solar energy to power NFT hydroponic systems, highlighting its benefits in reducing electricity costs and enhancing self-sufficiency in small-scale farming. This session has been conducted by Assoc. Prof.

Dr. Jasronita Jasni. Participants were introduced to system setup, maintenance, and best practices for combining renewable energy with modern agriculture. Both sessions received positive feedback, with participants eager to implement the techniques in their communities, underscoring UPM's commitment to sustainable innovation and impactful community engagement.

Dr. Thien Yee Von, Tunku Abdul Rahman University of Management and Technology.



Group photo.



High Voltage Calibration, Testing, Consultancy, Training, Research and Development at Institute of High Voltage and High Current, Universiti Teknologi Malaysia

Introduction

- > The Institute of High Voltage and High Current, or in Malay, Institut Voltan dan Arus Tinggi (IVAT), was established in Universiti Teknologi Malaysia in 1991
- > IVAT's establishment stems from the need of the country for a centre which carries out research and development, testing and calibration work, and training in the field of high voltage engineering
- > IVAT is a laboratory accredited under the Laboratory Accreditation Scheme of Malaysia and meets the requirements of MS ISO/IEC 17025:2017 (general requirements for the competence of testing and calibration laboratories)

Accredited Calibration and Testing Services



Ensure the reliability of your high voltage equipment through

Accredited Calibration & Testing Services



Accredited scope of calibration:

- AC – up to 180 kV rms
- DC – up to 180 kV
- Impulse – 50 kV to 140 kV
- High current – up to 1000 A



Accredited scope of testing:

- Power cable AC voltage withstand test from 2 kV to 180 kV at 50 Hz

Research and Development

IVAT has 2 main research themes covering comprehensive research on high voltage engineering:

Lightning Research and Safety:

- > Lightning monitoring, detection, and protection system
- > Lightning characterization, electromagnetic field, and radio frequency emission
- > Overvoltage protection system and insulation co-ordination, measurement techniques, surge arresters, and magnetic engineering
- > Grounding system improvement and measurement method
- > Super capacitor application in high voltage systems
- > Electromagnetic compatibility and interference in high voltage systems



Dielectrics, Discharges and Diagnostics:

- > Electrical discharge, detection, and monitoring
- > Partial discharge analysis on polymeric insulating materials
- > Condition monitoring of high voltage equipment
- > Diagnosis and fault analysis
- > Forensic investigation
- > Material assessment
- > Plasma and ozone generation applications
- > Low voltage and telecommunication surge protective devices

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Consultancy and Training Services

IVAT offers consultancy services for the following areas:

- > Laboratory accreditation based on MS ISO/IEC 17025: 2005
- > Lightning protection systems for buildings
- > Protection systems for electrical power networks
- > Grounding systems installations
- > High voltage product development
- > Low voltage and telecommunication surge protective devices

IVAT also organises training, visits, workshops, seminars and short courses for students, engineers, technical managers, technical supervisors, technicians, personnel, and researchers involved in electrical power industry. Some popular modules include:

- > Electrical Safety Seminar
- > Fundamentals of High Voltage Technology
- > Three-day Short Course on High Voltage Testing Techniques and Safety
- > Two-day Short Course on Grounding Systems
- > Short Course on Lightning Protection for High and Low Voltage Systems
- > Short Course on Partial Discharge Phenomena

Research Opportunities: University of Malaya High Voltage Research Group



UNIVERSITI
MALAYA

Greetings,

We are pleased to invite applications for PhD study at University of Malaya High Voltage Research Group (UMHVRG). The scopes of the projects include but are not limited to:

- Partial discharge measurement and simulation
- Dielectric material characterisations
- Artificial intelligence techniques in condition monitoring
- Optimisation techniques in high voltage equipment parameters' estimation
- Other high voltage engineering studies

STUDY MODE: Full-time research (Minimum 2 years, maximum 4 years)

REQUIREMENT:

- Academic qualification:
 - ♦ [Bachelor's Degree in Electrical Engineering with CGPA \geq 3.7 or equivalent] OR;
 - ♦ [Bachelor's Degree in Electrical Engineering with CGPA \geq 3.0 or equivalent] AND [Master by research in Engineering OR Master by Coursework in Engineering with CGPA \geq 3.00]
- Self-sponsored or fully funded
- Proficient in English language (written and spoken)
- Pleasant personality, hardworking and self-motivated
- Ability to carry out research work independently, quickly and efficiently
- Willing to write review and research papers

Advantages of pursuing PhD in UMHVRG:

- Widely experienced supervisors
- Great high voltage laboratory facilities
- Excellent working environment
- Friendly and helpful colleagues
- Top-class facilities in University of Malaya
- Enjoy fee waiver for appointed Graduate Research Assistant (GRA)

Interested candidate please send your resume with academic transcripts and research proposal to Professor Ir. Dr. Hazlee Illias at h.illias@um.edu.my or call +60379674483 anytime throughout the year.

