



POORNIMA

COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

CONFERENCE REPORT

- **TITLE AND DURATION:** 4th IEEE International Conference on Recent Advances and Innovation in Engineering (ICRAIE-2019) held during 28-29 November 2019.
- **SPONSORS:** Technically sponsored by IEEE Computer Society Poland Section Chapter and IEEE Computational Intelligence Society.
- **SUPPORTERS:** University Tun Hussein Onn Malaysia, Intel, the University of Melbourne.
- **ORGANIZING PARTNERS:** ICRAIE-2019 was jointly organized by UiTM Kedah, Malaysia, IEEE Malaysia & Poornima College of Engineering, Jaipur
- **PUBLISHER(S):** IEEE
- **ISBN/PARTNO./INDEXING AGENCY:** Electronic ISBN: 978-1-5386-4525-3, Print on Demand (PoD) ISBN: 978-1-5386-4526-0, IEEE Xplore Digital Library.
- **THEMES/TRACKS:**
 - **Track 1:** Computer Science & Engineering / Information Technology.
 - **Track 2:** Electronics & Communication Engineering.
 - **Track 3:** Electrical Engineering.

OBJECTIVES:

Poornima University, Poornima College of Engineering & UiTM Kedah Malaysia, IEEE Malaysia team has made an effort to make the Third International Conference ICRAIE-2019 a reality. As per the objective, it could bring together Academicians, Researchers, and Industry Experts in the areas of Computer Science & Information Technology, Electronics & Communication Engineering, and Electrical Engineering for the dissemination of original research, new innovations, and ideas on the International Platform.

EXPECTED OUTCOMES:

ICRAIE 2019 was technically sponsored by IEEE Delhi Section, supported by IEEE Rajasthan Subsection and Technically Co-sponsored by ISLE, IETE, ISTE, and IEI, Poornima University IEEE Student Branch Chapters. A target of 250 papers was set in three tracks Computer Science & Information Technology, Electronics & Communication Engineering, and Electrical Engineering

LEARNING OUTCOMES:

CO1: To appropriate agreement to promote and encourage the youth to select for Engineering education.

CO2: To produce quality Engineers for the bright future of our country.

CO3: Opportunity to learn, Discuss & interact with intellectuals all over the world.

MAPPINGS WITH PO AND PSO

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	3	-	-	-	-	-	-	-	1	1
CO2	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1
CO3									3	2		1			

**BROCHURE / POSTER / LEAFLET / FLYER:
FOURTH IEEE INTERNATIONAL CONFERENCE ON
RECENT ADVANCES AND INNOVATIONS IN ENGINEERING
(ICRAIE - 2019)
IEEE CONFERENCE RECORD # 47735**

Technically Sponsored by:



Co-Organizer:



Supporters:



Department of Computer Science
UiTM Neohi Campus, Neohi, Malaysia



**Organized by:
UiTM Kedah, Malaysia
IEEE Malaysia &
Poornima College of Engineering, Jaipur**


Dr. Mahesh Bunde
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RESPONSE (SUBMISSION / ACCEPTANCE / PRESENTATION):

In ICRAIE-2019, a total of 240 reviewers across the world consented and reviewed the papers. 52 papers were accepted after a rigorous review procedure, making it very selective. 39 registered papers were presented in 13 Oral Sessions during November 28-29, 2019. A total of 160 Bachelor, Master, and Doctoral scholars and professionals attended all the sessions including registered participants and local attendees.

SUMMARY / CATEGORIZATION OF PARTICIPANTS:

ICRAIE-2019 provided a stimulating environment for researchers, scientists, engineers, educators, industrial lists, and students from all over the world to discuss and present the research findings in the interest of society and the nation. The conference covered major areas of research in Electrical, Electronics, and Computer Engineering. Technical sponsor of the ICRAIE-2019 with IEEE Conference Record # 47735 was IEEE Delhi Section and supported by IEEE Rajasthan Subsection and Technically Co-sponsored by ISLE, IETE, ISTE, IEI, and Poornima University IEEE Student Branch Chapters.

In ICRAIE-2019, the Easy Chair conference management system was utilized to cater to the enthusiastic response making it to around 78 received manuscripts across 9 countries. Participants from countries like the United Kingdom, Iran, Germany, and Nigeria have also presented their research. The average paper acceptance rate was 66 % whereas 50 % with reference to accepted papers were presented.

