

CURRICULUM VITAE



Dr. Nik Nor Liyana Binti Nik Ibrahim
Faculty of Engineering
Universiti Putra Malaysia

NIK NOR LIYANA NIK IBRAHIM

DEPARTMENT OF CHEMICAL AND ENVIRONMENTAL ENGINEERING

EDUCATOR | CONSULTANT | INNOVATOR

BACKGROUND

34 years old (17 January 1991)

Education:

Vanderbilt University

Bachelor of Chemical and
Biomolecular Engineering, May 2012

University of Sheffield

PhD in Automatic Control and
System Engineering, May 2017

Academic Position:

Academic Coordinator II (2025-2026)

Committee JKIPP UPM (2023-2025)

Committee JKPPPTP UPM (2024)

Postgraduate Coordinator (2023-
2024)



“EMBRACING AI WITH
CHEMICAL ENGINEERING
INSIGHTS”

GRANTS (PRINCIPAL)



Total Funding

RM 540,809



Research Grants

RM 99,425



Consultation

RM 441,384



8 Projects

TEACHING

9

Undergraduates
Courses

4

Postgraduates
Courses

Main Teaching Courses

- Numerical Methods and Optimisation,
- Process Design and Integration,
- Process and Product Engineering,
- Process Control and Instrumentation

PUBLICATIONS



H-Index

6

SCOPUS

- 20 CIJ articles
(13 as senior author)
- 8 Q1/Q2 articles
(5 as senior author)
- 3 IPs (Copyrights)
- 1 Book Chapter



CHAIRMAN

PhD

1 graduated
(GOT)

1 ongoing

MSKK

7 graduated

1 ongoing

FYP

15 graduated



MEMBER

PhD

1 graduated

4 ongoing

MSc

2 graduated

TIMELINE



- Achieved 4th Place in the Hackathon Connected by Mangroves.
- Secured the copyright for the Putra Bingo Kit.
- Gave the First TV talk in Selamat Pagi Malaysia.

Joined UPM.
Completed PhD on
time at age 27.

2017



2019



- Finalist AFNC Kategori Pengajar muda 2022
- * Led my 1st consultation project with KASA.

2022



2024

- Led 3 consultation projects with PRSB focusing on decision-making and optimization.



Granted the **Geran Inovasi Pengajaran dan Pembelajaran**.

2018



2020

Innovation in Teaching & Learning

PICTL 2020

PUTRA BINGO KIT
• HENs Hunt



Secured 2 copyrights on the DemiPutra Interface.

Anugerah Perkhidmatan Cemerlang 2023

2023

Secured first industry grant (RM20k),

Third Place AKRI 2025 - Innovative Curriculum Category



2025

MY PROFILE

EDUCATION

University of Sheffield, United Kingdom (May 2017)

- **PhD, Automatic Control and System Engineering**

Vanderbilt University, Nashville, TN (May 2012)

- **Bachelor of Engineering, Chemical and Biomolecular Engineering**
- **Bachelor of Science, Mathematics**
- **Minor, Chemistry**

APPOINTMENTS

Universiti Putra Malaysia

- Academic Coordinator II, Department of Chemical & Environmental Engineering
Jan 2025 - present
- Ahli Jawatankuasa Kecil Pelantikan Penyeliaan dan Pemeriksa Tesis Pelajar (JKKPPTP)
Jul 2024 - Mar 2025
- Ahli Jawatankuasa Kerja Inovasi Pengajaran dan Pembelajaran (JKIPP)
Mar 2023 - present
- Postgraduate Coordinator, Department of Chemical & Environmental Engineering
Jan 2023 - January 2025
- Senior Lecturer, Department of Chemical & Environmental Engineering
September 2017 - present