For more information about University of Malaya High Voltage Laboratory, please visit <http://umhvl.um.edu.my>

For more information about the application of PhD study at the University of Malaya, please visit <https://study.um.edu.my>

Thank you.

POSTDOC OPPORTUNITY: Universiti Malaya High Voltage Lab

Requirement:

- Possess PhD Degree in Electrical Engineering
- Fluent in spoken and written English
- Good publication record
- Able to carry out research work independently

Benefits:

- Reasonable monthly salary
- Experienced supervisors
- Great lab facilities
- Excellent working environment
- Friendly and helpful colleagues
- Chance for contract renewal

Interested?

Please contact:
PROFESSOR IR. DR. HAZLEE AZIL ILLIAS
h.illias@um.edu.my or +60379674483



TARUMT ProDEx 2025 Successfully Held

KUALA LUMPUR, 15 May 2025 - The Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter became one of the sponsors for the Tunku Abdul Rahman University of Management & Technology (TARUMT) Project Design Exhibition (ProDEx) 2025 event. Thanks to the DEIS committee, Prof. Ir. Dr. Hazlee Azil Illias and Ir. Ts. Dr. Wong Jee Keen Raymond became the external judge in ProDEx 2025. The DEIS membership flyer was also distributed to the students to promote the DEIS society among the students.



Interactions during exhibition.



Prof. Hazlee (left) with Dr. Wong.

The Faculty of Engineering and Technology (FOET), Tunku Abdul Rahman University of Management and Technology hosted the ProDEx 2025 on 15 May 2025 at TARUMT Kuala Lumpur Campus with themes of "Engineering Solutions for a Sustainable Future." ProDEx

is a vibrant platform where final-year engineering and technology students showcase the results of their Capstone and Final Year Projects. It's an event designed to connect bright young talents with industry professionals, spark new ideas, and foster collaborations between academia and industry. The purpose of this event is not limited to evaluating the students' knowledge, skills, and ability to solve complex engineering problems, but also providing an opportunity to present and demonstrate their project outcome to internal and external visitors, as well as judging panels. Such exposure undoubtedly will strengthen the students' confidence, fostering their growth and development throughout the process.

Dr. Thien Yee Von, Tunku Abdul Rahman University of Management and Technology.

Technical Visit to UiTM High Voltage Laboratory

SHAH ALAM, 05 December 2025 – Members of Malaysian High Voltage Network participated in a technical visit to the High Voltage Laboratory of Universiti Teknologi MARA (UiTM), where they were introduced to equipment and experimental setups used in high voltage research of the university. The visit aimed to enhance participants' understanding of practical high voltage capabilities of UiTM and encourage collaborations among MyHVnet members.

During the visit, Dr. Nik Hakimi Nik Ali provided detailed explanations of the various experimental platforms used for studying high voltage phenomena. Participants had the opportunity to observe various setups of high voltage experiments used in teaching and research.

The visit concluded with a question-and-answer session, where participants engaged with laboratory staff to explore potential research opportunities and emerging technologies in the high voltage sector. Such initiatives are



Group photo at UiTM's High Voltage Laboratory.

expected to encourage greater interest in high voltage research and strengthen practical competencies among MyHVnet members.

Assoc. Prof. Eur. Ing. Ir. Ts. Dr. Lau Kwan Yiew, Universiti Teknologi Malaysia.



Universiti Teknologi Malaysia
Institute of High Voltage
and High Current

MS ISO 17025:2017

MEASUREMENT UNCERTAINTY FOR CALIBRATION AND TESTING

Trainer: Consultant & Technical Assessor by SIRIM Berhad

Laboratories pursuing ISO/IEC 17025 accreditation are required to establish and implement a robust procedure for the estimation of measurement uncertainty across all accredited testing and calibration activities. This course provides participants with a clear conceptual understanding of measurement uncertainty and a structured approach to its evaluation and calculation through guided lectures and practical applications.

Training Modules Include:

- Intro to measurement uncertainty
- Basic concept of measurement uncertainty
- Statistical Techniques
- Steps in calculating measurement uncertainty
- Practical exercises and sample calculations
- Spreadsheet applications

RM 1000



*DISCOUNT FOR A GROUP OF 3 PARTICIPANTS
* UTM CPD

22-23 JUNE 2026

08:00 am to 5:00 pm
Johor Bahru

LIMITED SLOTS AVAILABLE – RESERVE YOUR SPOT TODAY!