	Track1CS /IT	Track2E CE	Track3EE
Total No .of Papers Submitted	49	15	13
Total No. of Papers Accepted	32	12	8
Total No. of Papers Registered	26	10	3
Total No .of Papers Presented	26	10	3

The Honorable Dr. Mahesh Bunde, Director and Principal of Poornima College of Engineering Rajasthan, Jaipur, India accompanied by the organizing chair, Dr. Shamsul Jamel Elias, and, the conference chair II, Mrs. Siti Rafidah Muhamat Dawam, welcoming session with UiTM Kedah Branch Campus Rector, Assoc. Prof. Dr. Shaiful Annuar Khalid. The inaugural session was initiated with two parallel sessions at two different locations, 5 presentations were held at Seri Jerai Hall while 4 oral presentations were held at Big Data Lab. The guest of honor, is Associate Professor Dr. Maxim Mozgovoy from the University of Aizu Japan.

The sessions continued with a skype presentation from the honorable keynote speaker from Prof. Rajkumar Buyya from the University of Melbourne, Australia. The title of his presentation is "New Frontiers in Cloud and Edge/Fog Computing for Future Internet of Things".

Things Applications”.

The conference continued with a Plenary speech by Associate Professor Dr. Maxim Mozgovoy from University of Aizu Japan titled “Multiplatform Automated Software Testing: Personal Experience”. Next, plenary speech was given by Dr. Mahesh Bunde, Director and Principal of Poornima College of Engineering Rajasthan, Jaipur, India, titled “Scientific Research Paper: Reading & Writing”. The session proceeded with an opening ceremony by the arrival of VVIPs from UiTM Kedah Branch, Deputy Rector of Academic Affairs, Dr. Kamarudin Othman, the Deputy Rector of Student Affairs, Dr. Wan Irham Wan Ishak, the Deputy Registrar, Mr. Ismi Ridhwan Ismail, the Chief Librarian, Mrs. Azizah Khasim, and the Deputy Bursar, Mrs. Norhafizah Che Mat. The event started with the national anthem, “Negaraku” and university song, “UiTM Di Hatiku”. The conference chair I, Dr. Taniza Tajuddin delivered her speech to welcome the guest, audiences and participants. The officiating speech was given by the Deputy Rector of Academic Affairs, Dr. Kamarudin Othman, followed by a gimmick and montage presentation. Dr. Kamarudin Othman accompanied by the conference chairs, later presented tokens of appreciation to plenary speakers, Associate Prof. Dr. Maxim Mozgovoy and Dr. Mahesh Bunde for their outstanding presentation.

Conference materials were initially published on USB pen drives (as Preprints) and distributed to conference participants. After the conference, full papers were submitted to the IEEE Xplore Digital Library for publishing and indexing. Moreover, the Proceedings and Communication Papers of the ICRAIE-2019 Conference (in their final version) were posted on the IEEE Explore website with a link as <https://ieeexplore.ieee.org/xpl/conhome/8703604/proceeding> and DOI: 10.1109/ICRAIE47735.2019.9037647.

It should be stressed that only papers presented at the conference were published in either form (the ICRAIE conference series strictly adheres to the "IEEE No-show Policy")

PROGRAM OUTLINE:

INAUGURAL SESSION:

CONFERENCE SCHEDULE

4th International Conference and Workshops on Recent Advances and Innovations in Engineering (ICRAIE2019)
At Universiti Teknologi MARA Kedah Branch

DAY 1: Thursday (28th Nov 2019)	
08:00am – 09:00am	Conference Preparation & Registration I
09:00am – 10:30am	Parallel Session 1 Venue 1: Big Data Lab, Grd Floor (MK10), UiTM Kedah Venue 2: Seri Jerai Hall, UiTM Kedah
10:30am – 11:00am	Refreshment
11:00pm – 12:00pm	Keynote Address by Prof. Rajkumar Buyya, University of Melbourne, Australia. {Skype Presentation Title: New Frontiers in Cloud and Edge/Fog Computing for Big Data & Internet-of-Things Applications}
12:00pm – 01:00pm	Conference Preparation & Registration II
01:00pm – 01:50pm	Lunch Break
02:00pm – 02:15pm	Arrival of Guests and Participants Arrival of VIPs
02:15pm – 02:50pm	Plenary Speaker by Assoc. Prof. Maxim Mozgovoy, University of Aizu, Japan Title: Multiplatform Automated Software Testing: Personal Experience
02:50pm – 03:20pm	Plenary Speaker by Dr. Mahesh Bundele, Poornima College of Engineering Rajasthan, Jaipur, India Title: Scientific Research Paper: Reading & Writing

