

A⁺STECH

SARAWAK

ADVANCED SUSTAINABLE TECHNOLOGY INTERNATIONAL CONFERENCE
Fostering Research and Innovation for Sustainable TVET Development:
Pathways to Resilient Future

5th - 6th August 2024

**The Waterfront Hotel,
Kuching Sarawak,
Malaysia**

Programme Book



Main Organizer



Main Sponsor



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In collaboration with:



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Foreword

Advanced Sustainable Technology International Conference



*Assalamu'alaikum warahmatullahi wabarakatuh
Bismillahirrahmanirrahim*

It is with immense pride and great anticipation that we welcome you to The Advanced Sustainable Technology International Conference 2024 (ASTECH 2024). This conference marks a significant collaborative milestone, representing the unified efforts of Politeknik Negeri Bandung (POLBAN), Indonesia and our co-organiser Politeknik Kuching Sarawak (PKS), Malaysia, with the support of our main sponsor, the Ministry of Education, Innovation and Talent Development Sarawak (MEITD), in collaboration with Brunei Darussalam-Indonesia-Malaysia-Philippines East Asean Growth Area (BIMP-EAGA), Malaysia National University (UKM), SIDMA College Sarawak, the Technological Association Malaysia, and the Association of Professional Technicians & Technologists (APTT), TAM Sarawak, and Iloilo Science and Technology University. Together, these esteemed institutions and associations have orchestrated an event that promises to be a beacon of knowledge, innovation, and sustainable progress. These prestigious organizations and groups have worked together to plan an event that will shine a light on innovation, knowledge, and long-term progress.

ASTECH 2024 aims to gather a distinguished assembly of global academicians, scholars, researchers, and industry experts, providing a dynamic platform for the exchange of knowledge and ground-breaking ideas. This conference is more than just a meeting; it is a fertile ground for cultivating a robust research and innovation ecosystem. We are dedicated to encouraging participants to explore and develop state-of-the-art sustainable technologies across a broad spectrum of disciplines, including engineering, technology, science, Technical and Vocational Education and Training (TVET), and education.

Aligned with the principles of Industry Revolution 4.0, ASTECH 2024 is poised to drive progress in these critical areas. The conference agenda is carefully crafted to address the latest advancements and challenges, encouraging discussions that will pave the way for future technological innovations and sustainable solutions. By integrating advanced sustainable technologies, we aim to contribute to a future where technological growth harmoniously coexists with environmental stewardship.

Presenters and participants at ASTECH 2024 can anticipate a comprehensive program featuring insightful keynote speeches, engaging panel discussions, and thought-provoking presentations. We are confident that ASTECH 2024 will be an enriching and inspiring experience for all attendees. It will provide vast opportunities for networking, collaboration, and the exchange of innovative ideas that address the pressing challenges of our time. We believe that the insights gained and the connections made during this conference will significantly contribute to the global advancement of sustainable technologies and practices.

MARWANSYAH S.E., M.SI., PH.D.

**Director
Politeknik Negeri Bandung, Indonesia**

I would like to express my profound gratitude, on behalf of the organizing committee, especially to our sponsors and to all of the attendees, speakers, and organizers for their commitment to make ASTECH 2024 a successful one. Your contributions are invaluable, and your commitment to fostering a better, more sustainable future is truly commendable. Together, we will explore new horizons and pave the way for significant advancements in sustainable technology. Welcome to ASTECH 2024! We look forward to a successful and impactful conference.

Thank you.

*Wabillahitaufik Walhidayah Wassalamualaikum Warahmarullahi
Wabarakatuh.*





Foreword

Advanced Sustainable Technology International Conference



Assalamu'alaikum warahmatullahi wabarakatuh
Bismillahirrahmanirrahim

I would like to take this opportunity to welcome all stakeholders, sponsors and committee members to The Advanced Sustainable Technology International Conference 2024 (ASTECH 2024) with great pleasure and excitement. I am also delighted to send out my sincerest greetings to all participants, scholars, researchers, and industry experts who have joined us for this significant event. ASTECH 2024 is a remarkable collaboration between Politeknik Negeri Bandung (POLBAN) in Indonesia and Politeknik Kuching Sarawak (PKS).

As we embark on this journey, we are reminded of the significant collaborative effort and dedication that have led us to this momentous occasion. All sponsors, committee members, and stakeholders were instrumental in the creation of ASTECH 2024, and we really appreciate their support and involvement. Special acknowledgment goes to Politeknik Negeri Bandung (POLBAN), Indonesia, for their invaluable partnership as main organizer, and we are also deeply thankful to the Ministry of Education, Innovation, and Talent Development Sarawak (MEITD) for their invaluable contribution and steadfast support in making ASTECH 2024 a success.

We also extend our gratitude to our esteemed sponsors: Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA), TAM Sarawak, the Technological Association Malaysia, the Association of Professional Technicians & Technologists (APTT), Malaysia National University (UKM), SIDMA College Sarawak, and Iloilo Science and Technology University. Your invaluable contributions and dedicated collaborative spirit have been crucial to the success of this event.

ASTECH 2024 represents a crucial milestone in our shared quest to advance sustainable technology. Amidst the Fourth Industrial Revolution (IR4.0) and the urgent demand for sustainable development, this conference acts as an essential forum for the exchange of knowledge, ideas, and innovations. Our aim is to foster a dynamic environment that nurtures collaboration and inspires breakthroughs across various fields encompassing engineering, technology, sciences, and education.

ASTECH 2024 covers a broad range of topics, showcasing the diverse interests and expertise of our participants. From agricultural engineering to computer and information technology, from environmental engineering to tourism and hospitality – each discipline represented here plays a crucial role in shaping our future. Through insightful discussions, impactful research presentations, and engaging sessions, we aspire to ignite new pathways for progress and sustainability. Therefore, let us seize this opportunity to challenge our preconceptions, learn from each other, and explore innovative solutions to the complex global issues we face as we embark on this journey together. By harnessing the knowledge and expertise gathered here, we can lay the groundwork for a future that is more resilient, just, and sustainable.

On behalf of the organizing committee, I sincerely thank all participants, presenters, sponsors, and collaborators for their contributions in making ASTECH 2024 a reality. Your dedication and commitment to advancing sustainable technology are truly commendable, and I am confident that our collective efforts will yield meaningful outcomes that benefit the society at large. I wish you all a productive and enriching experience at ASTECH 2024, and I look forward to the fruitful discussions and collaborations that will undoubtedly emerge from this gathering.

Wabillahitaufik Walhidayah Wassalamualaikum Warahmarullahi
Wabarakatuh.





KEYNOTE SPEAKER

Advanced Sustainable Technology International Conference



PROF. IR. HERTO G NUGROHO

*Professor of Electrical Engineering
Politeknik Negeri Bandung Indonesia*

Title : Audio Signal Preprocessing for Feature Extraction in Speech Emotion Recognition

Abstract

Since the development of "Audrey", the first speech recognition system in Bell laboratory in 1950s, research on developing human machine interaction system have come to the understanding that texts alone can not deliver the true intention of the speaker, but it should also contain emotions of the speaker. Studies on human communication show that facial expressions are responsible for about 55%, voice intonation for about 38% and actual words for 7% of the message perception. This study is focused only on recognizing emotions contained in the recorded speaker's voice. In the last two decades, efforts to recognize the speaker's emotions in recorded speaker's voice have grown rapidly. Typically, the system consists of three parts: audio preprocessing, features extraction, and classification. While studies on features which can effectively represent humans' emotions in speeches and classifiers which can accurately recognize the emotions are widely reported, studies on audio preprocessing are rare. Therefore, this work focuses on preprocessing methods. The work explains the preprocessing steps and provides some examples in detail. It does not give a conclusion on the best approach since it depends on the chosen features and classifier. However, it can give basic idea about how to bridge variable length audio inputs and classifiers which usually require fixed input vectors.

Keywords: speech recognition system, speaker's emotions, variable length audio inputs, fixed input vectors, preprocessing.



KEYNOTE SPEAKER

Advanced Sustainable Technology International Conference



DR. RIAM CHAU MAI

*Director
Research and Innovation Centre
Polytechnic and Community College Education Department
Malaysia*

Title: Navigating the Future: RDICE @ PolyCC Roadmap

Abstract

Research, Innovation, Development, commercialization, and Economy (RDICE) represents a comprehensive approach to driving progress and prosperity, emphasizing the importance of each stage in translating ideas and research into tangible economic benefits. In today's rapidly evolving global landscape, integrating RDICE is supreme for fostering sustainable economic growth. The study will explore the strategic roadmap of RDICE in the context of Polytechnic and Community Colleges (PolyCC). By examining the symbiotic relationship between academic institutions and industry, the pivotal role that PolyCC plays in driving community and national economies is highlighted. The discussion will focus on the essential components of the RDICE framework, emphasizing how these institutions can leverage cutting-edge research, advance technological development, and foster a culture of innovation. We will delve into successful case studies where PolyCC has effectively bridged the gap between academia and industry, leading to the commercialization of research outcomes and substantial economic benefits. Likewise, the challenges and opportunities associated with implementing the RDICE roadmap, providing actionable insights for stakeholders to enhance collaboration, optimize resource utilization, and ensure long-term sustainability will be addressed. A forward-looking perspective on the evolving role of PolyCC in shaping the future of research, innovation, and economic development will be concluded. Eventually, RDICE @ PolyCC is dedicated to charting a path forward by leveraging the power of RDICE to build a resilient and prosperous future for polytechnics, community colleges, and communities.