Contact us:
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✉ nuraqilah.m@utm.my

PHONE
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WEBSITE
<https://research.utm.my/ivat/>

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Block P06,
Faculty of Electrical Engineering,
Universiti Teknologi Malaysia,
81310 Johor Bahru, Johor, Malaysia.

Final Year Student Project Competition

ARAU, 24 November 2025 – The Final Year Project (FYP) for the 2024/2025 academic session of the Electrical Engineering Programme (RK23) and the Mechatronics Engineering Programme (RK24) under the Faculty of Electrical Engineering and Technology, Universiti Malaysia Perlis (UNIMAP), concluded successfully with the second edition of the “FYP IEEE DEIS Award 2025” held on 24 November 2025. The award was sponsored by the Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter. The event was graced by Assoc. Prof. Ir. Ts. Dr. Baharuddin Ismail (Deputy Dean of Academic and Research at UNIMAP), Assoc. Prof. Ir. Dr. Mohd. Azrik Roslan (Head of Electrical Engineering Department at UNIMAP), and Assoc. Prof. Dr. Kamarulzaman Kamaruddin (Head of Mechatronics Engineering Department at UNIMAP). The awards were divided into two categories:

Category 1: Electrical Engineering

First Place

Winner: Abdulaziz Abdulwahab Ali Oshaish
Supervisor: Dr. Azralmukmin Azmi

Second Place

Winner: Yogitra A/P Ganasen
Supervisor: PM Dr. Mohammad Faridun Naim Tajuddin

Third Place

Winner: Nik Nuraina Fadhilah Nik Muhammad Nasir
Supervisor: PM Dr. Norkharziana Mohd Nayan

Category 2: Mechatronics Engineering

First Place

(This project was conducted in collaboration with industry partner FAMAX Technology (M) Sdn Bhd)

Winner: Low Yuan Ying

Supervisors: Ir. Ts. Dr. Mohd Shuhanaz Zanar Azalan, Dr. Eng Swee Kheng (Co-supervisor)

Second Place

Winner: Thines A/L K Vasanthan
Supervisor: Prof. Dr. Hazry Desa

Third Place

Winner: Mohd Shakirin Mohd Shukri
Supervisor: PM Dr. Norasmadi Abdul Rahim

The IEEE DEIS Malaysia Chapter congratulates all winners and supervisors for their outstanding achievements. Special appreciation goes to the RK23 and RK24 FYP Committees for their dedication and hard work throughout the 2024/2025 academic session.

Ir. Ts. Dr. Wooi Chin Leong, Universiti Malaysia Perlis.



Photos with competition winners (clockwise): Abdulaziz Abdulwahab Ali Oshaish, Yogitra A/P Ganasen, Nik Nuraina Fadhilah Nik Muhammad Nasir, Mohd Shakirin Mohd Shukri, Thines A/L K Vasanthan, and Low Yuan Ying

Building Bridges in High Voltage Research

JOHOR BAHRU, 08 August 2025 - The Institute of High Voltage and High Current (IVAT) and the Faculty of Electrical Engineering, Universiti Teknologi Malaysia (UTM), in collaboration with the Institute of Electrical and Electronics Engineers (IEEE) Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter and Malaysian High Voltage Network (MyHVnet), successfully hosted a one-day event entitled "Research Networking: Connect and Collaborate" on 7th August 2025.

The event began with welcoming remarks by the Director of UTM Research Management Centre, Prof. Dr. Zulkurnain Abdul Malek, who shared the university's research ambitions and highlighted the importance of fostering a dynamic research ecosystem. The Director of IVAT, Ts. Dr. Zulkurnain Ahmad Noorden, then introduced the institute's history, calibration and testing capabilities, and research activities. He also emphasised IVAT's commitment to national and international collaborations.

The event featured distinguished speakers from China and Malaysia who shared their research works in high voltage engineering and related disciplines. First, Prof. Dr. Jiawei Zhang from Xi'an University of Technology, China, delivered an inspiring speech entitled "Smart Sensing Technology for Green Energy Systems". He shared with the participants innovative sensing technology aimed at improving the efficiency and sustainability of renewable energy systems. Next, Assoc. Prof. Dr. Peng Wang from Sichuan University, China, made an insightful presentation entitled "Key Technologies of Electrical Insulation in Transportation Electrification". He discussed on latest research intended for enhancing electric vehicles, electric aircrafts, and many other electrified transportation systems.