Teaching Experience

1	ECH3128	Numerical Method and Optimisation Process	2 (2024/2025)
2	ECH4312	Process and Product Engineering	1 (2024/2025)
3	ECH5520	Process Safety Management	1 (2024/2025)
4	ECH3128	Numerical Method and Optimisation Process	2 (2023/2024)
5	ECH4306	Process and Product Engineering	2 (2023/2024)
6	ECH3119	Numerical Method and Optimisation Process	2 (2023/2024)
7	ECH5520	Process Safety Management	2 (2023/2024)
8	ECH3128	Numerical Method and Optimisation Process	2 (2022/2023)
9	ECH3119	Numerical Method and Optimisation Process	2 (2022/2023)
10	EAB5421	Forensic Science	2 (2022/2023)
11	ECH4305	Process Design and Integration	1 (2022/2023)
12	ECH5520	Process Safety Management	1 (2022/2023)
13	ECH5990	Dissertation	1 (2022/2023)
14	ECH3119	Numerical Method and Optimisation Process	2 (2021/2022)
15	EAB5421	Forensic Science	2 (2021/2022)
16	ECH4305	Process Design and Integration	1 (2021/2022)
17	ECH5990	Dissertation	1 (2021/2022)
18	ECH3119	Numerical Method and Optimisation Process	2 (2020/2021)
19	ECH5990	Dissertation	2 (2020/2021)
20	ECH4305	Process Design and Integration	1 (2020/2021)
21	ECH5990	Dissertation	1 (2020/2021)
22	ECH4305	Process Design and Integration	2 (2019/2020)
23	ECH4305	Process Design and Integration	1 (2019/2020)
24	ECH5516	Process Safety Laboratory	1 (2019/2020)
25	ECC3014	Engineering Statistics	2 (2018/2019)



26	ECC3004	Engineering Statistics	2 (2018/2019)
27	ECH3121	Process Control and Simulation	1 (2018/2019)
28	ECH5516	Process Safety Laboratory	1 (2018/2019)
29	ECH3111	Process Optimization and Simulation	2 (2017/2018)
30	ECH5516	Process Safety Laboratory	2 (2017/2018)
31	ECC3004	Engineering Statistics	2 (2017/2018)

Innovation in Teaching and Learning

Course Name	Innovations
Process and Product Engineering	• Sustainability Showcase
Numerical Method and Optimisation Process	• App Designer Module • App Designer Showcase • InterfaceDevelopment Project
Process Design and Integration	• HENs Hunt • BINGO Quiz



Supervision of Students

Doctor of Philosophy - Principal Supervisor

1	GS67666	Ahmed Aminu Aliyu	Ongoing
2	GS55355	Rabiatul Adawiyah Binti Ali	Graduated

Doctor of Philosophy - Co-Supervisor

1	GS70594	Melvin Fong Wai Loong	Ongoing
2	GS67768	Soh Ming Lun	Ongoing
3	GS66043	Noorsuria Binti Suradi	Ongoing
4	GS52238	Dirik Cengiz	Ongoing
5	GS55473	Nurfarahana Binti Mohd Nasir	Graduated

Master by Research - Co-Supervisor

1	GS55394	Mohd Shahril Bin Kamarudin	Graduated
2	GS52301	Lau Kia Li	Graduated

Master by Courseworks - Principal Supervisor

1	GS50073	Mohd Fareed Anuar Mazlan	Graduated
2	GS50889	Umamaheswari Porselvam	Graduated
3	GS59644	Saeed Abdulhalim Abdul Wahid	Graduated
4	GS58078	Vincent Tay Hsiang Hong	Graduated
5	GS52835	Syahrul Nizam bin Shahrudin	Graduated
6	GS59384	Safwan Bin Abdul Salam	Graduated
7	GS62589	Muhammad Firdaus Shuwadi bin Shoker	Graduated
8	GS65335	Jeevan A/L Raja Segaran	Ongoing

Final Year Project - Principal Supervisor

1	2018/2019	Rabiatul Adawiyah Binti Ali	Graduated
2	2018/2019	Girija Shankari A/P Nagooru	Graduated
3	2019/2020	Mythili A/P Nadarajah	Graduated
4	2019/2020	Lew Pei Sze	Graduated
5	2019/2020	Constantine Emparie Tujah	Graduated
6	2020/2021	Hariharan	Graduated
7	2020/2021	Thineswaran Morgan	Graduated
8	2021/2022	Muhammad Aizat Mohd Ibrahim	Graduated
9	2021/2022	Nazeera Zulkarnain	Graduated
10	2022/2023	Ahmad Faiz	Graduated
11	2022/2023	Siti Maisarah binti Zaidi	Graduated
12	2022/2023	Akmal Harris	Graduated
13	2023/2024	Khor Mei Wen	Graduated
14	2023/2024	Tan Ee Fan	Graduated
15	2023/2024	Ho Yong En	Graduated
16	2024/2025	Hallie Ng Xiu Yi	Graduated
17	2024/2025	Ngu Siew Li	Graduated
18	2024/2025	Koo Zhun Wai	Graduated
19	2025/2026	Low Chi Cheng	Ongoing
20	2025/2026	Muhammad Amir Ashraf bin Abdul Kader	Ongoing