03:30pm – 04:30pm	OPENING CEREMONY
3.30 pm – 3.40pm	Arrival of VVIPs
3.40 pm – 3.50 pm	Negaraku & UiTM Di Hatiku MC's Welcoming Speech & Doa Recitation
3.50 pm – 4.00 pm	Welcoming Speech of Conference Chair 1
4.00 pm – 4.10 pm	Officiating Speech of Deputy Rector of Academic Affairs
	Gimmick & Montage
4.30 pm – 5.00 pm	Photography session Refreshment

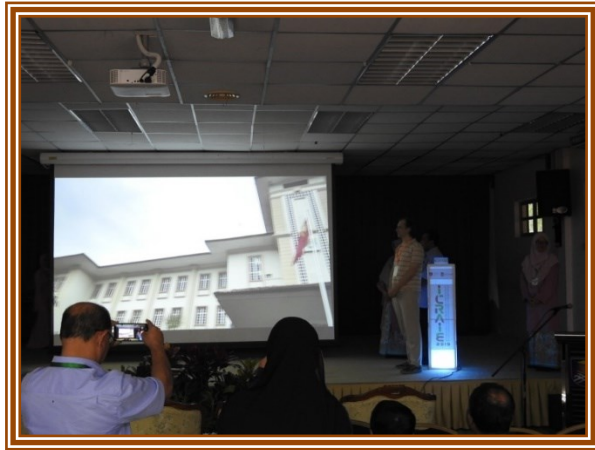
DAY 2: Friday (29th Nov 2019)	
08:00am – 08:30am	Registration
08:30am – 10:00am	Parallel Session 2 Venue 1: Merbok Room (K1) at Ground Floor, UiTM Kedah Venue 2: Mahawangsa Room (K2) at Ground Floor, UiTM Kedah Venue 3: Jerai Room (K3) at Ground Floor, UiTM Kedah Venue 4: Langkasuka Room (K4) at Ground Floor, UiTM Kedah
10:00am – 10:30am	Refreshment
10:30am – 11:30am	Parallel Session 3 Venue 1: Merbok Room (K1) at Ground Floor, UiTM Kedah Venue 2: Mahawangsa Room (K2) at Ground Floor, UiTM Kedah Venue 3: Jerai Room (K3) at Ground Floor, UiTM Kedah Venue 4: Langkasuka Room (K4) at Ground Floor, UiTM Kedah Venue 5: Tanjung Dawai Room (K5) at Ground Floor, UiTM Kedah
11:30am – 01:00pm	CLOSING & AWARD GIVING CEREMONY Lunch
01:00pm – 02:30pm	Adjourn & Jumaat Prayer
02:30pm – 05:30pm	Conference Tour

KEYNOTE SPEAKERS:

- **Prof. Rajkumar Buyya** (Professor and Director of the Cloud Computing and Distributed systems Laboratory, University of Melbourne Australia.
Topic: New Frontiers in Cloud and Edge/Fog Computing for Big Data & Internet-of-Things Applications
- **Assoc. Prof. Dr. Maxim Mozgovoy** (University of Aizu, Japan)
Topic: Multiplatform Automated Software Testing: Personal Experience
- **Dr. Mahesh Bunde** (SMIEEE, Vice Chair, ACM Jaipur Professional Chapter, Member STDCOM, IEEE Delhi Section, LMISTE, AMIE, MACM, Principal & Director, Poornima College of Engineering, Jaipur)
Topic: Scientific Research Paper: Reading & Writing

GLIMPSES OF PRESENTATIONS:







Conference Tour DAY 2 Friday - 29th November 2019

ICRAIE 2019 has also offered a fantastic Merbok River Cruise, and a visit to a historical Sungai Batu Archeological site – the oldest Southeast Asian Civilization to the participants.





VALEDICTORY SESSION:

Lastly, the Conference came to an end with a Valedictory Function. Deputy Rector of Academic Affairs of University Teknologi MARA Kedah, the underlying agenda of this conference, it served as a venue to forge closer ties among the national and international participants. He took the opportunity to thank the guest of honors, the keynote and plenary speakers, the presenters, and the participants for their support of ICRAEI 2019. To borrow Winston Churchill's words "The price of greatness is responsibility" Technology is a precious gift so it is up to us how we search for the proper knowledge and care of handling it. As scholars, are we ready for this challenging task? With that note, he officiated the conference ICRAEI 2019 with the theme: "Thriving Technologies". He finally congratulated the best paper award winners, and wished all participants "Happy Conferencing and all the best".