KEYNOTE SPEAKER

Advanced Sustainable Technology International Conference



HAJI ADANA BIN HAJI JED

*Permanent Secretary
Ministry of Education, Innovation and Talent
Development, Sarawak*

Title: MEITD in Producing Sarawak Skilled Workers: Towards Developed State by 2030

Abstract

This keynote speech, presented by the Ministry of Education, Innovation, and Talent Development (MEITD) at the Advanced Sustainable Technology International Conference (ASTECH) 2024, outlines the key role of MEITD in cultivating a skilled workforce in Sarawak. As Sarawak aims to achieve a 30% skilled workforce and 50% of its population to be in the workforce by 2030. MEITD's initiatives are crucial in aligning technical and vocational education with industry needs. The speech will cover MEITD's strategies in enhancing vocational education through collaborations with TVET institutions, curriculum development, infrastructure investments, and industry partnerships. Key achievements such as the signing of a Memorandum of Agreement with six skill training institutes and successful community outreach programs will be highlighted. Additionally, the speech will present data on employability rates of TVET institutions and the growing demand for skilled workers across various sectors in Sarawak. This presentation aims to illustrate MEITD's commitment to driving educational excellence and innovation to meet future workforce demands and support Sarawak's development goals.

Keywords: Sarawak, skilled workforce, MEITD, TVET, vocational education, employability, community outreach, development goals.



ABOUT THE CONFERENCE

Advanced Sustainable Technology International Conference

The Advanced Sustainable Technology International Conference (ASTECH) Sarawak is a collaborative initiative between Politeknik Negeri Bandung (POLBAN), Indonesia, and Politeknik Kuching Sarawak (PKS), Malaysia. This event marks a significant milestone as the inaugural international conference organized by the two TVET institutions. Scheduled for August 5th and 6th in Kuching, Sarawak, this prestigious event aims to convene global academics, scholars, researchers, and industry experts to foster a dynamic ecosystem for research and innovation. ASTECH Sarawak will explore advanced technologies in engineering, technology, sciences, TVET, and education, aligning with the principles of Industry Revolution 4.0 (IR 4.0) and sustainability.

The Ministry of Education, Innovation, and Talent Development Sarawak (MEITD), as the primary sponsor of ASTECH 2024, plays a critical and indispensable role in the success of the event. MEITD's involvement underscores its commitment to advancing education, fostering innovation, and developing talent. The ministry is pivotal in shaping education policies, promoting technological and research innovations, and nurturing talent in Sarawak. By endorsing ASTECH Sarawak Conference 2024, MEITD aims to stimulate economic growth, enhance sustainability, and reinforce Sarawak's position as a hub for technological advancement. MEITD's support also highlights its dedication to talent development through programs designed to identify, nurture, and empower individuals across the region.

In parallel, the ministry emphasizes promoting innovation in various sectors, including technology, research, agriculture, and industry. By fostering a culture of creativity and supporting cutting-edge research and development activities, MEITD aims to drive economic growth, foster sustainability, and propel Sarawak towards becoming a hub for innovation and technological advancement. Furthermore, talent development is a key pillar of the ministry's agenda, with dedicated programs and initiatives designed to identify, nurture, and empower individuals across Sarawak. By focusing on skills training and development, MEITD is committed to equipping the state's workforce with the capabilities and mindset needed to excel in a rapidly evolving global landscape.

ASTECH Sarawak Conference 2024 will feature research paper presentations from participants representing seven countries, focusing on advancing TVET education and sustainability. The conference will provide a platform for educators, researchers, industry professionals, and policymakers to exchange insights and innovations. It will include a town hall session, an exhibition, and a forum featuring distinguished speakers in TVET education and sustainability, thereby contributing to Sarawak's efforts to achieve the Sustainable Development Goals (SDGs). Nearly 600 students and educators from various institutions are expected to attend. Esteemed collaborators such as BIMB-EAGA, Universiti Kebangsaan Malaysia (UKM), Universiti Malaysia Sarawak (UNIMAS), SIDMA College Sarawak, the Association of Professional Technicians and Technologists (APTT), the Technological Association Malaysia (TAM) Sarawak Branch, and Iloilo Philippine University support the endeavor. Partners in this effort include Sarawak Skills, i-CATS University College, and Biomedix Solution. ASTECH 2024 aspires to address critical issues, disseminate best practices, and empower youth with the skills and knowledge necessary for a sustainable future.

ASTECH Sarawak Conference 2024 is significant for MEITD in enhancing education by facilitating the exchange of best practices and innovative ideas. The conference supports MEITD's goal of fostering innovation through a focus on advanced technologies and sustainability, driving economic growth and technological progress. ASTECH Sarawak Conference 2024 aids in talent development by providing opportunities for students and educators. Additionally, it strengthens international collaboration and aligns with Sustainable Development Goals. The event also demonstrates Sarawak's commitment to Industry Revolution 4.0, showcasing its dedication to technological advancements.



ABOUT THE CONFERENCE

Advanced Sustainable Technology International Conference



Sub-Themes

- Action Research
- Agricultural Engineering
- Biomedical Engineering
- Biotechnology
- Business and Management
- Chemical Engineering
- Civil Engineering
- Communication Engineering
- Computer and Information Technology
- Computer Engineering
- Education Studies
- Electrical and Electronic Engineering

- Environmental Engineering
- Financial and Accountancy
- Green Technology
- Industrial Engineering
- Information Technology
- Mechanical Engineering
- Power and Energy Engineering
- Science and Technology
- Social Sciences
- Structural Engineering
- Technical and Vocational Education and Training (TVET)
- Tourism and Hospitality



INTERNATIONAL FORUM

Advanced Sustainable Technology International Conference



Moderator

IR. DR. NGU LOCK HEI

*Senior Lecturer
Faculty of Engineering, Computing and Science
Swinburne University of Technology Sarawak Campus*

Ir. Dr. Ngu Lock Hei received her BEng(Hons) in Chemical Engineering from Universiti Sains Malaysia in 2001 and her MEng and Ph.D. in Environmental Engineering from Universiti Malaysia Sarawak respectively in 2004 and 2008. She is a Senior Lecturer of Chemical Engineering of the Faculty of Engineering, Computing and Science (FECS) in Swinburne University of Technology (Sarawak Campus) and had served as the Associate Dean (Accreditation and Curriculum Enhancement) for 6 years. Her research interests include CO₂ capture and utilization, CO₂ adsorption, CO₂ absorption, water and wastewater treatment, environmental engineering and management, and biogeotechnology. She has 5 years of consultancy experience in conducting Environmental Impact Assessment studies for various projects. She is a Professional Engineer with the Board of Engineers Malaysia (BEM), a corporate member of the Institution of Engineers Malaysia (IEM), and a registered Green Building Index (GBI) Facilitator. She serves on Engineering Accreditation Council (EAC) as an accreditation panel.



INTERNATIONAL FORUM

Advanced Sustainable Technology International Conference



Panel

DR. RAMPRAKASH KATHIRESAN

*Head of Technology & Venture Strategy
Ecolabs Centre of Innovation for Energy*

Dr. Ramprakash Kathiresan serves as the Head of Technology & Venture Strategy at Ecolabs Centre of Innovation for Energy. He is a Cleantech-Generalist having served in the key research establishments in top-tier universities, start-up environments & conducting industry-driven projects. His core activities at Ecolabs are deep-tech Innovation translation involving multidisciplinary solutions & scaling for markets with techno-commercial outfits. He pursued his Doctorate & Master of Science from the National University of Singapore and also pursued a Master of Business Administration specializing on Product Innovation management. He has been instrumental in capability building, architecting ventures and facilitating partnerships.



INTERNATIONAL FORUM

Advanced Sustainable Technology International Conference



Panel

HALLMAN BIN SABRI

*Executive Director
Sarawak Skills Group of Learning Institutions (Sarawak Skills)
& Chairman of the Federation of Malaysian Skills Development Centres
(FMSDC)*

Mr. Hallman bin Sabri is the Executive Director of the Sarawak Skills Group of Learning Institutions (Sarawak Skills). Established in 1994, Sarawak Skills offers a wide range of academic, skills and training programmes at its campuses and learning centres located in Sarawak, Malaysia. It is a stakeholder in the transformation of Sarawak's economic, educational and digital landscape.

