CURRICULUM VITAE

PERSONAL INFORMATION

Name	:	Nor Haniza Sarmin
Citizenship	:	Malaysian
Date of birth	:	September 8, 1967
Place of birth	:	Pontian, Johor, Malaysia
Marital Status	:	Married, three children
Office Address	:	Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia
Email	:	nhs@utm.my
Telephone	:	+60177557660
H-Index	:	18

EDUCATION BACKGROUND

PhD (Mathematics), State University of New York at Binghamton, Binghamton, New York 13902-6000, USA; January 1995 - May 1998.
Thesis: On Two-generator Groups of Class Two and Their Nonabelian Tensor Squares.
Supervisor: Prof. Luise-Charlotte Kappe

M.A. (Mathematics), State University of New York at Binghamton, Binghamton, New York 13902-6000, USA; August 1989 - December 1990.

B.Sc. (Mathematics) with honors, State University of New York at Binghamton, Binghamton, New York 13902-6000, USA; January 1986 - May 1989.
Minor in Economics.

PROFESSIONAL MEMBERSHIP

Malaysian Mathematical Sciences Society (PERSAMA), Lifetime Member
Institute of Electrical and Electronics Engineer (IEEE), 2011- 2023
PUTM Academic Staff Association (PKAUTM), 1991 - present
Islamic Science Academy (ASASI), 2003 – present
UTM Toastmasters Club, July 2016 – September 2023

PRESENT JOB

Professor
Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia
Starting date: June 6, 2014
Acting Director, UTM International

UTM International, Universiti Teknologi Malaysia
Date: August 1, 2022 – January 31, 2023

Associate Director (Global Strategy and Engagement), UTM International
UTM International, Universiti Teknologi Malaysia
Date: August 15, 2019 – December 31, 2022

Associate Professor
Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia
Starting date: October 30, 2002

Lecturer
Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia
Starting date: May 2, 1991
Confirmation date: May 1, 1994

TEACHING EXPERIENCE

Undergraduate:
Basic Mathematics, Calculus 1, Calculus 2, Basic Statistics, Linear Algebra, Discrete Mathematics, Set Theory and Logic, Modern Algebra, Applied Abstract Algebra, Complex Variables, Complex Analysis, Real Analysis, Number Theory, Research Methodology and Information Retrieval

Postgraduate:
Group Theory 1, Group Theory 2, Research Methodology

SUPERVISING EXPERIENCE

Bachelor Degree Level
May 1992 – present   *Total:*   *52 students*

Master Level
December 1999 – present   *Total:*   *30 students*

PhD Level
November 2003 – present   *Total:*   *51 students*

PhD Supervision

No.	Name	Year	Title
1.	Fong Wan Heng *(graduated on 26 March 2008)*	2004 – 2007	Modelling of Splicing Systems Using Formal Language Theory
2.	Azhana Ahmad *(graduated on 16 Sept. 2008)*	2003 – 2008	The Exact Number of Conjugacy Classes of 2-Generator p-Groups of Nilpotency Class 2

No.	Name	Year	Title
3.	Nor Muhainiah Mohd Ali *(graduated on 31 Dec 2008)*	2005 – 2008	Homological Functors and Capability of 2-Generator Groups of Nilpotency Class Two
4.	Rohaidah bte Masri (co) *(graduated on 17 Nov 2009)*	2005-2009	The Nonabelian Tensor Squares of Some Bieberbach Groups With Cyclic Point Group of Order 2
5.	Norashiqin Mohd Idrus (PT) *(graduated on 4 April 2011)*	2004 – 2011	Bieberbach Groups With Finite Point Groups
6.	Loh Ser Lee (co) *(graduated on 23 Nov 2011)*	2008-2011	Graph Theoretical Characterizations and Techniques for Minimization of Connected Graphs Into Single-row Networks
7.	Samad Rashid (Iran) *(graduated on 30 Jan 2012)*	July 2009-2012	The Nonabelian Tensor Squares and Capability of Some Finite Groups
8.	Yuhani Yusof *(graduated on 29 Feb 2012)*	Dec 2008-2011	DNA Splicing System Inspired by Bio Molecular Operations
9.	Mohd Sham Mohamad *(graduated on 26 March 2012)*	Dec 2008-2011	Compatibility Conditions and Nonabelian Tensor Products of Finite Cyclic Groups Of p-Power Order
10.	Fadila Normahia Abd Manaf *(graduated in March 2013)*	July 2009-2012	Commutativity Degrees of Nilpotent Groups of Class Two
11.	Fariba Karimi (Iran) *(graduated in July 2013)*	Dec 2009-2012	Mathematical Modeling of Splicing Systems in DNA Computing
12.	Sheila a/p Ilangovan *(graduated in November 2013)*	July 2010-2013	Conjugacy Classes and Graph of Some 2-Groups of Nilpotency Class 2
13.	Faiz Muhammad Khan (Pakistan) *(graduated in December 2013)*	July 2010 – 2013	Fuzzy Ideals in Ordered Semigroups and Their Generalisations
14.	Yasamin Barakat (Iran) *(graduated in December 2013)*	July 2010-2013	Automorphisms of Nonabalian 2-Generated p-Groups of Class 2
15.	Kayvan Moradipour (Iran) *(graduated in December 2013)*	2011-2013	The Exact Number and Size of Conjugacy Classes, Commutativity Degrees and Non-Commuting Graphs of Finite Metacyclic Groups
16.	Abdulqader Mohammed Bin Basri Assaqqaf (Yemen) *(graduated in January 2014)*	Dec 2009-2013	Capability and Homological Functors of Finite Metacyclic p-Groups
17.	Hazzirah Izzati Mat Hassim *(graduated in November 2014)*	July 2010-2014	The Homological Functors of Bieberbach Groups with Cyclic Point Groups of Order Two, Three and Five
18.	Sanaa Mohamed (Libya)	Sept 2011-2014	Extension of the Commutativity Degrees of Some Finite Groups and Their Related Graphs