List of Attendees

AUTHORS as ATTENDEES				
Track 1: Computer Science Engineering / Information Technology				
<u>S.No</u>	<u>ID</u>	<u>Authors</u>	<u>Paper</u>	<u>Name of Attendees</u>
1.	7	Animesh Deval, Rohit Kumar, Rahul Vyas (Flytxt Mobile Solution, India)	A recommendation of right product to right customer, next best offer: a comparative study	Animesh Deval, Rohit Kumar
2.	10	See Yuen Chark, Jian Jing Saw (Universiti Tunku Abdul Rahman, Malaysia)	Internet Of Things (IOT) Based Smart Wall Outlet	See Yuen Chark
3.	13	Mohammed Hajjaj Mitsunori Miki and Kitsunori Shimohara (Doshisha University, Japan)	Reducing the Energy by Utilizing Distributed Luminance of the Occupancy Spaces at the Office	Mohammed Hajjaj
4.	16	Nor Laily Hashim Yasir Salman Dawood (Universiti Utara Malaysia, Malaysia)	Review on Test Case Generation Methods using UML Statechart	Nor Laily Hashim
5.	19	Jamal Salem Amro Rohaida Romli (Universiti Utara Malaysia, Malaysia)	Investigation on the Learning Programming Techniques via Mobile Learning Application	Rohaida Romli
6.	69	Siti Azreena Mubin Matthew Wee Ann Poh (Asia Pacific University of Technology & Innovation (APU), Malaysia)	A Review on Gamification Design Framework: How They Incorporated for Autism Children	Siti Azreena Mubin
7.	22	Suman Sukhavasi, Thinagaran Perumal Norwati Mustapha Razali Yaakob (Universiti Putra Malaysia, Malaysia)	Device Verification and Compatibility for Heterogeneous Semantic IoT Systems	Thinagaran Perumal
8.	27	Yi Yun Lau, Muhammad Nasiruddin Mahyuddin Bakhtiar Affendi Rosdi Noor Hafizi Hanafi (Universiti Sains Malaysia, Malaysia)	Autonomous Test System for CAN-based Automotive Instrument Cluster	Muhammad Nasiruddin Mahyuddin
9.	37	Yong Jonathan Chung Ee Shariff Ghanem Nawazdeen, Norsaremah Bt Salleh Siow Chee Loon (UCSI University)	Risk Assessment of Building Fire Evacuation with Stochastic Obstructed Emergency Exit	Yong Jonathan Chung Ee


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10.	39	Zhong Ying Thean Vooi Voon Yap Peh Chiong The (Universiti Tunku Abdul Rahman, Malaysia)	Container-based MQTT broker cluster for edge computing	Zhong Ying Thean
11.	40	Muhamad Najib Zamri Mohd Shahrizal Sunar (Universiti Teknologi Malaysia, Malaysia)	Research on Atmospheric Clouds: A Review of Cloud Animation Methods in Computer Graphics	Muhamad Najib Zamri
12.	41	Syahida Hassan Azizah Ahmad, Alawiyah Abd Wahab, Rahayu Ahmad, Juliana Wahid (Universiti Utara Malaysia, Malaysia)	Simplicity is The Golden Rule: Lesson Learned from The Development of Smart Mobile Apps for Rural Community	Syahida Hassan
13.	42	Nur Nabilah Binti Abd Rahman Noor Syuhada Elyza Ghazali, Abdullah Sharaf and Rania Al-Ashwal (Universiti Teknologi Malaysia, Malaysia)	Critical Path Analysis For Myocardial Infarction Patient	Nur Nabilah Binti Abd Rahman
14.	46	Laurent Nana François Monin and Sophie Gire (University of Brest, France)	Proof of properties of a syntax analyzer of robotic mission plans	Laurent Nana
15.	50	Ramesh Chand Meena Meenakshi Nawal Mahesh Bunde (SET, Poornima University, Jaipur, India)	Appraisal of Source IP Validation Techniques in SDN	Ramesh Chand Meena
16.	56	Medikonda Asha Kiran Syam Kumar Pasupuleti R Eswari (IDRBT/NIT Trichy)	A Lightweight Two-factor Mutual Authentication Scheme for Cloud-based IoT	Medikonda Asha Kiran
17.	57	Nahla Mohammed Elzein Mazlina Abdul Majid Mohammed Fakherldin Ibrahim Abaker (Universiti Malaysia Pahang, Malaysia)	ANN-based Performance Analysis on Human Activity Recognition	Nahla Mohammed Elzein
18.	54	Boezura Borhanuddin Norziana Jamil Ooi Thomas Wei Min Mohd Zafri Baharuddin Chen Soong Der Tan Kelvin Sim Zhen (Universiti Tenaga Nasional, Malaysia)	Small-Scale Deep Network for DCT-Based Images Classification	Boezura Borhanuddin