Mr. Hallman has a Bachelor's degree in Mass Communication (specializing in Advertising) and a Master's degree in Human Resource Development. His wealth of professional experience covers various fields, including advertising, banking, business development, human resource development/management, and postsecondary/tertiary education. Indeed, the opportunity to wear many hats during the course of an illustrious career spanning more than thirty-five years has facilitated his lifelong quest to transform the lives of the youths and working adults in Sarawak and Malaysia as a whole, thereby contributing to the betterment of society.

Currently, in addition to his role as the Executive Director of Sarawak Skills, Mr. Hallman is the Executive Director of PPKS Ilmu Sdn. Bhd. (the company managing i-CATS University College) and Board Member of various companies under the Sarawak Skills Group. He is also the Chairman of the Federation of Malaysian Skills Development Centres (FMSDC). He has also been appointed as a member of the Malaysia WorldSkills Competition National Council under the purview of the Ministry of Human Resources Malaysia (KESUMA).

At the helm of Sarawak Skills, he has spearheaded numerous initiatives such as the development of an agile, future-ready workforce for Sarawak. Recently, he launched a five-year blueprint to transform the teaching and learning ecosystem across Sarawak Skills' campuses and learning centres. Under his leadership, the Sarawak Skills Group of Learning Institutions has won numerous accolades such as The Best Training Provider - Human Resource Minister Award 2015, The Chief Minister's Industry Excellence Awards 2019 (Sarawak Business Federation Recognition Award), Gold Award of Annual Quality Environment Challenge (AQEC) 2020 - Sarawak Skills, Gold Award of Annual Quality Environment Challenge (AQEC) 2021 - i-CATS University College, Contribution to Human Resource (HR) Community Award 2022 (part of the Asia HRD Awards 2022), Best TVET Training Provider Award (Industrial Training Category) - Malaysia Education and TVET Awards 2022, BrandLaureate SMEs BestBrands Award 2023 (Category: Best Choice - Education: Technical Skills Excellence), Premier of Sarawak's Industry Excellence Awards (PSIEA) 2023 (Silver Award - PPKS Ilmu Sdn. Bhd.), Malaysia Education & TVET Awards 2023 (Categories: Leadership, Organization Brand Excellence, and Automotive & Welding), and HRD Awards 2023 (Certificate of Excellence - Training Provider Category).



INTERNATIONAL FORUM

Advanced Sustainable Technology International Conference



Panel

MADAM PENG YAN

*Lecturer
Guizhou Polytechnic of Construction*

Madam Peng Yan, PhD in Facilities Management, Faculty of Built Environment, Universiti Malaya, Master of Engineering in Project Management, Guizhou University, Bachelor of Engineering in Engineering Management, Huaqiao University. Her research interests include engineering management, project management, facility management, operation and maintenance management. As a lecturer in Guizhou Polytechnic of Construction, she has led and participated in professional development, curriculum planning and reform. She has led her students to participate in several skill competitions and won the first prize at the provincial level. She has also won the first prize of Auto CAD skill competition in the teacher group at provincial level and was awarded the title of "Excellent Teacher". She has published one SCI Q1 article and several articles in Chinese, edited and co-edited three textbooks, and chaired and participated in several projects and programs.



TOWN HALL PANELS

Advanced Sustainable Technology International Conference



Deputy Dean (Industri @
Community Engagement)
Universiti Malaysia Sarawak

Moderator

Assoc. Prof. Ir. Ts. Dr.
Kismet anak Hong Ping



Panel 1

Prof. Ts. Dr. Mohamad
Sattar bin Rasul

Chairman of STEM Enculturation
Studies Center
Universiti Kebangsaan Malaysia



WorldSkills Competition
Coach & Country Expert
Team Member

Panel 2

Ts. Sharina binti Safiee



Panel 3

Abdul Azid bin Allan

Head of Industrial Capability
Petroleum Sarawak Berhad
(PETROS)



Panel 4

Mohd Zuhdi bin Ibrahim @
Ahyat

Principle Assistant Director
Department of Skills
Development (D&D)



TOWN HALL PANEL

Advanced Sustainable Technology International Conference



Deputy Dean (Industri @ Community Engagement) Universiti Malaysia Sarawak

Moderator

Assoc. Prof. Ir. Ts. Dr.
Kismet anak Hong Ping

Assoc. Prof. Ir. Ts. Dr. Kismet Anak Hong Ping is an Associate Professor at the Department of Electrical & Electronic Engineering, Faculty of Engineering, Universiti Malaysia Sarawak (UNIMAS). He holds a Bachelor of Engineering in Electronics and Telecommunications from UNIMAS, a Master of Science in Digital Communication Systems from Loughborough University, and a PhD in Systems Science from Nagasaki University. His research focuses on microwave engineering, particularly in biomedical imaging, through-the-wall imaging (TWI), and non-destructive testing (NDT). He has developed microwave image processing algorithms for medical diagnostics and advanced antenna designs, significantly contributing to the fields of microwave breast imaging and other medical diagnostic tools.

He has led and collaborated on various research projects funded by national and international grants, and his work is widely published in prestigious journals and conferences. His contributions to the academic community and advancements in electrical and electronic engineering have earned him numerous awards and recognitions. Associate Professor Ir. Ts. Dr. Kismet is a registered Professional Engineer with the Board of Engineers Malaysia (BEM), a registered Member of The Institution of Engineers Malaysia (M.I.E.M), an ASEAN Chartered Professional Engineer (ACPE), a registered Professional Technologist with the Malaysia Board of Technologists (MBOT), and a Certified Energy Manager in the ASEAN Energy Management Scheme (AEMS).



TOWN HALL PANEL

Advanced Sustainable Technology International Conference



Chairman of STEM Enculturation
Studies Center
Universiti Kebangsaan Malaysia

Panel 1

Prof. Ts. Dr. Mohamad
Sattar bin Rasul

Prof. Ts. Dr. Mohamad Sattar is the Chairman of STEM Enculturation Center in Universiti Kebangsaan Malaysia and a Professor in Technical & Vocational and STEM Education. He is also the Adjunct Professor for Universiy Indonesia (UI), Jakarta Indonesia. His academic journey began with a Diploma in Mechanical Engineering in 1987 and a Bachelor Technology and Education (Mechanical Engineering) (UTM) in 1996. Obtain a Masters and Doctor of Philosophy (PhD) degree in Industrial Engineering & System from Universiti Putra Malaysia (UPM) in 2004 and 2010.

His research area include TVET Curriculum, TVET Career Development, and STEM Education. He received an Award of the Most Highest Researchers Receiving External Research Grant in 2018-2022 by the Faculty. He has received a number of grants from Industry such as Exxonmobil (7 years in a row from 2015-2023) and Tabung Haji (TH) (2 years in a row from 2017) and Ministry of Human Resources (MoHR) and Ministry of Higher Education (MoHE). As for international research he is the Project Overseer Information for Asia-Pacific Economic Cooperation (APEC) for the project of Actualization of Integrated STEM Degree Programmes. Until present he has been as keynotes speakers at more than 35 national and international conference/seminars.

In 2018 to 2021 he has won the "Most Published in Indexed Journal (WOS / SCOPUS / ERA)" award. Until now he has published more than 200 articles in indexed journals and 14 academic books. He has won the Community Involvement/Engagement Award from 2015 and 2021 as an academic with a very active community engagement. He also have won the Gold Award and the Best of the Best Award in Innovative Practices in STEM Education and Industry Exhibition (I-PEINX) 2016.

He is also the Board Members of Asian Academic Society for Vocational Education and Training (AASVET) and Members of IVETA (International Vocational Education and Training Association). He has been and editor for the Journal of Asian Academic Society for Vocational Education and Training (JAVET), Journal of Technical Education and Training (JTET) and Malaysian Journal of Education (MJE).



TOWN HALL PANEL

Advanced Sustainable Technology International Conference



WorldSkills Competition
Coach & Country Expert
Team Member

Panel 2

Ts. Sharina binti Safiee

Ts. Sharina binti Safiee is a dedicated Higher Education Officer at Kolej Komuniti Kuala Langat, part of the Ministry of Higher Education Malaysia, with extensive experience in education. With a Bachelor of Electrical Engineering and a Master's in Technical and Vocational Education from Universiti Tun Hussein Onn Malaysia, she has been teaching since 2007. Her courses include Building Automation Systems, Electrical Wiring, and Electrical Safety. Beyond teaching, she contributes to curriculum development, educational planning, and resource management. She is a registered Professional Technologist with the Malaysia Board of Technologists (MBOT), certified KNX Tutor by the KNX Association of Belgium, and a competent person certified by Suruhanjaya Tenaga for PW2 Single Phase Wireman and Testing Endorsement. As the first KNX Tutor among JPPKK's Higher Education Officers, she managed to register and establish the KKKL KNX Certified Training Centre in 2023 as the first certified centre in JPPKK and the 11th in Malaysia.