No.	Name	Year	Title
	(*graduated in November 2014*)		
19.	Gan Yee Siang (co) (*graduated in Mac 2015*)	Sept 2011-2015	Finite Automata in DNA Splicing and Sticker Systems with the Presence of Weights
20.	Hidayat Ullah Khan (Pakistan) (*graduated in 2015*)	Feb 2012 – 2015	Generalized Interval-Valued Fuzzy Sets of Ordered Semigroups
21.	Mathuri Selvarajoo (co) (*graduated in 2015*)	Sept 2011-2015	Probabilistic Splicing System and Sticker Systems in DNA Computing
22.	Zainab Yahya (co) (*graduated in 2016*)	Sept 2011-2015	Representation of Some Finite Groups and Galois Stability
23.	Rosita Zainal (co) (*graduated in 2016*)	Feb 2012-2016	The Schur Multipliers, Nonabelian Tensor Squares and Capability of Some Finite p-Groups
24.	Muhammad Azrin Ahmad (*graduated in 2016*)	Sept 2012 - 2016	Second Order Limit Language and Its Properties in Yusof-Goode Splicing System
25.	Mustafa El-Sanfaz (Libya) (*graduated in 2016*)	Oct 2013 - 2016	The Probability that an Element of a Non-Abelian Group Fixes a Set and its Applications in Graph Theory
26.	Adnin Afifi Nawi (co) (*graduated in 2017*)	Sept 2012 – 2016	The Schur Multiplier and Capability of Pairs of Some Finite Groups
27.	Muhanizah Abdul Hamid (co) (*graduated in 2017*)	Sept 2012 – 2016	The Relative n-th Nilpotency Degree of Two Subgroups of a Finite Group Related to a Graph
28.	Nurhidaya Mohamad Jan (co) (*graduated in 2017*)	Sept 2012 - 2016	The Modelling of Watson-Crick Petri Net and Place-Labelled Petri Net Controlled Grammar using Formal Language Theory
29.	Siti Afiqah Mohammad (*graduated in 2018*)	Feb 2014 - 2017	The Homological Functors of Bieberbach Groups of Dimension Six with Quaternion Point Group of Order Eight
30.	Norarida Abd Rhani (co) (*graduated in 2018*)	Sept 2014-2017	An Extension of the Commutativity Degree of Some Finite Groups and Their Graphs
31.	Siti Norziahidayu Amzee Zamri (*graduated in 2018*)	Mac 2015-2017	A Variance of the Probability That a Metacyclic p-Groups Fixes a Set and Its Related Graphs
32.	Rabiha Birkia (Sudan) (*graduated in 2019*)	Sept 2015-2018	Energy of Some Graphs Associated to Finite Groups
33.	Ibrahim Gambo (Nigeria) (*graduated on 2019*)	Oct 2015-2018	Innovative Types of Fuzzy Gamma Ideals in Ordered Gamma Semigroups
34.	Suad Saed M Alrehaili (*graduated in 2020*)	Aug 2016 - 2019	Homological Functors of Metabelian Groups
35.	Alia Husna Mohd Noor (*graduated in 2020*)	Aug 2016 - 2019	3-generator Groups of p-power Order and Some Related Graphs
36.	Nabilah Najmuddin (*graduated in 2021*)	Aug 2016 - 2021	Homological Functors of Bieberbach Groups
37.	Amira Fadina Ahmad Fadzil (*graduated in 2021*)	Feb 2017 - 2021	The Energy of Cayley Graphs of Some Finite Groups