Examiners

Examiner - University Level

1	Noumeur Abdelmoutaleb	GS57160	PhD	2025
2	Choo Boon Chong	GS58539	PhD	2025
3	Akhtar Muhammad Bilal	GS61673	Master	2024
4	Mohamad Faizal Bin Khamis	GS59423	Master	2023
5	Irwin Tan Kai Ge	GS61386	Master	2022
6	Nor Hafizah Md Aris	GS58564	Master	2022
7	Raymond Nee Chan Yew	GS57971	Master	2022
8	Abd Halim bin Zakaria	GS55227	Master	2021
9	Ba Rashaid Ali Abdullah Baqdhimh	GS49039	Master	2018

FYP Examiner

1	Lee Yong Jia	2025
2	Tan Hui Wen	2025
3	Nur Ayuni Zahirah Mohd Raduan	2024
4	Nur Aqilah Uzma Noor Hisam	2024
5	Wafa Azmi	2023
6	Muhammad Raimi	2023
7	Wan Hanis Suffia Wan Rossman	2022
8	Michael Chong Vui San	2021
9	Nurjihan Najwa	2021
10	Tharsini Amma a/p Puspadaran	2020
11	Nur Syakirah Romli	2020

Research and Consultation Projects

Research - Principal Investigator

1	WNEC SDN. BHD.	Real-time data monitoring for algae photobioreactor for Atoz Carbon Cycle Microalgae Experience Store in GMBB	2025	RM19,425.00
2	GP-IPM (9635500)	Applying New Methods Of Determining Output Frequency Response Function In The Analysis and Design Of Chemical Engineering Process	2018-2021	RM60,000.00
3	GIPP (9323752)	Developing Bingo Quiz: Gamification As An Alternative Assessment And Analysis Of Its Effectiveness On Students Learning Experiences	2018-2022	RM20,000.00

Consultation - Principal Investigator

1	PRSB	Decision-Making Framework for Potential Products Derived From Microalgae Biomass, Crude Algae Oil (CAO) and Defatted Algae Cake (DAC) Based On Techno-Economic and Environmental Impacts	2024-2026	RM109,100.00
2	PRSB	CO ₂ Optimization for Growth of Robust Microalgae and PMC Under Pure and Simulated Flue Gas Conditions	2025	RM143,750.00
3	PRSB	Decision-Making of Nutrient Formulation from Waste Substrates for Microalgae	2024-2025	RM92,901.00
4	WNEC SDN. BHD.	Real-Time Data Monitoring for Algae Photobioreactor	2023-2024	RM45,650.00
5	KASA	Projek Pelan Pengukuhan Inventori Kebangsaan (National Inventory Improvement Plan – NIIP) – Uncertainty Assessment Untuk Data Inventori GHG	2025	RM49,983.77

Research and Consultation Projects

Research - Member

1	FRGS	Conceptualization of Big Data Management for Palm Oil Mill Low Emissions Development Strategy	2024-2027	160800
2	Matching Geran Putra	Thermorheological behavior of polyamide 11 blends and composites	2019-2021	20000

Consultation - Member

1	PRSB	The Provision for Elevated CO2 Concentration Evaluation Using Microalgae	2025	RM143,750
2	PRSB	Screening Robust Marine Microalgae and PMC for CO ₂ Tolerance	2025	RM143,750
3	PRSB	Proof-of-concept Nutrient Formulation from Waste Substrates for Microalgae Cultivation : Aquaculture Waste	2024-2025	RM92,901
4	PRSB	Proof-of-concept Nutrient Formulation from Waste Substrates for Microalgae Cultivation :Palm Oil Mill Digestate	2024-2025	RM92,901
5	PRSB	Proof-of-concept Nutrient Formulation from Waste Substrates for Microalgae Cultivation : Molasses	2024-2025	RM92,901
6	PRSB	Proof-of-concept Nutrient Formulation from Waste Substrates for Microalgae Cultivation : Fruit Waste	2024-2025	RM92,901
7	Clarity Crest Sdn Bhd.	Sustainable Bamboo Value Chain Study	2022	RM37,100

Publications

H-Index (with total citations)