Sharina is actively involved in skills competitions in the Electrical Installation field, like MyCCSkills for JPPKK's skills competition, participant in national skills competitions, namely WorldSkills Malaysia Pengajar, coach and judge for WorldSkills Malaysia Belia and JuniorSkills Malaysia, showcasing her commitment to youth skill enhancement. The latest excellent contribution in TVET Malaysia, is her contribution with the country expert team in WorldSkills ASEAN Singapore 2023 with a gold and silver medal and WorldSkills Asia Abu Dhabi 2023 with a silver medal for the Malaysian team. Currently she was appointed as the Chief Judge in WorldSkills Malaysia 2024 for Electrical Installation field. Her dedication has earned her awards for student mentoring and outstanding service. She participates in professional and community activities, including the Smart Green Committee and Safety and Health Committee. Sharina is committed to academic excellence and continuously improves her teaching through training and workshops. Her research interests include energy savings, building automation systems in educational facilities, teaching strategies, and educational technology.



TOWN HALL PANEL

Advanced Sustainable Technology International Conference



Head of Industrial Capability
Petroleum Sarawak Berhad
(PETROS)

Panel 3

Abdul Azid bin Allan

Mr. Abdul Azid bin Allan is an industry professional with over 20 years of leadership experience. With exposures in oil & gas upstream and downstream, as well as in the ferroalloy smelting industries, he joined Petroleum Sarawak Berhad (PETROS) since 2018. He is currently the Head of Industrial Capability driving PETROS' industry-wide initiative to enhance the capability building of the Sarawak oil & gas skilled workforce since March 2023. Through close collaboration with the industry players and training institutions, Industrial Capability focusses on Sarawakian employability of critical skills required to sustain the current and future development of the industry in Sarawak.

He began his career at ExxonMobil, in HR and industrial lubricants sales, before embarking on a focussed career journey in HR with Shell in Bintulu & Miri, learning the ropes of multinationals oil & gas corporations. At Sakura Ferroalloys in Samalaju, he joined the pioneering team in setting up a new plant in a new industry, delivering a workforce setup of 95% Sarawakian. He holds a Bachelor of Engineering in Chemical Engineering with Fuel Technology from The University of Sheffield and is certified in Strategic Human Resources and as a Senior Certified Professional (SHRM-SCP) by the Society for Human Resource Management.

TOWN HALL PANEL

Advanced Sustainable Technology International Conference



Principle Assistant Director
Department of Skills
Development (D&D)

Panel 4

Mohd Zuhdi bin Ibrahim @
Ahyat

Mr. Mohd Zuhdi bin Ibrahim @ Ahyat is an experience professional in vocational training and skills development. He is the Principal Assistant Director and Technical Delegate (TD) of WorldSkills Malaysia at the Department of Skills Development, Ministry of Human Resources Malaysia. He holds a Master's in Manufacturing System Engineering from Universiti Putra Malaysia and a Bachelor's in Electrical Engineering (Mechatronic) from Universiti Teknologi Malaysia.

Zuhdi has held various roles within the Ministry of Human Resources since 2000, including Vocational Training Officer at the Centre for Instructor and Advanced Skills Training (CIAST) and the Manpower Department. He has played a key role in Malaysia's participation in international skills competitions and contributed to developing technical and vocational education and training (TVET) standards. He actively involved in research and innovation of TVET and skills development. He has several publications in international conferences and journals, demonstrating his commitment to advancing vocational training in Malaysia.



PROGRAMME SCHEDULE

Advanced Sustainable Technology International Conference

DAY 1

5th August 2024

07:30 - 08:00	Arrival & Registration of Participants
08:00 - 09:00	Morning Break
09:00 - 11:00	Parallel Session 1 Face to Face : The Waterfront Hotel - Tubau Room 1, 2, 3 Online : Politeknik Kuching Sarawak
11:00 - 13:00	Parallel Session 2 Face to Face : The Waterfront Hotel - Tubau Room 1, 2, 3 Online : Politeknik Kuching Sarawak
13:00 - 14:00	Lunch
14:00 - 16:00	Parallel Session 3 Face to Face : The Waterfront Hotel - Tubau Room 1, 2, 3 Online : Politeknik Kuching Sarawak
16:00 - 16:30	Afternoon Tea Break
17:00	The End of Day 1

DAY 2

6th August 2024



07:30 - 08:00	Arrival & Registration of Participants
08:15 - 08:45	Arrival of VIP & VVIP
09:00 - 09:50	Dua Recital
	Welcoming Address (Director of PKS)
	Officiating Speech by The Honourable Dato Sri Roland Sagah Wee Inn, Minister for Education, Innovation, and Talent Development Sarawak (MEITD)
	Launching Gimmick
09:50 - 10:30	Souvenir Session to Keynote Speakers, Town Hall Panels & Collaborative Partners VVIP Photo Session
10:30 - 11:30	Keynote Session Speaker 1 : Professor Ir. Hertog Nugroho (POLBAN, INDONESIA) Speaker 2 : Dr. Riam Chau Mai (POLYCC, MALAYSIA) Speaker 3 : Haji Adana bin Haji Jed (MEITD, MALAYSIA)
11:30 - 13:00	Town Hall Session Moderator : Associate Professor Ir. Ts. Dr. Kismet anak Hong Ping Panel 1 : Professor Ts. Dr. Mohamad Sattar bin Rasul Panel 2 : Ts. Sharina binti Safiee Panel 3 : Abdul Azid bin Allan Panel 4 : Mohd Zuhdi bin Ibrahim @ Ahyat
13:00 - 14:00	Lunch
14:00 - 16:00	International Forum Moderator : Ir. Dr. Ngu Lock Hei Panel 1 : Dr. Ramprakash Kathiresan Panel 2 : Hallman bin Sabri Panel 3 : Madam Peng Yan
	Bridge Model Workshop
16:00	End of Conference



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 1 (Session 1)

09:00 - 11:00 a.m.

Session Panel : Dr. Azlina Bujang (UiTM Sarawak)

Moderator : Alfred Valentine Bakrin (PKS)

Rapporteur : Mornita anak Deri (PKS)

Field : Engineering and Technology

Face to Face Presentations

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 028-014	Production of Collagen for Regenerative Medicine from Bovine Tendon	Munira Shahbuddin, Dahlia Shahbuddin, Hashem Abdulwali, Najwa Hamdan	Dr. Munira Shahbuddin	IIUM, US
ASTECH 2024: 034-019	Investigation of the Effects of Different Bending Degrees on the Performance of Microstrip Patch Textile-Based Antenna	Nizar Ahmad, Dyg Norkhairunnisa Abang Zaidel	Nizar bin Ahmad	Politeknik Kuching Sarawak
ASTECH 2024: 035-022	Tapered Bladed of Vertical Axis Wind Turbine for Powering Street Lights in Urban Areas in Indonesia with Wind Speed of 2 " 4 m/s	Maria Fransisca Soetanto, Yackob Astor, Singgih Satrio Wibowo, Syaiful, Muhammad Rizki Zuhri, Mochammad Luthfi	Maria Fransisca Soetanto	Politeknik Negeri Bandung
ASTECH 2024: 004-025	Mechanical Properties of Thulium-doped Bismuth Borotellurite Glass via Nanoindentation for Lead-Free Radiation Shielding Application	Nur Arina Mat Rusni, Azuraida Amat, Wan Yusmawati Wan Yusoff, Nor Azlian Abdul-Manaf, Nurazlin Ahmad	Nur Arina Mat Rusni	National Defense University Malaysia (UPNM)
ASTECH 2024: 042-035	Gap Analysis to Determine the Scope of IT Development in Local Government	Narti Prihartini, U.Heri Mulyanto, Sri Wahyuni, Ahmad Ridho	Narti Prihartini, S.T.,M.T.	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 2 (Session 1)

09:00 - 11:00 a.m.