No.	Name	Year	Title
38.	Nur Idayu Alimon *(graduated in 2021)*	Sept 2017 - 2021	The Spectrum and Laplacian Spectrum of Some Graphs of Metacyclic p-Groups
39.	Nurul Izzaty Ismail (co) *(graduated in 2022)*	Sept 2017 - 2022	Mathematical Modelling of DNA Splicing Systems with Palindromic and Non-Plindromic Restriction Enzyme
40.	Dr Mohammad Hassan Mudaber *(graduated in 2023)*	Feb 2020 – March 2023	Perfect Codes in Unit Graph of Some Commutative Rings
41.	Aqilahfarhana Abdul Rahman (co) *(graduated in 2023)*	Sept 2017 – June 2023	Characterization of Static Watson-Crick Grammar in Formal Language Theory
42.	Siti Salmah Yasiran *(graduated in 2023)*	2016 – Nov 2023	A Computer Aided Diagnosis for Breast Cancer Classification Based on Keypoint Descriptors
43.	Nurhidayah Zaid *(graduated in 2024)*	Sept 2018 – May 2024	Probabilistic Characterizations of Finite Rings and Their Related Graphs
44.	Athirah Zulkarnain *(graduated in 2024)*	Feb 2018 – Aug 2024	The Prime Cayley Graphs of Non-Abelian p-Groups
45.	Nabilah Fikriah Rahin *(graduated in 2024)*	Feb 2018 – Aug 2024	Moore-Penrose Inverse Matrix of Directed Simple Graphs to some Finite Groups
46.	Maryam Fahd Al Shammari (co) *(graduated in 2024)*	Feb 2021 – Oct 2024	Union Power Cayley Graphs and the Intersection Power Cayley Graphs of Cyclic Groups and Dihedral Groups with Their Classifications and Invariants
47.	Nur Athirah Farhana Omar Zai (graduated in 2025)	Sept 2019 – 2025	The Non-Zero Divisor Graph and Total Non-Zero Divisor Graph Associated to the Ring of Integers Modulo n and Their Properties
48.	Ghazali Bin Semil @ Ismail (graduated in 2025)	Sept 2021 – 2025	Topological Indices of the Zero Divisor Graph for Some Integers Modulo Ring and Its Calculator App
49.	Muhammad Nur Syiham Abdul Razak (co)	Sept 2019 - 2026	n-Cut Splicing on Labeled Graphs Over Two Symbols in Graph Splicing Systems
50.	Mahwash Imtiaz (co)	Oct 2023 - present	Perfect Codes on Zero-divisor Cayley Graphs and Unit Cayley Graphs Associated with Some Commutative Rings
51.	Nuzhat Arooj (co)	Mar 2025 – present	Complexities of DNA Splicing Using Graph Theory

External co-supervisor:

1. Hossein Mousa Jafarabadi (PhD by Mixed mode - Iran) – Title: Semihypergroups and Dynamics Created by Them.
2. Asad Ghafoor (Universiti Sultan Zainal Abidin, Terengganu, Malaysia) - Title: An Ideal Based Weakly Zero Divisor Graph of a Commutative Ring

LATEST EXTERNAL EXAMINER

1. Waqar Ali (Associate Professor Dr. Mohamad Nazri Husin, Professor Dr. Roslan Hasni @ Abdullah, Associate Professor Dr. Muhammad Faisal Nadeem), PhD Thesis, Universiti Malaysia Terengganu, 2026.
2. Intekhab Hussain, PhD Thesis, Universiti Sains Malaysia, 2025.
3. Intekhab Hussain, PhD Thesis, Universiti Sains Malaysia, 2025.
4. Lee Han Zhou, MSc Thesis, Universiti Sains Malaysia, 2025.
5. Nooradelena binti Mohd Ruslim, PhD Thesis, Universiti Malaysia Pahang, 2024.
6. Fatin Hanani binti Hasan, PhD Thesis, Universiti Malaysia Pahang, 2024.
7. Sadia Akhter, PhD Thesis, University of Punjab, Pakistan, 2024.
8. Suriana Alias, PhD Thesis, Universiti Teknologi Mara, 2023.
9. Siti Humaira, PhD Thesis, Institut Teknologi Bandung, Indonesia, 2023.
10. Ahmad Hazazi bin Ahamad Sumadi, PhD Thesis, Universiti Putra Malaysia, 2023.
11. Sumathi, PhD Thesis, Alagappa University, India, 2023.

LATEST PUBLICATIONS

Indexed Journals

ISI Web of Knowledge

(2026)
1. Nurhabibah, Abdul Gazir Syarifudin, Intan Muchtadi-Alamsyah, Erma Suwastika, **Nor Haniza Sarmin**, Nur Idayu Alimon and Ghazali Semil Ismail, "On properties and topological indices of the zero divisor graph for direct product of some commutative rings", AIMS Mathematics, 11(1), 1590−1615, 2026.