1	Scopus	7	177
2	Google Scholar	7	241

Journal Publications - Senior Author

1. Ali, R. A., **Nik Ibrahim, N. N. L.**, Ghani, W. A. W. A. K., Sani, N. S., & Lam, H. L. (2024). DeMI interface tool for profit estimation and waste conversion technology recommendations in enhancing municipal solid waste management. *International Journal of Environmental Science and Technology*, 1-18.
2. Thamrin, N. M., Jaffar, A., Ali, M. S. A. M., Yassin, A. I. M., Misnan, M. F., Zan, N. M., & **Ibrahim, N. N. L. N.** (2023). Application of Long-Short Term Memory for Accurate Biochemical Oxygen Demand Prediction in Rivers through Water Quality Parameters. *Applications of Modelling and Simulation*, 7, 132-145.
3. Tujah, C.E., Ali, R.A., **Nik Ibrahim, N.N.L.**, 2023. Optimization of Sugarcane Bagasse Conversion Technologies Using Process Network Synthesis Coupled with Machine Learning. *Pertanika Journal of Science & Technology*, 31(4).
4. Ali, R.A., **Nik Ibrahim, N.N.L.**, Ghani, W.A.W.A.K., Sani, N.S., Lam, H.L. (2022) A Hybrid P-Graph And WEKA Approach In Decision-Making: Waste Conversion Technologies Selection. *J. Appl. Sci. Eng.* 2022, 26, 261–267.
5. Misnan M.F. Thamrin N.M. & **Nik Ibrahim N.N.L.** (2022) Smart Sustainable Water Monitoring System via Internet of Things (IoT) for Water Retention Pond UiTM Cawangan Johor, Kampus Pasir Gudang. *International Journal of Sustainable Construction Engineering and Technology*, 13(2), 1-7.
6. Ali, R.A., **Nik Ibrahim, N.N.L.**, Wan Ab Karim Ghani, W.A. et al. (2022) Utilization of process network synthesis and machine learning as decision-making tools for municipal solid waste management. *Int. J. Environ. Sci. Technol.*
<https://doi.org/10.1007/s13762-021-03250-0>
7. Mohd Aisha, S., M Thamrin, N., Ghazali, M.F., **Nik Ibrahim, N.N.L.**, Megat Ali, M.S.A (2022) Non-Linear Autoregressive Dissolved Oxygen Prediction Model for Paddy Irrigation Channel. *TEM Journal*, 11(2), 842-850.

8. M Thamrin, N., Megat Ali, M. S. A., Misnan, M. F., **Nik Ibrahim, N. N.L.**, & Shaghaghi, N. (2021). Sustainable surface water dissolved oxygen monitoring at lake 7/1F, Shah Alam, Selangor/Norashikin M. Thamrin...[et al.]. Journal of Mechanical Engineering (JMechE), 8(2), 13-26.
9. Lew, P. S., **Nik Ibrahim, N. N. L.**, Kamarudin, S., Thamrin, N. M., & Misnan, M. F. (2021). Optimization of Bokashi-Composting Process Using Effective Microorganisms-1 in Smart Composting Bin. Sensors, 21(8), 2847.
10. Annuar Mazlan, M. F., & **Nik Ibrahim, N. N.L.** (2021) Safety Devices Compliances Study : Liquid Fuel Dispenser Area of Petrol Stations in Terengganu. Journal of Occupational Safety and Health, 18(2), 46-56.
11. Porselvam, U., **Nik Ibrahim, N. N.L.**, & M. Y., Hamdan (2020). Evaluation of Plated versus Grated Process Deck in Floating Production Storage and Offloading (FPSO) from Explosion Perspective using SAFETI OFFSHORE. Pertanika Journal of Science & Technology, 28(101).
12. M Thamrin, N., Misnan, M. F., **Nik Ibrahim, N. N.L.**, & Shaghaghi, N. (2020). Long-Range Data Transmission for Online Water Quality Monitoring of the Tembling River in Rural Areas of Pahang, Malaysia. AMBIENT 2020 : The Tenth International Conference on Ambient Computing, Applications, Services and Technologies, 28-32.
13. Ali, R. A., **Nik Ibrahim, N. N. L.**, & Lam, H. L. (2019). Conversion technologies: evaluation of economic performance and environmental impact analysis for municipal solid waste in Malaysia. Processes, 7(10), 752.

