

CURRICULUM VITAE



A. Biodata

Full Name	Nurul Izzah Binti Khalid
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B. Education and Academic Qualifications

Universiti Putra Malaysia, Serdang, Selangor

<i>PhD, Food Engineering</i>	2022
<ul style="list-style-type: none">• Thesis: Development of Electrolyzed Water Sanitation Program For SME Frozen Meat Patty Industry	
<i>Master of Science, Food Engineering</i>	2015
<ul style="list-style-type: none">• Thesis: Kinetics of Fouling Deposit Removal of Pink Guava Purees in a Specially Designed Cleaning-In-Place Test Rig• CGPA: 4.00	
<i>Bachelor of Engineering (Process and Food), Food Engineering</i>	2011
<ul style="list-style-type: none">• Thesis: Conceptual Design and Validation Work of Fouling Rig• CGPA: 3.562	

C. Area of Interest

- Cleaning and disinfection in Food Industry
- Sanitation
- Hygienic processing
- Fouling and cleaning in Food Industry

D. Award and Recognition

No.	Role	Title	Organization	Award	Year
1	Leader	A conceptual design of a portable electrolysis sanitation unit for food SMEs	The 6th Agricultural Engineering Student Chapter Annual Regional Convention 2020 (ARC 2020)	Gold prize paper (International)	2020
2	Leader	A conceptual design of a portable electrolysis sanitation unit for food SMEs	The 6th Agricultural Engineering Student Chapter Annual Regional Convention 2020 (ARC 2020)	Silver prize poster (International)	2020
3	Member	Electrolysis generator for postharvest handling of fruits & vegetables	The 6th Agricultural Engineering Student Chapter Annual Regional Convention 2020 (ARC 2020)	Bronze prize paper (International)	2020
4	Member	Electrolysis generator for postharvest handling of fruits & vegetables	The 6th Agricultural Engineering Student Chapter Annual Regional Convention 2020 (ARC 2020)	Silver prize poster (International)	2020
5	Presenter	Alkaline Cleaning-in-Place of Pink Guava Puree Fouling Deposit Using Lab-scale Cleaning Test Rig	International Conference of Food and Agricultural Engineering (CAFEi2014)	YSN-ASM Young Presenter Award (International)	2014
6	Presenter	A sustainable CIP program for Pink guava puree factory	International Engineering Invention & Innovation Exhibition (i-ENVEX 2014)	Bronze prize (International)	2014
7	Presenter	Test Rigs for Evaluation of Cleaning-in-Place (CIP) Performance	International Engineering Invention & Innovation Exhibition (i-ENVEX 2013)	Bronze prize (International)	2013

D. Award and Recognition (continued)

No.	Role	Title	Organization	Award	Year
8	Presenter	Concentric Tube-Fouling Rig for Investigation of Fouling Deposit Formation After Heat Treatment of Pink Guava Puree	International Engineering Invention & Innovation Exhibition (i-ENVEX 2012)	Silver prize (International)	2012
9	Student	Faculty of Engineering	Anugerah Skim Galakan Akademik, Koperasi Universiti Putra Malaysia Berhad	Best student (University)	2011
10	Presenter	Nata de coco dicing machine	Karnival Rekaipita Kebangsaan 2010 in Universiti Teknologi Malaysia, Skudai, Johor	Best Presentation (International)	2010
11	Presenter	Plant Design Competition	Department of Process and Food Engineering, UPM	Second place (University)	2011
12	Presenter	Student Packaging Design Competition. Teabag with Hanger	Department of Process and Food Engineering, UPM	Third place (University)	2010

E. Teaching Experience

Final Year Project (FYP) Instructor 2019-2020

Final Year Project (FYP)

Department of Process and Food Engineering, Universiti Putra Malaysia

- Assisted an undergraduate student in Market Validation for the potential application of a Portable water jet equipped with an electrolysis unit.
- Assisted and demonstrated lab-scale experiments to an undergraduate student related to the electrolysis process using a lab-scale electrolyzing unit

Final Year Project (FYP) Instructor 2018-2019

Final Year Project (FYP)

Department of Process and Food Engineering, Universiti Putra Malaysia

- Assisted and demonstrated lab-scale experiments to an undergraduate student related to the electrolysis process using a lab-scale electrolyzing unit