(2025)

1. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw, "The Zero Product Probability of Some Finite Ring of Matrices Based on the Order of the Annihilator", Journal of the Indonesian Mathematical Society, 31(2), 1838, 2025.
2. Nur Idayu Alimon, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw, Nabilah Najmuddin and Ghazali Semil@Ismail, "The Sombor Index of a Power Graph for Some Finite Groups and Their Sombor Polynomial", Malaysian Journal of Mathematical Sciences, 19(2), 399−410, 2025.
3. Asma Ali, **Nor Haniza Sarmin,** Bakhtiyar Ahmad, "On the Genus Extended Dot Product Graph and the Crosscap of Dot Product Graph", Malaysian Journal of Mathematical Sciences, 19(3), 921−932, 2025.
4. Ghazali Semil@Ismail, **Nor Haniza Sarmin** and Nur Idayu Alimon, "The Distance-Based Topological Indices of the Zero Divisor Graph for Some Commutative Rings with the Calculator App", Malaysian Journal of Mathematical Sciences, 19(1), 207−222, 2025.
5. Ghazali Semil@Ismail, **Nor Haniza Sarmin,** Nur Idayu Alimon, Abdul Gazir Syarifudin, Nurhabibah, Intan Muchtadi-Alamsyah, Erma Suwastika, and Fariz Maulana, "Zagreb Indices and Size of a Graph Associated to a Ring with Python Syntax", International Journal of Computer Mathematics: Computer Systems Theory, 1−34, 2025.

6. Ghazali Semil @ Ismail, **Nor Haniza Sarmin**, Nur Idayu Alimon and Fariz Maulana, "Forgotten Topological Index of the Zero Divisor Graph for Some Rings of Integers", Journal of Indonesian Mathematical Society, 31(1), 1-9, 2025.

7. I Gede Adhitya Wisnu Wardhana, Fariz Maulana, **Nor Haniza Sarmin**, "On the Uniqueness Of Almost Prime Submodules Within Cyclic Uniserial Modules", Journal of Discrete Mathematical Sciences & Cryptography, 28(1), 239-247, 2025.

8. Yun Ru Yew, Nor Haniza Sarmin, "The Minimum Degree Energy of the Cayley Graph Associated to the Dihedral Group of Order Six with Subsets of Order Two and Three", Malaysian Journal of Fundamental and Applied Sciences, 21, 1936-1944, 2025.

9. Siti Hajar Mohd Khairuddin, Muhammad Azrin Ahmad, Aizi Nor Mazila Ramli, **Nor Haniza Sarmin**, Fong Wan Heng, "A Study on Mathematical Model of n-th Order Limit Language from a Biological Perspective via Wet-Lab Experiment", Malaysian Journal of Mathematical Sciences, 19, 325-342, 2025.

10. Gusti Yogananda Karang, I Gede Adhitya Wisnu Wardhana, Nur Idayu Alimon, **Nor Haniza Sarmin**, "Energy and Degree Sum Energy of Non-coprime Graphs on Dihedral Groups", Journal of the Indonesian Mathematical Society, 31 (1), 1-11, 2025.

(2024)

1. Ghazali Semil @ Ismail, **Nor Haniza Sarmin**, Nur Idayu Alimon and Fariz Maulana, "The First General Zagreb Index of the Zero Divisor Graph for the Ring Z_pq^k", Punjab University Journal of Mathematics, 56(5), 135-147, 2024.

2. Fariz Maulana, Muhammad Zulfikar Aditya, Erma Suwastika, Intan Muchtadi-Alamisyah, Nur Idayu Alimon and **Nor Haniza Sarmin**. "On The Topological Indices of Zero Divisor Graphs of Some Commutative Rings", Journal of Applied Mathematics and Informatics, 42(3), 663-680, 2024.

3. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw. "The Squared-Zero Product Probability of Some Ring of Matrices over Integers Modulo Prime", Malaysian Journal of Mathematical Sciences, 18(2), 259-266, 2024.

4. Mohammad Hassan Mudaber, **Nor Haniza Sarmin** and Ibrahim Gambo, "Perfect Codes in Unity Product Graphs of Some Commutative Rings", Southeast Asian Bulletin of Mathematics, 48(3), 401-409, 2024.

5. Ali Aqeel Salim Al-Ashammari, Sib Krishna Ghoshal, Maitham Salman Amana, Nandang Mufti, Muhammad Safwan Abdul Aziz, Safa Riyadh Waheed, Karrar Abdulameer Kadhim, **Nor Haniza Sarmin** and Hazri Bakhtiar, "Humidity Sensing Characteristics of Rose Bengal Dye-Functionalized Plasmonic Silver Nanoparticles-Coated Novel Fiber-Optic Sensors", Optical Fiber Technology, 88(1), 104025, 2024.