Journal Publications - Co-author

1. Dirik C., Biak D.R.B., Razak M.B.A. & **Nik Ibrahim N.N.L.** (2025) Flooding Probability in Temporal Risk Assessment for LNG Vaporizer Unit established in West Coast Malaysia. Journal of Integrated Disaster Risk Management, 15(1), 1-21
- Nasir, N.M., Jusoh, A., Harun, R., **Nik Ibrahim, N.N.L.**, Rasit, N., Ghani,
2. W.A.W.A.K. and Kurniawan, S.B., 2023. Nutrient consumption of green microalgae, Chlorella sp. during the bioremediation of shrimp aquaculture wastewater. Algal Research, 72, p.103110.

3. Maluin, F.N., Hussein, M.Z., Wayayok, A., **Nik Ibrahim, N.N.L.**, and Hashim, N. (2023). Chitosan nanoparticles as a sustainable alternative nutrient formulation in hydroponically grown *Brassica rapa* subsp. *chinensis* (L.) Hanelt microgreen and its adult vegetable. *Archives of Agronomy and Soil Science*, 69(12), pp.2401-2412.
- Dirik, C., Biak, D.R.A., **Nik Ibrahim, N.N.L.** (2022). Externally initiated event in sequential risk assessment for the onshore LNG marine loading arm unit. *Journal of Loss Prevention in the Process Industries*, 75, p.104717.
- Adeyi, A.A., Jamil, S.N.A.M., Abdullah, L.C., **Nik Ibrahim, N.N.L.**, Nourouzi, M. (2022) Efficient sequestration of boron from liquid phase by amidoxime-functionalized poly(acrylonitrile-co-acrylic acid): experimental and modelling analyses. *Water Sci Technol* (2022) 85 (10): 3055–3071.
<https://doi.org/10.2166/wst.2022.162>
- Ahmad Naim, N.A., Omar, R., **Nik Ibrahim, N.N.L.** (2022) Emergency preparedness and response in palm oil mill and investigation of the employees' emergency preparedness knowledge and attitude. *Process Safety Progress*, 41, S75-S83.
- Nasir N.M., Razif Harun A.J., **Nik Ibrahim N.N.L.**, & Abdul Karim Ghani W.A.W. (2021) Optimization of aquaculture wastewater bioremediation and harvesting utilizing response surface methodology (RSM), *Chemical Engineering Transactions*, 83, 151-156.
- Maluin, F. N., Hussein, M. Z., **Nik Ibrahim, N. N. L.**, Wayayok, A., & Hashim, N. (2021). Some Emerging Opportunities of Nanotechnology Development for Soilless and Microgreen Farming. *Agronomy*, 11(6), 1213.
- Li, L. K., Jamil, S. N. A. M., Abdullah, L. C., **Nik Ibrahim, N. N. L.**, Adekanm, A. A., Nourouzi, M. (2019). Application of feed-forward and recurrent neural network in modelling the adsorption of boron by amidoxime-modified poly(Acrylonitrile-Co-Acrylic Acid). *Environmental Engineering Research*.10 .4491/eer.2019.138

Chapter in Book

1. **Nik Ibrahim, N.N.L.**, Asmawi, A., AbdulKadir, S. (2021), Putra Bingo: Gamifikasi dan Penaksiran Alternatif dalam Memperkayakan Pengalaman Pembelajaran Pelajar in Abdul Rani, M.Z., Man, N. A.(Eds.) *Penyelidikan dan Inovasi dalam Pengajaran dan Pembelajaran di Universiti Putra Malaysia* (pp.82-90). Selangor, Malaysia. UPM (eISBN 978-967-19652-6-9)