Face to Face Presentations

Session Panel : Dr.Lily Siong @ Lily binti Mahmud (KK Kuching)

Moderator : Ann anak Report (PKS)

Rapporteur : Nurizan binti Saury (PKS)

Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 062-068	Impact of Data Source on Evapotranspiration Calculations: On-Site vs. MET Weather Stations	Wan Fazilah Fazlil Ilahi, Nur Syaffiq Izleen Rosdi, Muhammad Hazim Shahemi	Dr. Wan Fazilah Fazlil Ilahi	Universiti Putra Malaysia
ASTECH 2024: 063-069	Tackling Drought: Rice Crop Water Requirement in Kelantan, Malaysia	Nur Syaffiq Izleen Rosdi, Wan Fazilah Fazlil Ilahi, Mohd Razi Ismail, Zulkarami Berahim	Nur Syaffiq Izleen Rosdi	Universiti Putra Malaysia
ASTECH 2024: 092-077	Prototype of Short EDM Baseline Test Site for Survey Grade Receiver	Mohd Zahirudin bin Mohammed Na'aim, Che Zaidi bin Che Hassan, Marlina binti Abdul Manaf	Mohd Zahirudin bin Mohammed Naaim	Politeknik Kuching Sarawak
ASTECH 2024: 111-103	Development of a Fuzzy-Based Anti-Crash Wheelchair Adapter	Tata Supriyadi, Kang Chia Yang, Yana Sudarsa, Ridwan Solihin, Sudrajat, Supriyanto, Adnan Rafi Al Tahtawi, Budi Setiadi	Yana Sudarsa	Politeknik Negeri Bandung
ASTECH 2024: 035-024	Development of Carbon Fiber Composite Material Blades for Vertical Axis Wind Turbines as An Alternative Energy Source for Street Lights for A Speed Range Of 2-8 m/s	Maria Fransisca Soetanto, Syarif Hidayat, Lenny Iryani, Adri Maldy Subardjah, Budi Hartono, Citra Asti Rosalia	Maria Fransisca Soetanto	Politeknik Negeri Bandung



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 3 (Session 1)

09:00 - 11:00 a.m.

Session Panel : Assoc Prof. Jati Kasuma Ali (UiTM Srawak)

Moderator : Neelam Amelia binti Mohamad Rejeni (PKS)

Rapporteur : Siti Zuriah binti Osman (PKS)

Field : Social Science and Business Management

Face to Face Presentations

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 036-023	Evaluation of Societys Participation in the Low Carbon City (LCC) Initiative in the Kajang Municipal City (MPKJ) Area	Nur Afiqah Azmi, Loong Chuen Lee, Hukil Sino	Nur Afiqah Azmi	National University of Malaysia
ASTECH 2024: 039-028	Assessing Financial Literacy and Educational Impact among Polytechnic Students: A Comprehensive Study	Radziah Mohd Dani, Mohd Faizal Mohd Muslim	Dr. Radziah binti Mohd Dani	Politeknik Muadzam Shah Pahang
ASTECH 2024: 014-030	Marketability of Sijil Perkhidmatan Logistik Program Graduates at Community Colleges	Mohamad Khairul Nizam Mohd Anuar Cheng, Yasinah Abdul Rahman, Syahira Md Desa	Mohamad Khairul Nizam bin Mohd Anuar Cheng	Kolej Komuniti Jasir
ASTECH 2024: 059-044	A Conceptual Framework: Exploring The Relationship Between Digital Entrepreneurship and Sustainable Innovation	Daymar Latok anak Daya, Abang Zainoren bin Abang Abdurahman, Azlina Bujang	Daymar Latok Anak Daya	UITM Samarahan
ASTECH 2024: 064-047	Misconceptions and Stigma Regarding Psoriasis Among Commerce Students of Politeknik Kuching Sarawak	Magdalyne Egan, Christopher Suresh Martin	Magdalyne Egan	Politeknik Kuching Sarawak
ASTECH 2024: 076-058	Learning Theories for VR Technology Adoption in English Education Field: A Systematic Literature Review	Yao Ling, Mohamad Sattar Rasul, Marilissa Omar	Yao Ling	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 1 (Session 2)

11:00 a.m. - 01:00 p.m.

Face to Face Presentations

Session Panel : Sr. Dr. Hj. Noraziah binti Hj Wahi (UiTM Sarawak)

Moderator : Siti Aisyah binti Ismawi (PKS)

Rapporteur : Mornita anak Deri (PKS)

Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 122-114	Development of a Single Phase Shunt Active Power Filter using Synchronous Reference Frame and Self-charging Algorithms	Muhammad Ammirul Atiqi Mohd Zainuri, Noor Syazwana Mohd Din, Nor Azwan Mohamed Kamari, Ahmad Asrul Ibrahim, Mohd Hairi Mohd Zaman, Asraf Mohamed Moubark, Mohd Amran Mohd Radzi	Dr. Muhammad Ammirul Atiqi Mohd Zainuri	Universiti Kebangsaan Malaysia
ASTECH 2024: 136-124	Numerical Simulations of Combustion Behavior of Ammonia/Hydrogen and Methane	Wan Mahafez Rosni, Nur Mardiana Ramli	Wan Mahafez bin Rosni	Politeknik Kuching Sarawak
ASTECH 2024: 140-130	IoT-based Smart Electricity and Power Usage Monitoring System	Wong Sie Woo, Sylvia Ong Ai Ling, Sylvester Dawson anak Jonathan	Ts. Wong Sie Woo	Politeknik Kuching Sarawak
ASTECH 2024: 095-094	User Requirements for Developing a Gamified Sign Language Mobile Application Based on Learning Domain	Nur Atiqah Zaini, Ong Sing Ling, Cherlyn Chai Ju Yi	Nur Atiqah binti Zaini	University of Technology Sarawak
ASTECH 2024: 047-033	Investigating parents' participation in Home-School Partnership at Chinese TVET colleges in the Digital age	Li Cao, Mohamad Sattar Rasul, Marlissa Omar	Cao Li	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 2 (Session 2)

11:00 a.m. - 01:00 p.m.

Face to Face Presentations

Session Panel : Dr. Ong Tze Ching (PKS)

Moderator : Nursyafiqah binti Abd Samad (KK Mas Gading)

Rapporteur : Nurizan binti Saury (PKS)

Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 147-142	A Digital Evaluation System for Final Year Projects Using Google Workspace	Francisca Kevin Akeu, Jamaah Suud, Khairul Hisham Shahari	Francisca Kevin Akeu	Politeknik Kuching Sarawak
ASTECH 2024: 149-145	Landscape Sustainability Assessment Tools	Ts. Nur Azemah Bt Aminludin, Siti Norzaemah binti Mohd Rashid	Ts. Nur Azemah binti Aminludin	Bahagian Pembangunan Sumber Manusia, KPT
ASTECH 2024: 161-150	Poly (Ethylene Oxide) Reinforced with A Nanocellulose-Based Nanocomposite Polymer Electrolyte in Dye-Sensitized Solar Cells	Ts. Dr. Mohd Saiful Asmal Rani	Ts. Dr. Mohd Saiful Asmal Rani	Universiti Putra Malaysia
ASTECH 2024: 122-112	Effectiveness of Agrivoltaics Towards Solar Photovoltaic Module Performance	Muhammad Ammirrul Atiqi Mohd Zainuri, Abdul Rashid Abdul Kadir, Nor Azwan Mohamed Kamari, Ahmad Asrul Ibrahim, Mohd Hairi Mohd Zaman, Asraf Mohamed Moubark, Mohd Asyraf Zulkifley	Dr. Muhammad Ammirrul Atiqi Mohd Zainuri	Universiti Kebangsaan Malaysia
ASTECH 2024: 069-050	Trends and Challenges in STEM Education Development in Malaysia: A Systematic Literature Review	Zhang Lei, Nur Atiqah Jalaludin, Mohamad Sattar Rasul	Zhang Lei	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 3 (Session 2)

11:00 a.m. - 01:00 p.m.

Session Panel : Dr. Mohd Farid bin Atan (UNIMAS)

Moderator : Abdul Rahman bin Morni (KK Mas Gading)

Rapporteur : Siti Zuriah Binti Osman (PKS)

Field : Social Science and Business Management

Face to Face Presentations

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 082-067	Mooting as a Simulation to Enhance Understanding of Business Law for Non-Law Students in Polytechnic Kuching Sarawak	Nur Zuleikha binti Zakaria	Nur Zuleikha binti Zakaria	Politeknik Kuching Sarawak
ASTECH 2024: 083-074	Challenges to Circular Economy Implementation for Sustainable TVET : A Systematic Literature Review	Norzaharah Ab Hamid, Mohamad Sattar Rasul, Fathiyah Mohd Kamaruzaman, Osman Ahmad, Bayu Ramadhani Fajri	Norzaharah Ab Hamid	Universiti Kebangsaan Malaysia
ASTECH 2024: 084-076	Identifying Key Transversal Skills for Enhancing TVET Students' Abilities in Product Design: A Scoping Review	Salwa Suradin, Mohamad Sattar Rasul, Marlissa Omar	Salwa Suradin	Universiti Kebangsaan Malaysia
ASTECH 2024: 094-079	Development of Work Ability Tailored to Multiple Intelligence and Job Characteristic Elements among Students with Learning Disabilities	Nik Norlaili Jamilah binti Nik Othman, Mohamad Sattar Rasul, Fathiyah Mohd Kamaruzaman	Nik Norlaili Jamilah binti Nik Othman	Universiti Kebangsaan Malaysia
ASTECH 2024: 097-081	Interactive Multimedia Weblog Courseware: A Needs Analysis for Hydrology Engineering Learning in Malaysian Polytechnics	Fatin Hana Naning, Ishak Johari	Dr. Fatin Hana Naning	Universiti Putra Malaysia
ASTECH 2024: 093-082	Determinants of Students' Enrolment Decisions at Kolej Komuniti Sarikei and Kolej Komuniti Sarikei Cawangan Sibu	Nurmawati binti Bohari, Norliza binti Borhan, Ting Ee Lee	Norliza binti Borhan	Kolej Komuniti Sarikei



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024
Room Tubau 1 (Session 3)
02:00 - 04:00 p.m.