E. Teaching Experience (continued)

- Final Year Project (FYP) Instructor** 2017-2018
Final Year Project (FYP)
Department of Process and Food Engineering, Universiti Putra Malaysia
- Assisted in a case study for a meat patty factory using a portable cleaning unit.
 - Assisted and demonstrated lab-scale experiments to an undergraduate student related to the electrolysis process using a lab-scale electrolyzing unit
- Demonstrator** 2016-2017
Computer Programming for Process Engineers
Department of Process and Food Engineering, Universiti Putra Malaysia
- Assisted students on how to use MATLAB software
 - Assisted students on how to apply knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- Final Year Project (FYP) Instructor** 2016-2017
Final Year Project (FYP)
Department of Process and Food Engineering, Universiti Putra Malaysia
- Assisted and demonstrated lab-scale experiments to an undergraduate student related to cleaning and fouling of fat-based fouling deposits using a fouling rig.
- Demonstrator (Special Graduate Research Allowance Scheme or S-GRA)** 2015-2016
Computer Programming for Process Engineers
Department of Process and Food Engineering, Universiti Putra Malaysia
- Assisted students on how to use MATLAB software.
 - Assisted students on how to apply knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- FYP Instructor (Special Graduate Research Allowance Scheme or S-GRA)** 2015-2016
Final Year Project (FYP)
Department of Process and Food Engineering, Universiti Putra Malaysia
- Assisted an undergraduate student in designing a portable cleaning unit for the meat processing industry
 - Assisted students in analyzing the current cleaning process in a meat processing factory.
- Laboratory Assistant (Graduate Research Fellowship or GRF)** 2012-2013
Heat and Fluid Laboratory
Department of Process and Food Engineering, Universiti Putra Malaysia
- Demonstrated lab-scale experiments to undergraduate students related to fluid mechanics.

E. Teaching Experience (continued)

FYP Instructor (Graduate Research Fellowship or GRF) 2012-2013

Final Year Project (FYP)

Department of Process and Food Engineering, Universiti Putra Malaysia

- Assisted and demonstrated lab-scale experiments to undergraduate students related to cleaning and fouling of pink guava puree fouling deposit using a lab-scale cleaning test rig.

FYP Instructor (Graduate Research Fellowship or GRF) 2011-2012

Final Year Project (FYP)

Department of Process and Food Engineering, Universiti Putra Malaysia

- Assisted and demonstrated lab-scale experiments to undergraduate students related to chili sauce fouling deposits using a fouling rig.

F. Publications

Journal

- 1 **N.I. Khalid**, Sulaiman, N.S., Ab Aziz, N., Taip, F.S., Sobri, S. and Nor-Khaizura, M.A.R (2022). Sustainable sanitation: Screening methods of electrolysis parameters for a custom-built electrolysed water generator. *Cleaner Engineering and Technology*. Vol. 8, 100482. (Scopus)
- 2 Jalil N.A., **N.I. Khalid**, Sulaiman, N.S., Sobri S., Taip, F.S., and Ab Aziz, N., (2021). Conceptual design of a portable electrolyzed water cleaning rig using TRIZ method. *Journal of Food Research*. Vol. 5 (Suppl. 1), 188-192. (Scopus)
- 3 **N.I. Khalid**, Sulaiman, N.S., Ab Aziz, N., Taip, F.S., Sobri, S. and Nor-Khaizura, M.A.R (2021). Stability of electrolyzed water: from the perspective of food industry. *Journal of Food Research*. Vol. 5 (Suppl. 1), 47-56. (Scopus)
- 4 Sulaiman, N.S., **N.I. Khalid**, Fauzi, E.M.H., Ab Aziz, N., Yusof, N.A., Sobri, S. and Hasnan, N.Z.N (2020). Revamp of existing lab-scale electrolytic cell design for electrolyzed water study in cleaning application. *Journal of Food Research*. Vol. 4 (6), 146-149. (Scopus)
- 5 **N.I. Khalid**, Sulaiman, S., Ab Aziz, N., Taip, F.S., Sobri, S. and Nor-Khaizura, M.A.R (2020). Optimization of Electrolysis Parameters for Green Sanitation Chemicals Production Using Response Surface Methodology. *Processes*. Vol. 8(7), 792. (Scopus, Web of Science, JCR Q2)
- 6 **N.I. Khalid**, Ab Aziz, N., and Taip, F.S (2020). Performance Evaluation of Portable Hot Water Jet for Frozen Meat Industry Application. *International Journal on Advanced Science, Engineering and Information Technology*. Vol. 10 (3), 1099-1106. (Scopus)
- 7 **N.I. Khalid**, N. Ab Aziz, N. Mohd Thani, R. Shapi'i, N. F. Abd Rahman (2020). Electrolyzed water as a sustainable cleaning and disinfection chemical for SMEs Malaysian meat processing food industries: Challenges and uncertainties. *Journal of Agricultural and Food Engineering*. Vol. 1, 0006.
- 8 **N.I. Khalid**, U.S. Sulaiman, N.A. Nasiruddin, M.M. Hatdran, N. Ab Aziz, M.A.R. Nor Khaizura, N.Z.N. Hasnan, F.S. Taip, S. Sobri (2019). Integrating cleaning studies with industrial practice: Case study of an effective cleaning program for a frozen meat patties SME factory. *Journal of Cleaner Production*. Vol. 235, 688-700. (Scopus, Web of Science, JCR Q1)
- 9 **N.I. Khalid**, Sulaiman, S., Ab Aziz, N., Taip, F.S., Sobri, S. and Nor-Khaizura, M.A.R (2018). Electrolyzed water as a green cleaner: chemical and physical