Conference Proceedings

1. Misnan, M. F., Azri, M. A. I., Thamrin, N. M., & **Ibrahim, N. N. N.** (2023, September). Performance Evaluation of RGB and YCrCb Colour Space Models for Submerge Aquatic Vegetation Area Estimation in the Shallow Lake 7/1F Shah Alam, Selangor. In 2023 IEEE International Conference on Agrosystem Engineering, Technology & Applications (AGRETA) (pp. 1-6). IEEE.
2. Ali, R.A., **Nik Ibrahim, N.N.L.**, Wan Ab Karim Ghani, W.A. et al. A hybrid P-graph and WEKA Approach in Decision-making: A Case Study for Kuala Lumpur, Waste Management, 14th Aun/Seed-Net Regional Conference on Chemical Engineering 2021 in conjunction with 1st International Conference on Innovation in Chemical Engineering And Technology 2021, 2021.
3. Umamaheswari, P., Mohamed Yusoff, H., **Nik Ibrahim, N. N. L.**, Evaluation of Plated vs Grated Process Deck in Typical FPSO from Explosion Perspective, Loss Prevention Asia 2019
4. **Nik Ibrahim, N. N. L.**, Asmawi, A., Abdul Kadir, S., Teo, R.M., Putra BINGO : From Pen and Paper to Digital, 2019 IEEE Conference on Graphics and Media, 2019
5. Ali, R. A., **Nik Ibrahim, N. N. L.**, Optimization of municipal solid waste conversion technology using process network synthesis, International Conference On Environmental Sustainability And Resource Security, 2019.
6. Hussin, M. H., Ab Karim Ghani, W. A. W., Lam, H.L., **Nik Ibrahim, N. N. L.**, Alias, A. B. 2018. Understanding Biomass Value Chains and the Environment-Food-Energy-Water Nexus in Biorefinery using P-graph. Biomass-Environment-Food-Energy-Water (BEFEW NEXUS). Hotel Bangi Putrajaya.
7. **Nik Ibrahim, N. N. L.**, Lang, Z.Q. (2016), A new and efficient method for the determination of Output Frequency Response Function of nonlinear vibration system. Proceedings of the International Conference on Smart Infrastructure and Construction (ICSIC 2016), University of Cambridge, Cambridge, United Kingdom, 27-29 June 2016.

Research Products and Awards

Awards

Third Place in AKRI 2025 - Innovative Curriculum Category	MOHE	National	2025
Second Place in Putra Pintar 2025	UPM	National	2025
Gold Medal at Putra InnoCreative Poster Competition 2025	UPM	National	2025
Silver Award in AI and IoT International Innovation Expo 2024	UITM	International	2024
Gold Medal at Putra InnoCreative Poster Competition 2023	UPM	National	2023
Anugerah Perkhidmatan Cemerlang	UPM	National	2023
Finalist Anugerah Fellowship Naib Canselor UPM Kategori Pengajar Muda	UPM	National	2022
Silver Award in Innovation and Invention Challenge College of Engineering 2021	UITM	National	2021
Silver Award in 4th Digitalised International Invention, Innovation and Design Johor 2021	UITM	International	2021
Gold Award in 3rd International Putra InnoCreative Carnival in Teaching and Learning	UPM	International	2020
Gold medal in Invention, Innovation and Design Competition FKE 2019	UITM	National	2019
Gold medal in International Robotics Competition and Exhibition	CLAWAR	International	2019
Silver award in 2nd International Putra InnoCreative Carnival in Teaching and Learning	UPM	International	2019
4th place in Hackathon – Connected Mangrove 2019 by Ericsson	Ericsson, UPM, UTM, Celcom, Xpand, JPT	National	2019



Research Products and Awards

Copyright

1. Putra Bingo, LY2019008577
2. DeMI PUTRA, Literary Work, LY2023W06567
3. DeMI PUTRA (Interface), Artistic Work, AR2023W06581

Outreach Works

Industry Network

1. ESG Awareness Game Exhibition in Impact X-Chain 2025 : **New Energy Centre Malaysia Sdn. Bhd.**
2. ESG Buddy Talk Ag Tech : **New Energy Centre Malaysia Sdn. Bhd.**
3. Development of Algorithmic Model for Microalgae Cultivation and Harvesting with IoT and Data Analytics : **Petronas Research Sdn. Bhd.**
4. Sharing Session by Next Gene Scientific Sdn Bhd : **Next Gene Scientific Sdn. Bhd.**
5. Sharing session by IKA Works (Asia) Sdn Bhd : **IKA Works (Asia) Sdn. Bhd.**
Perbincangan.projek Microalgae Cultivation Monitoring System and Automation :
6. **Petronas Research Sdn. Bhd.**
Key Factor of Technical Decision for Solid Waste Management by The
7. Concensionaires : **E-Idaman Group Sdn. Bhd.**
Training Session for Green path Foundation: Step 1 to ESG Journey : **World New**
8. **Energy Centre Sdn Bhd**
Decision-Making of Nutrient Formulation from Waste Substrates for Microalgae
9. Cultivation : **Petronas Research Sdn. Bhd.**
Real-Time Data Monitoring For Algae Photobioreactor : **World New Energy Centre**
10. **Sdn Bhd**
Knowledge Transfer on Microbial Diversity Studies : **Apical Scientific Sdn. Bhd.**
11. Knowledge Transfer on Amino Acid and Protein Studies : **Calia Technology Sdn. Bhd.**
12. AI Tools For Thesis Writing Seminar : **Megabase Global Resources**
Consultation on collaboration and research fund : **Asiatech Education Sdn. Bhd.**
13. sustainable bamboo-based value chain study : **Clarity Crest Sdn. Bhd**
Projek Pelan Pengukuhan Inventori Kebangsaan (National Inventory GHG) :
Kementerian Alam Sekitar dan Air
- 14.