Session Panel : Dr. Lau Sei Ping (UNIMAS)
Moderator : Marcus Kho Gee Whai (PKS)
Rapporteur : Mornita anak Deri (PKS)
Field : Engineering and Technology

Face to Face Presentations

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 071-052	The Design and Development of a Web-Based System: ePolikuExam	Neelam Amelia binti Mohamad Rejeni, Safinah binti Nawawi	Neelam Amelia binti Mohamad Rejeni	Politeknik Kuching Sarawak
ASTECH 2024: 075-055	Healthcare Services Chatbot- The Evolution of Healthcare Assistance in Digital Era	Shubham Seth	Shubham Seth	Amity University, Noida, India
ASTECH 2024: 118-107	A Sensitivity Study of the Mathematical Model for Carbon Dioxide Removal by Physical Absorption in the Production of Biomethane from Palm Empty Fruit Bunch	Mohamad Afiq Mohd Asrul, Hafizah Abdul Halim Yun, Mohd Farid Atan, Ivy Ai Wei Tan, Josephine Chang Hui Lai	Mohamad Afiq Mohd Asrul	Universiti Malaysia Sarawak
ASTECH 2024: 056-096	Load Control Efficiency Improvement in Educational Facilities using KNX Building Automation System	Sharina Safiee, Nofri Yenita Dahlan, Rozita Jailani, Mohamad Fani Sulaima	Ts. Sharina Safiee	Kolej Komuniti Kuala Langat



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Room Tubau 2 (Session 3)

02:00 - 04:00 p.m.

Session Panel : Prof. Dr. Tan Chong Eng (UNIMAS)

Moderator : Nazri bin Bains (KK Santubong)

Rapporteur : Nurizan Binti Saury (PKS)

Field : Social Science and Business Management

Face to Face Presentations

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 085-071	Bridging the gap: Evaluating TVET Graduate Competencies, Teaching Effectiveness and Institutional Supports	Nor Syazana Nahwah binti Mohd Zamri, Shatila binti Shani, Darlia binti Saini	Nor Syazana Nahwah Bt Mohd Zamri	Politeknik Mukah
ASTECH 2024: 146-140	Perception of Architecture Lecturers on the Effectiveness of CPD Practices in Community Colleges	Fathiyah Mohd Kamaruzaman, Osman Ahmad, Mohamad Sattar Rasul	Osman Ahmad	Universiti Kebangsaan Malaysia
ASTECH 2024: 110-098	Exploring Teachers' Perception on The Implementation of Employability Skills Among Students With Disabilities in Vocational Setting	Siti Nur Wahidah Razman, Nor Azwahanum Nor Shaid, Fathiyah Mohd Kamaruzaman, Marlissa Omar, Norzaharah Ab Hamid	Dr. Fathiyah Mohd Kamaruzaman	Universiti Kebangsaan Malaysia
ASTECH 2024: 072-059	The Impact of Design Thinking on Student Creativity: A Meta-Synthesis	Li Jia, Nur Atiqah Jalaludin, Mohamad Sattar Rasul	Li Jia	Universiti Kebangsaan Malaysia
ASTECH 2024: 064-066	How Study Techniques Affect Student Outcomes: A Case of Politeknik Kuching Sarawak	Magdalyne Egan, Christopher Suresh Martin	Magdalyne Egan	Politeknik Kuching Sarawak
ASTECH 2024: 113-102	Behavioral Intention and Cooperation Behaviour in Vocational School-Enterprise Cooperation	Zhan Guofang, Marlissa Omar, Mohamad Sattar Rasul	Dr. Marlissa Omar	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024
Room Tubau 3 (Session 3)
2:00–4:00 p.m.

Session Panel : Dr. Johari bin Abdullah (UiTM Sarawak)
Moderator : Marina Azalia binti Addendy (SK Tanjong Bako)
Rapporteur : Siti Zuriah binti Osman (PKS)
Field : Social Science and Business Management

Face to Face Presentations

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 115-104	A Review of the Written Instructional Material on Malaysia Skills Certification System: Adaptation Technology Emerging in TVET Teaching & Learning	Mohd Nor Azlan Mohamed Sidek, Mohammed Rezasudin Basir Khan, Zulkifflee Mohamed, Maznizam Mansor	Mohd Nor Azlan Mohamed Sidek	Universiti Tun Abdul Razak
ASTECH 2024: 166-155	Students Perceptions of The Use of AI Tools in Assisting Cover Letter Writing	Mornita Deri, Duke Michael Dangat	Duke Michael Dangat	Politeknik Kuching Sarawak
ASTECH 2024: 034-156	Navigating the Complexities of Calculus: An Analysis of Student Learning Experiences	Norhunaini Mohd Shaipullah, Nizar Ahmad, Liyana Truna, Nurul Syuhada Ismail	Nizar bin Ahmad	Politeknik Kuching Sarawak
ASTECH 2024: 049-034	Determinants of Financial Distress in Manufacturing Companies During the Covid-19 Pandemic	Imam Billyansyah, Eliza Noviriani, Lailatul Mukaromah, Ee Zurmansyah, Munandar	Eliza Noviriani	Politeknik Negeri Sambas
ASTECH 2024: 108-118	The Needs of Active Learning Approach in Technical and Vocational Teachers' Professional Development	Ahmad Faiz Ramli, Marlissa Omar, Mohamad Sattar Rasul	Ahmad Faiz Ramli	Universiti Kebangsaan Malaysia
ASTECH 2024: 067-070	Research on Talent Training Mode in Chinese Higher Vocational Colleges Based on the Model of Integration of Post-Curriculum-Competition-Certificate	Jia Fu, Mohamad Sattar Rasul, Marlissa Omar	Jia Fu	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Microsoft Team 1 (Session 1)

09:00 – 11:00 am

Online Presentations

Session Panel : Ts. Dr. Hisyammudin bin Maseri (i-CATS University College)

Moderator : Herman Nordiadi bin Abd Wahab (PKS)

Rapporteur : Nurshakhuzaimah binti Sahmat (PKS)

Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 019-032	Smart Vehicles Tracking System Using IoT	Zuraini binti Abdul Rajab, Faizul bin Mohd Noor	Faizul Mohd Noor	Politeknik Sultan Mizan Zainal Abidin
ASTECH 2024: 017-006	Enhancing Halia Bentong Cultivation : Designing An Industrial Internet of Things (IIoT) Table-Top Planting Rack	Muhammad Nurfaiz Abd Kharim, Fatimah Kayat, Raimi Mohamed Ridwan, Akmal Adilah Idris, Mohd Fauzie Jusoh, Mohd Akbal Mohd Zahid	Dr. Muhammad Nurfaiz Bin Abd Kharim	Universiti Malaysia Kelantan
ASTECH 2024: 015-009	Application of Environmentally Friendly Porous Paving Using Hydraulic Cemen	Oktoria Masniari, Elfiranahla Chandra Dewi, Chusla Ramah Darmawan	Oktoria Masniari	Gedung PPS PT Semen Indonesia (Persero)
ASTECH 2024: 026-012	Hospitality Students' Readiness to Use Eco-Friendly Packaging: A Study at Sungai Petani Community College	Ahmad Hanisah, Abidin Sabidatul Afifah, Quah Wei Boon	Hanisah Ahmad	Kolej Komuniti Sungai Petan
ASTECH 2024: 027-013	Implementation of Digital Twin for Investigation of Delayed Building Construction	Muhammad Rizal Mutaqien, Nurpusparatnasaridewi, Yackob Astor, Moch. Imam Muflih, Dandi Haniif Pratama, Yasuyuki Nabesima	Dr. Yackob Astor	Politeknik Negeri Bandung (Polban)
ASTECH 2024: 142-141	[ChI][Gly]/ZIF-8 Composites: Maximising CO ₂ Gas Adsorption Efficiency	Muhammad Khairi Zakuwan Kamaruddin, Mohamad Amirul Ashraf Mohd Razip, Cecilia Devi Wilfred	Muhammad Khairi Zakuwan Kamaruddin	Universiti Teknologi Petronas



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024
Microsoft Team 2 (Session 1)
09:00 – 11:00 am