19.	64	Suhanah Rosnan Nurazzah Abd Rahman Shahirah Mohamed Hatim Zahirah Hamid Gul Universiti Teknologi MARAJohor, Perak, Shah Alam, Malaysia)	Performance Evaluation of Inverted Files B-Tree and B+Tree Indexing Algorithm in Malay Text	Shahirah Mohamed Hatim
20.	72	Khairul Adilah Ahmad Mahmod Othman Sharifah Lailee Syed Abdullah Noor Rasidah Ali Siti Rafidah Muhamat Dawam (UiTM Kedah, Malaysia)	Mango Shape Maturity Classification Using Image Processing	Khairul Adilah Ahmad
21.	75	Jamaluddin Jasmis, Mohd Nor Hajar Hasrol Jono, Azlan Abdul Aziz, Rosdiana Abd Razak, Shamsul Jamel Elias Shaifizat Mansor (UiTM Kedah Malaysia)	An Evolutionary Tool For Requirements and Design Crosscutting Concerns	Shaifizat Mansor
22.	76	Afida Ahmad, Ong Weng Eng Ab Razak Mansor (UiTM Kedah, Malaysia)	Preserving the Positivity of Curves and Surfaces using Radial Basis Function	Afida Ahmad
23.	77	Aznor Hanah M R A Rejab, Rohani Farook, M Fairuz M Fadzil, Shamsul Jamel Elias Zulkifli Husin (UNIMAP, Malaysia)	IoT Room Control And Monitoring System Using Rasberry Pi	Aznor Hanah
24.	67	Nur Hana Samsudin Lukman Nurhaqim Rahim (Universiti Sains Malaysia)	Rapid Heteronym Disambiguation for Text-to- Speech System	Nur Hana Samsudin
25	79	Quinny Ben Hassan, Azlan Abdul Aziz, Jamaluddin Jasmis Jasmis, Zainal Fikri Zamzuri, Syamsul Ariffin Yahya, Mohd Nor Hajar Hasrol Jono Shamsul Jamel Elias Elias Siti Nurbaya Ismail (UiTM Kedah)	Evaluation of e-Content for Adult Learners in a Distance Education Program: A Case Study	Siti Nurbaya Ismail
26	80	Taniza Tajuddin Azizah Abdul Manaf,	Crime Suspect Profiling (CSP) for Forensic	Taniza Tajuddin

		Nor Fatimah Awang, Siti Rafidah Muhamat Dawam, Noor Rasidah Ali Rafidah Amat (UiTM Kedah)	Investigation on Smartphone	
Track 2: Electronics And Communication Engineering				
27	14	Anita Garhwal Mohd. Riduan Ahmad, Badrul Hisham Ahmad, Sanyog Rawat, Pushepndra Singh, Kanad Ray, Anirban Bandyopadhyay (Amity University Rajasthan)	Dual Band Flower Shaped Fractal Patch Antenna for Remote Health Monitoring	Anita Garhwal
28	23	Fredrik Schalling Sebastian Ljungberg Naveen Mohan (KTH Royal Institute of Technology)	Benchmarking LiDAR Sensors for Development and Evaluation of Automotive Perception	Fredrik Schalling
29	38	Ramashini Murugaiya, Pg Emeroylariffion Abas, Ulmar Grafe, Liyanage C De Silva	Bird Sounds Classification using Linear Discriminant Analysis	Pg Emeroylariffion Abas,
30	44	Yuliarman Saragih Gilang Ramadhany Hakim Agatha Elisabet (Singaperbangsa Karawang of University, Indonesia)	Monitoring Design of Methods and Contents Methods in Semi Real Water Tandon by Using of Arduino – based on Internet of Things	Yuliarman Saragih
31	48	Ahmed A. Hussain Nizar Tayem, Abdel-Hamid Soliman (Prince Muhammad Bin Fadh University)	Matrix Decomposition Methods for Efficient Hardware Implementation of DOA Estimation Algorithms: A Performance Comparison	Ahmed A. Hussain
32	55	Venkata Raghunadh Machavaram (A. Prof) Bheema Rao Nistala (National Institute of Technology, Warangal, India)	A High Performance Miniaturized onchip 25 GHz Narrow Bandpass Filter for 5G Radio Access Applications	Venkata Raghunadh Machavaram (A. Prof)
33	58	Sridhar K V Prof. Kishore Kumar T (National Institute of Technology, Warangal, India)	Performance Evaluation Of CS Based Speech Enhancement Using Fixed And Sparse Dictionaries	Sridhar K V