15. Temasek Foundation–Singapore Polytechnic Conceive-Design-Implement-Operate (CDIO) Forum On Education For Sustainable Development : **Singapore Polytechnic International Temasek Foundation**
16. kajian komposisi sisa pepejal tapak pelupusan Sg Udang, Melaka : **SWCorp**
Hack for Good 2.0 – Connected Mangroves Hackathon : **Ericsson (M) Sdn Bhd**
Mangroves Planting Activity with Ericsson : **Ericsson (M) Sdn Bhd**
17. Latihan PHAST 28 April 2018 : **Khalil Trading & Services**
Latihan Bow_Tie : **Khalil Trading & Services**
18. Fire Safety Engineering & Regulation Visit To KLIA2 : **Malaysia Airport Berhad**
Latihan Investigator 3 (TRIPOD BETA) : **Khalil Trading & Services**
Projek Master PSLP dengan Phast Software : **DNVGL**
- 19.

Community Engagement

1. Pembinaan IoT Used Cooking Oil Recycler Bersama SMK Setapak Indah : **SMK Setapak Indah**
2. Program Pemindahan Ilmu - Program Selepas Ujian Akhir Sesi Akademik (UASA):
Pembugaran Minda : **SMK Bandar Tasik Selatan**
3. Chemical Engineers@school : **SMK Convent Kajang**
4. Sustainable Development by ChemE : **SRI Integrasi Puncak Jalil**
5. Global I-Lead STEM Camp 2018 : **Persatuan Guru STEM Malaysia**
6. Acidity and Lyophilization of Fruit and Plant Extracts : **SM SAINS TUANKU JAAFAR**

Media Engagement

1. Slot Selamat Pagi Malaysia, 22 Julai 2019, Teknologi IoT untuk Paya Bakau

Professional Service and Contributions

Coordinator

1	Department of Chemical and Environmental Engineering	Academic Coordinator II	Jan 2025-present
2	Department of Chemical and Environmental Engineering	Postgraduate Coordinator	Jan 2023-Jan 2025

Academic Advisor

1	197742	TINESA A/P KRISHNAN	1 (2018/2019)
2	197748	VIKNESWARY A/P SOORIYANARAYANAN	1 (2018/2019)
3	198521	NUR SABRINA BINTI MOHD NOR	1 (2018/2019)
4	198692	NURAFIFAH DILLA BINTI DIWI	1 (2018/2019)
5	198742	NAZEERA BINTI ZUKERNAIN	1 (2018/2019)
6	198978	MUHAMMAD ALIFF IKHMAL BIN ZULKAFLI	1 (2018/2019)
7	199018	MUHAMMAD ARASY BIN YUSRANNADZIRIN	1 (2018/2019)
8	199030	MUHAMMAD SALIHIN BIN MOHD HIDZIR	1 (2018/2019)
9	199043	NUR LYANA AQILAH BINTI MOHD SUPANDI	1 (2018/2019)
10	199090	MUHAMMAD AL-ALIF IRFAN BIN ALPIAN	1 (2018/2019)
11	216297	NUR FAREISYA IRDINA BINTI SHAHIMI	1 (2022/2023)
12	215992	NG CHOI YENG	1 (2022/2023)
13	216035	NG SIN YEEN	1 (2022/2023)
14	215477	LIM KOK YOU	1 (2022/2023)
15	214978	ARSHAD HAKIMI BIN MOHD ZAIDI	1 (2022/2023)
16	215668	MUHAMMAD ALIF AIDIL BIN SUPARWI	1 (2022/2023)