Online Presentations

Session Panel : Dr. Zakir Hussain bin Ibrahim (PKS)
Moderator : Sabrina binti Milan (PKS)
Rapporteur : Wan Faisal bin Wan Ahmad Mohtasa (PKS)
Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 053-037	Phytochemical Screening, Nutritional Profiling And Enzymatic Activity of The Liposu (Baccaurea Lanceolata) Pulp As Potential Anti-Obesity	Mohd. Nazri Abdul Rahman, Tan Yew Ming, Nor Hayati Muhammad	Dr. Ts. Mohd. Nazri bin Abdul Rahman	Universiti Malaysia Sabah
ASTECH 2024: 060-043	IRI of Road by Using UAV and Roughometer Iii	Yackob Astor, Mohamad Zaidan Khairul Arifin, Syifa Auliya Nurohmah, Atmy Verani Rouly Sihombing	Syifa Auliya Nurohmah	Politeknik Negeri Bandung
ASTECH 2024: 061-046	Seeing Through The Trees : A Deep Learning Approach to Species Classification In Malaysias Tropical Forests	Robiah Hamzah, Mohammad Faizzudin, Suriana Ismail	Robiah Hamzah	Universiti Kuala Lumpur
ASTECH 2024: 068-049	Study on Multifunctional Automotive Creeper by Using Remote Controller	Mohd Sarhan Othman, Mohd Fitri Safe'i, Ashraf Azzam Zulkifli Amin, Dannyson Tandang Jackson Tandang	Ts. Mohd Sarhan Bin Othman	Politeknik Kuching Sarawak
ASTECH 2024: 073-056	Preliminary Study on The Influence of Zeolite and Vermiculite on The Growth of Marigold Flower (TAGETES ERECTA)	Norsuhailizah Sazali, Marini Nafi, Murni Rahim, Helmilisa Atirah Syaiedieha Muhamad Helmiazni, Nurhanis Aqilah Mohd Drafee, Nur Syuhada Balqis Najib	Ts. Dr. Norsuhailizah Sazali	Universiti Malaysia Perlis
ASTECH 2024: 027-020	Analysis of the Correlation between Road Geometry and Pavement Condition Index (PCI)	Ananda Amatory Zahra, Yackob Astor, Atmy Verani Rouly Sihombing	Dr. Ananda Amatory Zahra	Politeknik Negeri Bandung (Polban)



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024
Microsoft Team 3 (Session 1)
09:00 - 11:00 am

Online Presentations

Session Panel : Dr. Hayati binti Ibrahim (KK Mas Gading)
Moderator : Nurul Nisa binti Mohd Nasir (PKS)
Rapporteur : Haslinda binti Jama'in (PKS)
Field : Social Science and Business Management

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 081-065	Academic Workload and Learning Facilities; Is Chatgpt is Harmful or Helpful, a Preliminary Insights.	Mohd Mohadir Harun, Noorazyla Mohd Nasri, Rosmanizah Derahman	Noorazyla Binti Mohd Nasri	Politeknik Sultan Idris Shah
ASTECH 2024: 086-073	Preliminary Study on Intention towards Sustainable Investment among TVET Institutions	Nurul Syamshida Mokhtar, Siti Hajar Arani, Rosmanizah Derahman, Nor Suhaira Jamil	Nurul Syamshida Binti Mokhtar	Politeknik Sultan Idris Shah
ASTECH 2024: 104-091	Board Characteristics And Financing Risks of Indonesian Islamic Banks: Do Women's Contributions Matter?	Via Muthmainnah Luthfi, Muhamad Umar Mai	Via Muthmainnah Luthf	Politeknik Negeri Bandung
ASTECH 2024: 119-108	Reading Habits and Attitudes of Students towards Reading: A Study on Students at Ledang Community College Johor	Siti Hazwani Rosli, Rizarina Ekhwani, Razzatul Iza Zurita Rasalli	Siti Hazwani Binti Rosli	Kolej Komuniti Ledang
ASTECH 2024: 124-113	Learning Facilities: A Pilot Investigation on The Perceived Academic Achievement in TVET Institutions	Yusnizah Selamat, Nurul Syamshida Mokhtar, Mohd Sufian Hussin, Rosmanizah Derahman, Faridzul Adli bin Mat Adam	Yusnizah Selamat	Politeknik Sultan Idris Shah
ASTECH 2024: 107-095	Audit Committee Composition and Bank Profitability Growth: Evidence from Indonesia	Sudradjat, Arif Afriady, Rahma Nazil Muhammad	Rahma Nazila Muhammad	Politeknik Negeri Bandung



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024
Microsoft Team 1 (Session 2)
11:00 a.m - 01:00 p.m.

Online Presentations

Session Panel : Dr. Muhamad Nazri bin Abu Shah (PKS)
Moderator : Amir Haziq bin Long Bojeng (PKS)
Rapporteur : Nurshakhuzaimah binti Sahmat (PKS)
Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 105-090	An Evaluation of Structural Design Analysis of Slab Capacity for Sustainable Modular Skid in Process Plant	Nora Ayu Ramli, Farah Hanim Abd Jabar, Nurdalilah Nordin, Hilmi Isa	Dr. Nor Ayu Ramli	Hi Technics System Sdn Bhd
ASTECH 2024: 106-092	A Study on Composite Adsorbent for Textile Wastewater Treatment	Muhd Nazmi bin Ismail, Syahira binti Mohd Zayadi, Mohamad Anuar bin Kamaruddin	Dr. Muhd Nazmi Bin Ismail	Politeknik Kuching Sarawak
ASTECH 2024: 106-093	Biomass-Based Activated Carbon From The Seeds of Canarium Odontophyllum for Dye Wastewater Treatment	Muhd Nazmi bin Ismail, Syahira binti Mohd Zayadi, Mohamad Anuar bin Kamaruddin	Dr. Muhd Nazmi Bin Ismail	Politeknik Kuching Sarawak
ASTECH 2024: 102-110	Analysis and Characterization of Perlis Dolomite Powder And Effect of Binder Additions on its Sintered Properties.	Nur Hasnidah binti Ahmad Shukeri, Syed Nuzul Fadzli Syed Adam, Hasmaliza Mohamad, Heah Cheng Yong	Nur Hasnidah Binti Ahmad Shukeri	Universiti Malaysia Perlis
ASTECH 2024: 123-111	Design of Reinforced Concrete Slab Bridge for The Use in Plantation Area	Chai Teck Jung, Haspina binti Sulaiman, Tang Hing Kwong, Koh Heng Boon	Chai Teck Jung	Politeknik Sultan Idris Shah
ASTECH 2024: 060-053	Temperature Susceptibility of Waste Oleochemical Glycerine Pitch as Asphalt Binder Extender of Petroleum Bitumen	Atmy Verani Rouly Sihombing, Mulyadi Yuswandono, Jenny Rizkiana, Ruth Esther Ambat, Rini Septiani, Edward Wardana	Rini Septiani	Politeknik Negeri Bandung
ASTECH 2024: 116-109	Preliminary Study on The Design of a Rice Husk Drying Heater Using Conduction Heat in The Shell Rotary Kiln Burning Zone	Ratu Fenny Muldiani, Fahri Alfinanto, Yanti Suprianti, Achda Fitriah	Ratu Fenny Muldiani	Politeknik Negeri Bandung



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024
Microsoft Team 2 (Session 2)
11:00 a.m - 01:00 pm

Online Presentations

Session Panel : Ts. Dr. Bong Siaw Wee (PMU)
Moderator : Nurhazura binti Hassan (PKS)
Rapporteur : Wan Faisal bin Wan Mohtasa (PKS)
Field : Engineering and Technology

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 157-146	Performance of Hybrid Green-Tech Lightweight Prism Composite Floor Pane	Mohd Isa bin Jaffar, Kartini Kamarulzaman, Hasmawi Khalid	Dr. Mohd Isa Bin Jaffar	Politeknik Kota Kinabalu
ASTECH 2024: 160-148	Coordinate Comparison of Geocentric Datum Between Datum BT68 & SGED20 Using GNSS Method	Stuart Otto anak Wilson Munan, Mohd Nizar bin Hashim, Alvdjuri bin Affandie, Reminjus anak Anding, Joshua anak Ribin	Stuart Otto Anak Wilson Munan	Politeknik Kuching Sarawak
ASTECH 2024: 152-149	Leveraging LSTM Network for Accurate Climate Variability Forecasting : Enhancing Green Sustainability Through SPEI Analysis	Halimatun Sa'adiah Md Salehan, Rossly Salleh, Mohd Ilias M Shuhud	Halimatun Sa'adiah Md Salehan	Kolej Universiti Agrosains Malaysia
ASTECH 2024: 163-151	The Effect of Incorporating Fibres as Additional Material in Concrete Mixture	Azlan bin Mohd Ali, Jessie Liew Jia Hui , Clifford Herbert Anak Marcus, Azim Adli bin Edeni	Azlan Mohd Ali	Politeknik Kuching Sarawak
ASTECH 2024: 012-004	Development Medicine Pill Box Reminder	Nor Asiah binti Mat Yunus, Mohd Fauzi bin Hassan, Che Zaidi bin Che Hassan	Ts. Nor Asiah Bt Mat Yunus	Politeknik Kuching Sarawak
ASTECH 2024: 090-100	A* Algorithm for Optimized Pathfinding in Three-Degree-of-Freedom Robotic Manipulators	Martin, Ja'far Fauzan Katsir, Feriyonika	Martin	Politeknik Negeri Bandung
ASTECH 2024: 145-138	Proximate Characteristics of Pegaga Leaves Grown in High Carbon Dioxide	Izyan Irdina Rosroha, Mohamad Yusof Maskat	Prof. Dr. Mohamad Yusof Maskat	Universiti Kebangsaan Malaysia