6. Maryam Fahd A. Alshammari, Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin** and Ahmad Erfanian, "The Union Power Cayley Graph for Cyclic Groups and Its Properties", International Journal of Mathematics and Computer Science, 19(3), 841-853, 2024.

7. Sanhan Muhammad Salih Khasraw, ChenarAbdulla, **Nor Haniza Sarmin** and Ibrahim Gambo, "On the Non-Commuting Graph of The Group U_6n", Malaysian Journal of Mathematical Sciences, 18(3), 491-500, 2024.

8. Sanhan Muhammad Salih Khasraw, **Nor Haniza Sarmin**, Nur Idayu Alimon, Nabilah Najmuddin and Ghazali Semil@Ismail. "Sombor Index and Sombor Polynomial of the Noncommuting Graph Associated to Some Finite Groups", Journal of Advanced Research in Applied Sciences and Engineering Technology, 42(2): 112-121, 2024.

(2023)

9. Nur Athirah Farhana Omar Zai, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw, Ibrahim Gambo and Nurhidayah Zaid. "On the Non-Zero Divisor Graphs of

Some Finite Commutative Rings", Malaysian Journal of Mathematical Sciences, 17(2), 105-112, 2023.

10. Nur Idayu Alimon, **Nor Haniza Sarmin** and Ahmad Erfanian. "On the Szeged Index and Its Noncommuting Graph", Jurnal Teknologi, 85(3), 105-110, 2023.

11. Ghazali Semil @ Ismail, **Nor Haniza Sarmin**, Nur Idayu Alimon and Fariz Maulana. "The First Zagreb Index of the Zero Divisor Graph for the Ring of Integers Modulo Power of Primes", Malaysian Journal of Fundamental and Applied Sciences, 19(5), 892-900, 2023.

(2022)

12. Vian Salah, **Nor Haniza Sarmin** and Hazzirah Izzati Mat Hassim. "Maximum Degree Energy of the Non-commuting Graphs Associated to the Dihedral Groups", Advances and Applications in Mathematical Sciences, 21(4), 1913-1923, 2022.

13. Nurul 'Ain Mazlan, Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw. "Wiener Index and Mean Distance of Zero-Divisor Type Graph of Ring of Integers Modulo n", Advances and Applications in Mathematical Sciences, 21(4), 1907-1911, 2022.

14. Mohammad Hassan Mudaber, **Nor Haniza Sarmin** and Ibrahim Gambo. "Perfect Codes in Unit Graph of Some Commutative Rings", Advances and Applications in Mathematical Sciences, 21(4), 1895-1905, 2022.

15. Mustafa Anis El-Sanfaz, **Nor Haniza Sarmin** and Siti Norziahidayu Amzee Zamri. "On the Generalized Non-commuting Graphs of Dihedral, Semi-dihedral and Quasi-dihedral Groups", Advances and Applications in Mathematical Sciences, 21(4), 1883-1893, 2022.

16. Mohd Pawiro Santono, Mathuri Selvarajoo, Wan Heng Fong and **Nor Haniza Sarmin**. "Bounded-Addition Fuzzy Simple Splicing Systems", Journal of Algebraic Statistics, 13(2), 2079-2089, 2022.

17. Mohammad Hassan Mudaber, **Nor Haniza Sarmin** and Ibrahim Gambo. "Non-Trivial Subring Perfect Codes in Unit Graph of Boolean Rings", Malaysian Journal of Fundamental and Applied Sciences (MJFAS), 18, 374-382, 2022.

18. Mohammad Hassan Mudaber, **Nor Haniza Sarmin** and Ibrahim Gambo. "Perfect Codes in Induced Subgraph of Unit Graph Associated with Some Commutative Rings", Jurnal Teknologi, 84(5), 131-136, 2022.

(2021)

19. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw. "The Applications of Zero Divisors of Some Finite Rings of Matrices in Probability and Graph Theory", Jurnal Teknologi, 83(1), 127-132, 2021.

20. Nurul Izzaty Ismail, Wan Heng Fong and **Nor Haniza Sarmin**. "Generalisations of Splicing Languages in DNA Splicing Systems Involving Two Palindromic Restriction Enzymes", Malaysian Journal of Fundamental and Applied Sciences (MJFAS), 17(2), 128-138, 2021.

21. Mustafa Anis El-Sanfaz, **Nor Haniza Sarmin** and Siti Norziahidayu Amzee Zamri. "Generalized Commuting Graph of Dihedral, Semi-dihedral and Quasi-dihedral Groups", Malaysian Journal of Fundamental and Applied Sciences (MJFAS), 17(6), 711-719, 2021.