Student Advisor

1	Gold Medal FYP Day Exhibition	FYP Supervisor	2025
2	Silver Medal FYP Day Exhibition	FYP Supervisor	2025
3	Malaysia Data Innovation Talent X DOSM Datathon 2025 (MDIT X DD 2025) Competition	Team Advisor	2025
4	2025 Short Video Competition	Team Advisor	2025
5	Gold Medal FYP Day Exhibition	FYP Supervisor	2024
6	Silver Medal FYP Day Exhibition	FYP Supervisor	2024
7	Consolation Prize Malaysia Data Innovation Talent X Dosm Datathon 2024 (MDIT X DD 2024) Competition	Team Advisor	2024
8	Silver Medal AI & IOT International Innovation Expo 2024	Student Advisor	2024
9	Bronze Medal FYP Day Exhibition	FYP Supervisor	2022
10	Bronze Medal FYP Day Exhibition	FYP Supervisor	2021
11	Silver Medal FYP Day Exhibition	FYP Supervisor	2020

International Level - Committee Member

1	3rd International Conference on Innovation in Chemical 3rd International Conference on Innovation in Chemical Engineering and Technology (ICICET 2026)	Technical Scientific Committee	2025-2026
2	28th Conference on Process Integration, Modelling and Optimization for Energy Savings and Pollution Reduction	Local Organising Committee	2024-2025
3	2nd International Conference on Innovation in Chemical Engineering and Technology (ICICET2023)	Secretary	2022-2024
4	Loss Prevention Asia 2023	Technical reviewer	2023
5	14th AUN/SEED Regional Conference on Chemical Engineering 2021 (RCChE2021) in conjunction with International Conference in Chemical Engineering and Technology (ICICET 2021)	Secretary	2020-2021
6	Loss Prevention Asia 2021	Technical Reviewer	2021

National Level - Jury

1	INVENTION, INNOVATION & DESIGN EXPOSITION 2025 (iidex2025) UiTM	Judge	2025
2	Malaysia Techlympics 2025	Judge	2025
3	3rd Process Control Virtual Symposium 2025 (PCVS2025)	Evaluator	2025
4	Mapping the Path to Sustainability: Creative Infographics on Green Energy	Judge	2024
5	Green Maker Challenge (GMC)	Judge	2023

University Level - Committee Member

1	Jawatankuasa Kerja Inovasi Pengajaran Dan Pembelajaran 2025-2026	Committee Member	2024 - 2025
2	Jawatankuasa Kecil Pelantikan Penyelia Dan Pemeriksa Tesis Pelajar (Jkppptp)	Committee Member	2024 - 2025
3	Biochemical Engineering Seminar Series 2024	Committee Member	2024
4	Jawatankuasa Kerja Inovasi Pengajaran Dan Pembelajaran 2023-2025	Committee Member	2023 - 2025
5	Ai Tools For Thesis Writing Workshop	Director	2023
6	Simposium Pascasiswazah Program Mskk Master Keselamatan Proses Dan Pencegahan Kehilangan 2023	Director	2023
7	Chemical Engineering Postgraduates Symposium 2023 (Ceps2023)	Committee Member	2023
8	Virtual Master Of Process Safety And Loss Prevention Postgraduate Symposium 2021	Director	2021
9	Process Safety And Loss Prevention Postgraduate Symposium 2019	Committee Member	2019 - 2020
10	Mskk Postgraduate Symposium 2019	Committee Member	2019
11	Process Safety And Loss Prevention Postgraduate Symposium 2019	Committee Member	2019

Academic Program - Committee Member

1	Semakan Kurikulum Bachelo Kejuruteraan Kimia dengan Kepujian	Vice Director	2025-2026
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Journal Reviewer

Integrating waste thermal conversion and lifecycle analysis for sustainable energy production: reflecting upon environmental and economic impacts	SETA	2025
An Approach for Selecting CO2 Removal Technology in Indonesia's Upstream Natural Gas Industry Using AHP Method	JASE	2023
Automation Of Psychological Selection Procedures For Personnel To Specific Activities	JST	2021
Evaluation of Zeolite A/Fe3O4 Nanocomposite as a Potential Adsorbent for Removal of Organic Molecules from Waste Water	JOURNAL OF CHEMISTRY	2019
Mathematical Model for Multivariate Nonlinear Prediction of SMD of X-type Swirl Pressure Nozzles	PSEP	2019