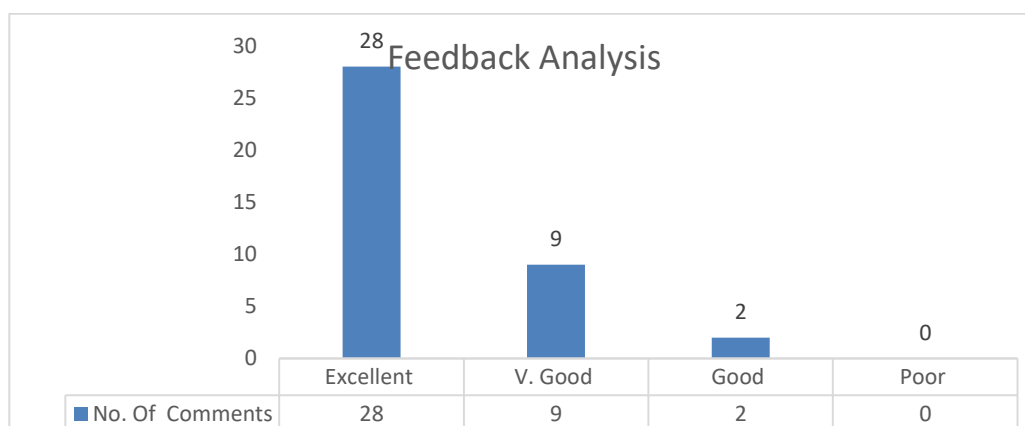
34	63	Sagar Shankarrao Dr Minh Nyuen Prof Wei Qi Yan Shazebo Kazi (Auckland University of Technology, New Zealand)	Human Tumor Detection using Active Contours and Region Growing Segmentation	Sagar Shankarrao
35	66	Saravana Selvan Umayal (Aimst University, Malaysia)	A Novel Dual Electrode and Gate Extended Doping-less TunnelFET for RF Energy Harvesting	Saravana Selvan
36	70	Indu Chhipa Devendra Somwanshi (Poornima University, India)	Fuzzy Logic Controller to control internal climate of a greenhouse	Indu Chhipa
Track 3:Electrical Engineering				
37	49	You-Chun Huang Chin-Sien Moo, Wan-Jung Chen, Shih-An Yin (National Sun Yat-Sen University)	An LED Driver Circuit with Partial Power Regulation for Photovoltaic Warning- Light	You-Chun Huang
38	60	Nur Darina Ahmad Nik Muhamad Syazwan Nek Omar Siti Solehah Md Ramli, Nurul Huda Ishak Mohd Taufiq Ishak Norlina Md Zain (UiTM Pulau Pinang Branch, Malaysia)	A Study on Varies Temperature and Varies Gap Distance on Mixed Vegetable Oil as an Transformer Oil	Nur Darina Ahmad
39	61	Siti Solehah Md Ramli Mohd Khairul Anwar Md Khairudin Nur Darina Ahmad Nurul Huda Ishak Nur Fadhillah Jamaludin Nur Atharah Kamarzaman Mohamad Kamarol Mohd Jamil (UiTM Pulau Pinang Branch, Malaysia)	An Effect on Form Particle Contamination in Biodegradable Transformer Oil	Siti Solehah Md Ramli

FEEDBACK ANALYSIS:

Written feedback was collected from each participant during each session. Oral feedback and views shared by the participants revealed that the conference has successfully fulfilled the objectives of the conference set forth. All the participants in their oral feedback have given positive remarks in all respects and shown their satisfaction over all the arrangements except about the time management.

♦ The analysis is presented below;

	Attributes	Comments	No. Of Comments
Program	How was the seminar?	Excellent	28
		V. Good	9
		Good	2
		Poor	0



SWOT ANALYSIS:

The primary goal of such conferences is to promote research and developmental activities in recent advances in engineering and allied areas. Another goal is to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in and around the world.

Strengths of the Conference:

- Experienced event team.
- Excellent PR.
- High motivation level.
- Usage of the right event marketing tools.
- Good market share, strong brand name.
- Many social media followers.

Weakness of Conference:

- Domination by a few Participants
- Expenditure