(2020)

22. **Nor Haniza Sarmin**, Nur Idayu Alimon and Ahmad Erfanian, "Topological Indices of the Non-commuting Graph for Generalised Quaternion Group", Bulletin of the Malaysian Mathematical Sciences Society, 43, 3361–3367, 2020.

23. Athirah Zulkarnain, **Nor Haniza Sarmin** and Hazzirah Izzati Mat Hassim. "The Conjugacy Class Graphs of Non-abelian 3-Groups", Malaysian Journal of Fundamental and Applied Sciences, 16(3), 297-299, 2020.
24. Nur Idayu Alimon, **Nor Haniza Sarmin** and Ahmad Erfanian, "The Harary Index of the Non-commuting Graph for Dihedral Groups", Southeast Asian Bulletin of Mathematics, 44(6), 763-768, 2020.
25. Amira Fadina Ahmad Fadzil, **Nor Haniza Sarmin** and Ahmad Erfanian, "Energy of Cayley Graphs for Alternating Groups", Southeast Asian Bulletin of Mathematics, 44(6), 789-795, 2020.
26. Nabilah Najmuddin, **Nor Haniza Sarmin** and Ahmad Erfanian, "The Independence and Clique Polynomials of the Center Graphs of Some Finite Groups", Southeast Asian Bulletin of Mathematics, 44(6), 803-812, 2020.
27. Nabilah Fikriah Rahin, **Nor Haniza Sarmin** and Sheila Ilangovan, "The Non-Normal Subgroup Graph for Some Generalised Quaternion Groups", Southeast Asian Bulletin of Mathematics, 44(6), 845-852, 2020.
28. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw, "Probabilistic Characterizations of Some Finite Ring of Matrices and Its Zero Divisor Graph", Southeast Asian Bulletin of Mathematics, 44(6), 859-866, 2020.
29. Athirah Zulkarnain, **Nor Haniza Sarmin**, Hazzirah Izzati Mat Hassim and Ahmad Erfanian, "Cayley Graph for the Non-Abelian Tensor Square of Some Finite Groups", Southeast Asian Bulletin of Mathematics, 44(6), 867-873, 2020.
30. Fasihah Mohd Jaslan, Mohd Ariffin Abu Hassan, Nur Izzati Adnan and **Nor Haniza Sarmin**, "Fostering Global Talent among Students in Universiti Teknologi Malaysia via Study Abroad Programme", Akademika: Jurnal Sains Sosial dan Kemanusiaan Asia Tenggara, 90(2), 5-15, 2020.
31. Siti Norziahidayu Amzee Zamri, **Nor Haniza Sarmin**, Mustafa Anis El-Sanfaz and Adnin Afifi Nawi, "The Conjugation Degree on a Set of Metacyclic 3- Groups", Malaysian Journal of Fundamental and Applied Sciences, 16(5), 530-535, 2020.

SCOPUS

(2026)

1. Miftahurrahman, I Gede Adhitya Wisnu Wardhana, Nur Idayu Alimon, and **Nor Haniza Sarmin**, "Graph Energy of the Coprime Graph on Generalized Quaternion Group", BAREKENG: Journal of Mathematics and Its Applications, 20(1), 0031−0040, 2026.

(2025)
1. I Gede Adhitya Wisnu Wardhana, Fariz Maulana, and **Nor Haniza Sarmin**, "On the Uniqueness of Almost Prime Submodules Within Cyclic Uniserial Modules", Journal of Discrete Mathematical Sciences & Cryptography, 28(1), 239-247, 2025.
2. Siti Zahidah, **Nor Haniza Sarmin**, Hazzirah Izzati Mat Hassim, Athirah Zulkarnain, Muhamad Najib Zakaria, Nahrul Millah, et al. "Reducing Mathematics Anxiety Among Madrasah Ibtidaiyah Students in Surabaya Through a "FunMath Camp" Program", Environment and Social Psychology, 10(2), 3237, 2025.

3. Nurhidayah Zaid, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw and Ibrahim Gambo. "Perfect Codes in Graph Theory: A Ring-Theoretic Perspective", Journal of Quality Measurement and Analysis. 21(2),153-162, 2025.
4. Miftahurrahman Miftahurrahman, I Gede Adhitya Wisnu Wardhana, Nur Idayu Alimon and **Nor Haniza Sarmin**, "Graph Energy of the Coprime Graph on Generalized Quaternion Group", BAREKENG: Journal of Mathematics and Its Applications, 20(1), 0031−0040, 2025.
5. Siti Norziahidayu Amzee Zamri, Hazzirah Izzati Mat Hassim, Norarida Abd Rhani, Muhammad Azrin Ahmad and **Nor Haniza Sarmin**, "Adjacency Matrix and Energy of Graph of a Ring Associated to Kapal Layar Pattern in Tudung Saji", MATEMATIKA: Malaysian Journal of Industrial and Applied Mathematics, 41(2), 167−177, 2025.