- characterization at different electrolysing parameters. *Journal of Food Research*. Vol. 2 (6), 512-519. (Scopus)
- 10 **N.I. Khalid**, N. Nordin, Z.Y. Chia, N.Ab Aziz, A.A. Nuraini, F.S. Taip, A. Ahmedov (2016). A removal kinetics approach for evaluation of economic cleaning protocols for pink guava puree fouling deposit. *Journal of Cleaner Production*. Vol. 135, 1317-1326. (Scopus, Web of Science, JCR Q1)
 - 11 **N.I. Khalid**, N. Nordin, N.Ab Aziz, A.A. Nuraini, F.S. Taip, Anuar, M.S (2015). Design of a test rig for cleaning studies and evaluation of lab-scale experiments using pink guava puree as a fouling deposit model. *Journal of Food Process Engineering*. Vol. 38, 583-593. (Scopus, Web of Science, JCR Q3)
 - 12 **N.I. Khalid**, N.A. Aziz, A.A. Nuraini, F.S. Taip and Anuar, M.S (2014). Alkaline Cleaning-in-Place of Pink Guava Puree Fouling Deposit Using Lab-scale Cleaning Test Rig. *Agriculture and Agricultural Science Procedia*. Vol. 2, 280 – 288. (Scopus)
 - 13 Nur Atika Ali, **Nurul Izzah Khalid**, Norashikin Ab. Aziz, Rosnah Shamsudin, Farah Saleena Taip. (2014). Investigation of fouling deposit formation from pasteurizer of chili sauce by using lab-scale concentric tube-pasteurizer. *Journal of Engineering Science and Technology*. Vol. 9, No. 3 334 - 346. (Scopus, Web of Science, JCR Q3)
 - 14 **N.I. Khalid**, K. W. Chan, N. Ab Aziz, F. S. Taip, M. S. Anuar (2013). Concentric Tube-Fouling Rig for Investigation of Fouling Deposit Formation from Pasteurizer of Viscous Food Liquid. *Journal of Engineering Science and Technology*. Vol. 8, No. 1: 16 – 26. (Scopus, Web of Science, JCR Q3)