PARALLEL PRESENTATION SESSION

Advanced Sustainable Technology International Conference

5 August 2024

Microsoft Team 3 (Session 2)

11:00 a.m - 01:00 pm

Online Presentations

Session Panel : Dr. Lewis Liew Teo Piaw (PKS)

Moderator : Mohd Hasrul Nizam bin Hamsani (PKS)

Rapporteur : Haslinda binti Jama'in (PKS)

Field : Social Science and Business Management

Paper ID	Paper Title	Author(s)	Presenter	Institution
ASTECH 2024: 135-132	Job Satisfaction Level Among Lecturers at Kolej Komuniti Miri Sarawak	Norayushafira binti Che Kamaruddin, Holinson Emang Wan	Norayushafira binti Che Kamaruddin	Kolej Komuniti Miri
ASTECH 2024: 143-135	Tahu-Qu: The Implementation of Tahsin Al-Quran Activities to Improve the Quality of Surah Al-Fatihah Recitation Among Students of Politeknik Kuching Sarawak	Shahidan bin Shafie, Natrah binti Mat Noor, Haslinda binti Jama'in	Shahidan bin Shafie	Politeknik Kuching Sarawak
ASTECH 2024: 141-137	The Effectiveness Of The "Peer Academic In Commerce" (PAC) Program Among Students Of The Commerce Department At Polytechnic Kuching, Sarawak.	Faidatul Akma binti Che Kamarudin, Arfieen bin Mokhtar	Arfieen bin Mokhtar	Politeknik Kuching Sarawak
ASTECH 2024: 099-139	Study of Green Space Changes in Miri Times Square Using Orthophoto Data Approach	Sr Che Ku Ahmad Fuad Bin Che Ku Abdullah, Sr Helmi bin Abd Kadir	Che Ku Ahmad Fuad bin Che Ku Abdullah	Politeknik Kuching Sarawak
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ASTECH 2024: 078-126	Enhancing Utilization of Online Teaching Platforms: Factors Influencing Lecturers' Adoption and Usage Patterns in Politeknik Kuching Sarawak (PKS)	Aeida Nurhafidzah binti Zahili, Fadhlinah binti Mohamad Ahmad, Haslinda binti Jama'in	Haslinda binti Jama'in	Politeknik Kuching Sarawak
ASTECH 2024: 174-158	Policies and Governance for Skills Development in The Fourth Industrial Revolution	Aizuddin Saari , Mohamad Sattar Rasul, Ruhizan Mohamad Yasin, Nur Atiqah Jalaludin ,Zool Hilmi Mohamed Ashari	Mohd Aizuddin bin Saari	Universiti Kebangsaan Malaysia



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Advanced Sustainable Technology International Conference

5 August 2024
Microsoft Team 1 (Session 3)
02:00 - 04:00 p.m.

Online Presentations

Session Panel : Dr. Nur Adilla Binti Kasim (PMU)
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Rapporteur : Nurshakhuzaimah binti Sahmat (PKS)
Field : Engineering and Technology

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ASTECH 2024: 029-015	Fabrication of Extra Virgin Olive Oil Alginate Beads: A Study on the Effect of Concentration and Distance Towards Beads' Characteristics.	Nur Eylana Balqis Amran, Muhammad Salahuddin Haris, Shaiqah Mohd Rus	Dr. Shaiqah Mohd Rus	UniKL RCMP
ASTECH 2024: 030-016	Improving Work Efficiency in the Sabah Manufacturing Industry: Leveraging Lean Tools for Optimization and Performance Enhancement	Mohd Adzrie, Mohd Shihabudin Ismail, Mohd Suffian Misran, Mohd Amran Madlan	Mohd Adzrie bin Hj. Radzali	Universiti Malaysia Sabah
ASTECH 2024: 077-063	Development of Smart Walking Cane using Pico Raspberry Pi, IoT and Mobile Apps	Farrah Waheda binti Abdullah, Nazrina binti Bakar, Kedung Fletcher, Mohamad Shahrin bin L Bari, Azhar bin Abd Hamid, Anding Nyuak	Farrah Waheda binti Abdullah	Politeknik Kuching Sarawak
ASTECH 2024: 089-072	Research Review on Autonomous Driving Software Test Technology	Liu Hao	Liu Hao	Universiti Selangor
ASTECH 2024: 134-143	Economic Evaluation of Aerobic Windrow Composting Facilities for Food Waste Management Using Life Cycle Costing Analysis	Roziena Abu, Muhammad Arif Ab Aziz, Shariffah Nur Jannah Syed Zainol Abidin, Zainura Zainoon Noor, Rohaya Abd Jalil	Shariffah Nur Jannah Syed Zainol Abidin	Politeknik Tun Syed Nasir
ASTECH 2024: 101-117	Minimap-Based Approach in Badminton Game Using Computer Vision Algorithm	Dianthika Puteri Andini, Muhammad Yusuf Fadhlan, Ginanjar Suwasono Adi	Muhammad Yusuf Fadhlan	Politeknik Negeri Bandung



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02:00 - 04:00 p.m.

Online Presentations

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Field : Engineering and Technology

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ASTECH 2024: 088-078	Study on Development of Green Pavement for Motorcyclist Shelter (GPMS)	Ruslawati Abdul Wahab Fahrurrazi Mahyun, Mohd Rozaimi Ibrahim, Muhammad Aiman Farhan Areffin, Muhamad Zulhanif Dappis	Dr. Ruslawati Abdul Wahab	Politeknik Port Dickson
ASTECH 2024: 125-116	Implementation of Staff Attendance Recording at Sekolah Kebangsaan (SK) Tanjong Bako Using CFAS System	Siti Noor Aishah Mohammad, Rohaya Mohamad, Mohamad Faizal Gapor	Siti Noor Aishah binti Mohammad	Politeknik Kuching Sarawak
ASTECH 2024: 120-125	Instant Foxtail Millet Puri With Curry	Rahimawati binti Abdul Rahim, Subasri A/P Kumaran	Rahimawati binti Abdul Rahim	Politeknik Tun Syed Nasir Syed Ismail
ASTECH 2024: 065-153	Statistical Analysis of Deflection Conditions on Road Segments Near Intersection Arms on National Roads Using Light Weight Deflectometer (LWD) by Prima 100	Martinus Agus Sugiyanto, Ajeng Meiliana Rizky, Atmy Verani Rouly Sihombing	Ajeng Meiliana Rizky	Politeknik Negeri Bandung
ASTECH 2024: 138-128	Level of Understanding in Green Technology and Their Impact on Creative Activities and Innovation Among Students	Zainatun Nisa Sapaat, Halizah Alwi	Zainatun Nisa binti Sapaat	Politeknik Muadzam Shah
ASTECH 2024: 098-085	Movement Classification of Badminton Players Using Human Pose Estimation Based on Long Short-Term Memory	Muhammad Yusuf Fadhlani, Dianthika Puteri Andini, Ginanjar Suwasono Adi	Dianthika Puteri Andini	Politeknik Negeri Bandung



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ASTECH 2024: 130-120	A Preliminary Insights of Human Resource Sustainability Among Young Talents in TVET Institutions	Haziri Husain, Maisarrah Aqlili Riana Mohamad Zaini, Norhidayati Mohd Kosni, Rosmanizah Derahman	Haziri Husain	Politeknik Sultan Idris Shah
ASTECH 2024: 126-115	Moderating Roles of Technology Readiness in Generalized Audit Software (GAS) Adoption: Evidence from Malaysian TVET Institution.	Masraya Sait	Masraya Sait	Politeknik Mukah
ASTECH 2024: 079-062	The Influence of ISO 21001 Educational Organization Management System on Staff Satisfaction: A Qualitative Study on Private Higher Education Providers in Malaysia	Looi Tuck Kian, Salina Muhammad, Nur Fatin Nabilah Shahrom	Looi Tuck Kian	SGS (M) Sdn Bhd
ASTECH 2024: 109-097	Awareness of the Importance of Fiber Optic Installation Course among Students of Computer System and Network Certificate Program at Melaka Community College	Shaheda Mohammad Khawari, Norhana Safee, Mohd Aznan Janal	Shaheda binti Mohammad Khawari	Kolej Komuniti Jasin
ASTECH 2024: 103-099	Envisioning Teaching Factory Ecosystem for Vocationally Focused Marketing Curricula in Indonesia	Rafiati Kania, Faraan Ahmad Rafi	Rafiati Kania	Politeknik Negeri Bandung



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