(2024)
1. Maryam Fahd A. Alshammari, Hazzirah Izzati Mat Hassim, Nor Haniza Sarmin and Ahmad Erfanian, "Power Cayley Graphs of Dihedral Groups with Certain Order", Journal Of Advanced Research in Applied Sciences and Engineering Technology, 40(2): 212-220, 2024.
2. Nor Haniza Sarmin, Sanhan Muhammad Salih Khasraw, Nur Idayu Alimon, Nabilah Najmuddin and Ghazali Semil @ Ismail, "Sombor Index and Sombor Polynomial of the Noncommuting Graph Associated to Some Finite Groups", Journal of Advanced Research in Applied Sciences and Engineering Technology, 42(2): 112-121, 2024.

(2023)
3. Nur Idayu Alimon, **Nor Haniza Sarmin** and Ahmad Erfanian. "On Topological Indices of a Graph Associated to the Direct Product of Two Groups", Kongzhi yu Juece/Control and Decision Journal, 38(03), 1173-1181, 2023.
4. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw. "The Zero Product Probability of Ring of Matrices Based on Euler's Phi-Function", Kongzhi yu Juece/Control and Decision Journal, 38(07), 2319-2326, 2023.

(2022)
5. Athirah Zulkarnain, Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin**, Ahmad Erfanian. "The Non-Abelian Tensor Square Graph Associated to a Symmetric Group and its Perfect Code", Mathematics and Statistics, 10(2), 436-441, 2022.
6. Mohammad Hassan Mudaber, **Nor Haniza Sarmin** and Ibrahim Gambo. "Perfect Codes in the Spanning and Induced Subgraphs of the Unity Product Graph", Mathematics and Statistics, 10(4), 754-758, 2022.
7. Nabilah Fikriah Rahin, **Nor Haniza Sarmin**, Sheila Ilangovan. "The Application of GAP Software in Constructing the Non-Normal Subgroup Graphs of Alternating Groups", Journal of Physics: Conference Series, 2287: 012001, 2022.

(2021)
8. Mathuri Selvarajoo, Fong Wan Heng, **Nor Haniza Sarmin**, Sherzod Turaev. "The Properties of Semi-Simple Splicing System Over Alternating Group, A3", Journal of Physics: Conference Series, 1770(1): 012001, 2021.
9. Ibrahim Gambo, **Nor Haniza Sarmin**, Hidayat Ullah Khan, Faiz Muhammad Khan. "New generalization of Fuzzy Interior Gamma Ideals of Ordered Gamma Semigroups", Turkish Journal of Computer and Mathematics Education, 11(3): 893-902, 2021.
10. **Nor Haniza Sarmin**, Amira Fadina Ahmad Fadzil and Ahmad Erfanian, "Seidel energy for Cayley graphs associated to dihedral group", Journal of Physics: Conference Series, 1988: 012066, 2021.

11. Muhammad Nur Syiham Abdul Razak, Wan Heng Fong and **Nor Haniza Sarmin**, "Graph splicing rules with cycle graph and its complement on complete graphs", Journal of Physics: Conference Series, 1988: 012067, 2021.
12. Nurhidayah Zaid, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw, Ibrahim Gambo and Nur Athirah Farhana Omar Zai, "The perfect codes of commuting zero divisor graph of some matrices of dimension two", Journal of Physics: Conference Series, 1988: 012070, 2021.
13. Siti Afiqah Mohammad, **Nor Haniza Sarmin** and Hazzirah Izzati Mat Hassim, "Consistency Relations of an Extension Polycyclic Free Abelian Lattice Group by Quaternion Point Group", Journal of Physics: Conference Series, 1988: 012071, 2021.
14. Nabilah Najmuddin, **Nor Haniza Sarmin** and Ahmad Erfanian, "Independence polynomial of the commuting and noncommuting graphs associated to the quasidihedral group", Journal of Physics: Conference Series, 1988: 012072, 2021.
15. Nur Athirah Farhana Omar Zai, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw, Ibrahim Gambo and Nurhidayah Zaid, "The non-zero divisor graph of ring of integers modulo six and the Hamiltonian quaternion over integers modulo two", Journal of Physics: Conference Series, 1988: 012074, 2021.
16. Sook-Yan Hue, **Nor Haniza Sarmin**, Eddie Shahril Ismail, Ji-Jian Chin. "Easy Simple Factoring-based Digital Signature Scheme", 2020 15th International Conference for Internet Technology and Secured Transactions (ICITST), 9351341, 2021.
17. Mohammad Hassan Mudaber, **Nor Haniza Sarmin** and Ibrahim Gambo, "Perfect Codes Over Induced Subgraphs of Unit Graphs of Ring of Integers Modulo n", WSEAS Transactions on Mathematics, 20: 399-403, 2021.