International Proceeding

- 1 **N.I. Khalid** and N. Ab Aziz (2019). Challenges in cleaning for frozen food SMEs: Current and suggested cleaning program. *Konvensyen Kebangsaan Kejuruteraan Pertanian Dan Makanan 2019*, Putrajaya, 21 Mac 2019.
- 2 **N.I. Khalid** and N. Ab Aziz (2018). Teknik Pembersihan Kilang Pemprosesan Makanan untuk Jaminan Makanan Selamat. *Malaysian Society of Agricultural Engineers (MSAE) Conference*, Faculty of Engineering, Universiti Putra Malaysia, 7-8 Februari 2018.
- 3 **N.I. Khalid**, N. Nordin, A.A. Nuraini, N.Ab Aziz, F.S. Taip and A. Ahmedov (2015). Removal kinetics of pink guava puree fouling deposit from a stainless steel surface during alkaline cycle. *International Conference on Heat Exchanger Fouling and Cleaning - 2015*, Enfield, Republic of Ireland, 7-12 Jun 2015.
- 4 N.A. Ali, **N.I. Khalid**, N. Ab Aziz, R. Shamsudin, F.S. Taip (2012). Fouling Deposit from Chili Sauce Pasteurization Unit. *International Conference on Agricultural and Food Engineering for Life (CAFEi2012)*, 26-28 November 2012, 643-652.
- 5 **N.I. Khalid**, N.Ab Aziz, F.S. Taip and Anuar, M.S. (2012). Concentric Tube-Fouling Rig for Investigation of Fouling Deposit Formation after Heat Treatment of Pink Guava Puree. *The 2nd International Symposium on Processing & Drying of Foods, Vegetables and Fruits (ISPDFVF 2012)*, University of Nottingham, Malaysia Campus, 18-19 Jun 2012.
- 6 X.W. Tew, **N.I. Khalid**, N.A. Aziz, F.S. Taip and Anuar, M.S (2012). A Conceptual Design of Fouling Deposit Adhesiveness Gauge. *AIP Conference Proceedings*, Volume 1440, 578-585. (Scopus, Web of Science)

G. Grants and Funding

No.	Title	Amount	Year	Source of Fund
1	University Consortium (UC) Student Thesis Grant for Research Activities	USD 676	2021	Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), Philippines

H. Academics Duties/Committee Member

No.	Title	Level	Year
1.	Deputy Director (Brochure/Program Book) of Asia Packaging Network International Packaging Symposium	International	2021

I. Professional Qualification/Membership/Affiliation

Graduate Engineer, Board of Engineers, Malaysia
Registration Number: 93505A
Since 2014

Graduate Technologist, Board of Technologist, Malaysia
Registration Number: GT22110449
Since 2022

J. Working Experience

Senior Lecturer 2022 – present
Department of Food Technology, Faculty of Food Science and Technology,
Universiti Putra Malaysia, Serdang, Selangor, Malaysia

Personal Secretary 2022 – 2022
SY Shakipur Tradings Sdn. Bhd

Technical Editor 2020 – present
Journal of Agricultural and Food Engineering (MYJAFE)

Research Assistance 2015 – 2016
Department of Process and Food Engineering, Faculty of Engineering,
Universiti Putra Malaysia, Serdang, Selangor, Malaysia

K. Professional Services

No.	Role	Title	Year
Editorial Board			
1.	Editor	Program Book of Asia Packaging Network International Packaging Symposium	2021
2.	Editor	Abstract Book of Asia Packaging Network International Packaging Symposium	2021

K. Professional Services (continued)

No.	Role	Title	Year
Chair/Panellist/Speaker/Jury			
1.	Co-chairperson	The 4th International Conference on Agricultural and Food Engineering	2018
Reviewer			
1.	Reviewer	National Technology Research in Engineering, Design and Social Science Conference 2022 (NTRENDS2022)	2022
2.	Reviewer	Journal of Agricultural and Food Engineering (MYJAFE)	2022

L. Undergraduate Projects

Final Year Project (FYP):

Conceptual Design and Validation Work of Fouling Rig

Objective: To design a monitoring device for fouling deposits, namely a concentric tube-fouling rig, which provides in-direct measurement in the heating area of food processing equipment.

Internship Project:

Effect of high temperature on bloating packaging during transportation overseas.

Objective: To study the effect of different temperatures on pineapple jam biscuits packaging.

M. Training attended

- Professional Halal Executive Training Program
- Introduction on MS 1514:2009 Good Manufacturing Practices (GMP)
- MS 1514:2009 GMP Compliance Plant Layout
- Understanding and Implementing MS 1480:2007 Hazards Analysis and Critical Control point (HACCP)
- HACCP on Documenting MS 1480:2019
- Cleaning and Disinfection Training
- Basic Food Handling Training (Kursus Pengendalian Makanan)
- Kursus Latihan Pembersihan dan Sanitasi
- Workshop on Basic Food Microbiology Techniques
- Knowing the Standard Methods for Food Microbiological Analysis Workshop
- IDEXX Water Quality Seminar
- COMSOL Day 2016

N. Computer Literacy

Design Expert, Minitab, COMSOL, MATLAB, ImageJ, HyperSnap, SPSS, Microsoft Office (Visio, Word, Excel, and Powerpoint)

Referees

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