Meanwhile, Prof. Dr. Zulkurnain Abdul Malek presented his research work entitled "Optimisation of Superconduct-

ing Pulsed Transformer for High-Performance Inductive Pulsed Power Supplies". He highlighted the design of pulsed power transformers aimed at improving the efficiency of transformers in power applications. Assoc. Prof. Eur. Ing. Ir. Ts. Dr. Lau Kwan Yiew then shared his research work entitled "Materials Engineering for Next-Generation Electrical Insulation", emphasising the importance of developing advanced electrical materials in high voltage insulation systems that embrace sustainable development agenda.

In the afternoon, participants had the opportunity to tour several research facilities within UTM, gaining exposure to the research capabilities of the university. The tour began at the high voltage laboratory, where the participants observed various high voltage equipment used for calibration, testing and research purposes. The participants then visited the electric vehicle laboratory that showcased ongoing research projects in electric vehicle powertrains, charging systems, and performance optimisation. This was followed by a tour to the electric vehicle charging facility with integrated photovoltaic systems. The tour ended at the battery energy storage facility aimed at efficient energy management.

The event allowed intensive knowledge exchange and interactive discussion among the speakers and the participants. By uniting research experience from China and Malaysia, the event brought the opportunities for international cooperation in the fields of high voltage engineering, advanced materials, and modern energy systems, paving the way for future research agenda that align with energy sustainability.

Assoc. Prof. Eur. Ing. Ir. Ts. Dr. Lau Kwan Yiew, Universiti Teknologi Malaysia.



Group photo.

Pursue Your Postgraduate Studies at UTM IVAT

The Institute of High Voltage and High Current (IVAT), Universiti Teknologi Malaysia (UTM), welcomes applications for Doctor of Philosophy (PhD) and Master of Philosophy (MPhil) studies to undertake research projects at IVAT. The themes of the projects include:

- Lightning characterisation, monitoring and detection
- Electromagnetic compatibility and interference
- Partial discharge detection and measurements
- Plasma and ozone generation applications
- Supercapacitors in high voltage applications
- Dielectrics and electrical insulating materials

Admission Requirements:

- PhD:
 - Entry to the programme requires a Master degree in Electrical Engineering or equivalent from UTM or other Institution of Higher Learning recognised by UTM. First-class Bachelor graduates (CGPA \geq 3.67/4.00) may apply for a fast-track PhD (terms & conditions apply)
- MPhil:
 - Entry to the programme requires a Bachelor degree in Electrical Engineering or equivalent from a tertiary institution recognised by UTM, with a minimum CGPA of 2.75/4.00 for fresh graduates, or a minimum of 2.50/4.00 with four (5) years experience as an Electrical Engineering practitioner
- English Requirement for International Students:
 - All international students must have a valid two-year old IELTS certificate an IELTS Band 6.0

Why Study at IVAT?

- Our field of electrical and electronic engineering is ranked Top 150 in the world (according to QS World University Rankings by Subject 2025)
- Our high voltage laboratory is the largest in Malaysia
- We have well-equipped high voltage facilities
- We have widely experienced supervisors working on a variety of high voltage related research and development
- We have dedicated student working areas for office and laboratory work

To Apply:

- Please send your resume with academic qualifications, transcripts and research proposal to ivat@utm.my anytime throughout the year. You may also directly contact the respective project supervisors at IVAT.

For more information about IVAT, please visit: <http://ivat.utm.my/>

For more information about UTM's postgraduate programmes, please visit: <http://admission.utm.my/>



About MyHVnet

High voltage research and development activities continue to prosper in Malaysia due to rapid urbanisation across the country. Each year, an enormous amount of expenditure is allocated for the development of high voltage infrastructure and its relevant expertise to ensure its sustainability. This indirectly leads to an increasing number of players, both at the university and industry levels. While this certainly brings positive impact to the field of high voltage engineering, it can, sometimes, be difficult for interested parties to approach the right experts in a specific high voltage related area, e.g., lightning protection, condition monitoring and diagnosis, and insulation design. Consequently, more effective research and development activities related to high voltage engineering may have been hindered.

To address the above issue, the possibility of setting up an informal networking group relevant to high voltage engineering has been looked into. This leads to the idea of the estab-

lishment of Malaysian High Voltage Network (MyHVnet) in 2014. MyHVnet will hopefully serve as a “one-stop” platform for members from various organisations (universities and industries) across Malaysia for the effective communication of high voltage related research and development.

The main objectives of the establishment of MyHVnet are:

- i) To serve as a platform for the discussion of high voltage related research and development among member organisations.
- ii) To raise the awareness of the research and development capabilities of member organisations to high voltage related industries.
- iii) To lobby for high voltage related research funding.



Group photo at 2024 MyHVnet Colloquium.

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