(2020)
18. Nabilah Fikriah Rahin, **Nor Haniza Sarmin**, Sheila Ilangovan. "The Non-Normal Subgroup Graph of Some Dihedral Groups", ASM Science Journal, Vol. 13, 2020, 1-7. https://www.akademisains.gov.my/asmsj/article/the-non-normal-subgroup-graph-of-some-dihedral-groups/
19. Nur Idayu Alimon, **Nor Haniza Sarmin**, Ahmad Erfanian. "The Topological Indices of the Non-commuting Graph for Symmetric Groups", ASM Science Journal, Vol. 13, 2020, 1-5. https://www.akademisains.gov.my/asmsj/article/the-topological-indices-of-the-non-commuting-graph-for-symmetric-groups/
20. S.A. Mohammad, **N.H. Sarmin** and H.I. Mat Hassim, "The Exterior Square of a Bieberbach Group with Quaternion Point Group of Order Eight", ASM Science Journal, Vol. 13, 2020, 1-7. https://www.akademisains.gov.my/asmsj/article/the-exterior-square-of-a-bieberbach-group-with-quaternion-point-group/
21. Amira Fadina Ahmad Fadzil, **Nor Haniza Sarmin** and Ahmad Erfanian, "The Energy of Cayley Graphs for Symmetric Groups of Order 24", ASM Science Journal, Vol. 13, 2020, 1-6. https://www.akademisains.gov.my/asmsj/article/the-energy-of-cayley-graphs-for-symmetric-groups-of-order-24/
22. Siti Norziahidayu Amzee Zamri and **Nor Haniza Sarmin**. "Orderly Set Graph for Some Metacyclic p-Groups of Odd Prime", ASM Science Journal, Vol 13, 2020, 1-8. https://www.akademisains.gov.my/asmsj/article/orderly-set-graph-for-some-metacyclic-p-groups-of-odd-prime/
23. Nurul Izzaty Ismail, Wan Heng Fong and **Nor Haniza Sarmin**. "Automata for DNA Splicing Languages with Two Restriction Enzymes", ASM Science Journal, Vol 13, 2020, 1-7.

https://doi.org/10.32802/asmscj.2020.sm26(5.5)

24. Aqilahfarhana Abdul Rahman, Wan Heng Fong, **Nor Haniza Sarmin** and Sherzod Turaev. "1-Normal Form for Static Watson-Crick Regular and Linear Grammars", ASM Science Journal, Vol 13, 2020, 1-7.
https://doi.org/10.32802/asmscj.2020.sm26(5.1)

25. Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin** and Nor Muhainiah Mohd Ali. "A Homological Invariant of Certain Torsion Free Crystallographic Groups", ASM Science Journal, Vol 13, 2020, 1-8.
https://doi.org/10.32802/asmscj.2020.sm26(5.4)

26. N. M. Mohd Ali, M. Abdul Hamid, **N. H. Sarmin** and A. Erfanian. "Graph Related to Cubed Commutativity Degree", ASM Science Journal, Vol 13, 2020, 1-5.
https://doi.org/10.32802/asmscj.2020.sm26(5.16)

Indexed Proceedings

(2026)

1. Nurhabibah, Abdul Gazir Syarifudin, Intan Muchtadi-Alamsyah, Erma Suwastika, **Nor Haniza Sarmin**, Nur Idayu Alimon and Ghazali Semil@Ismail. "Topological indices of the zero-divisor graph for direct product of integers modulo ring", AIP Conference Proceedings 3326, 030002 (2026) https://doi.org/10.1063/5.0308941

(2024)

2. Athirah Zulkarnain, **Nor Haniza Sarmin**, Hazzirah Izzati Mat Hassim and Ahmad Erfanian. "A variation of Cayley graph for cyclic groups of composite order", AIP Conference Proceedings 3189, 110005 (2024) https://doi.org/10.1063/5.0225729

3. **Nor Haniza Sarmin**, Mohammad Hassan Mudaber and Ibrahim Gambo, "Perfect codes over induced subgraph of complement unit graph for some commutative rings", AIP Conference Proceedings 3189, 110006 (2024) https://doi.org/10.1063/5.0224402

4. Muhammad Nur Syiham Abdul Razak, Wan Heng Fong and **Nor Haniza Sarmin**. "The regular expressions of the resulted labelled graph in n-cut splicing", AIP Conference Proceedings 3189, 110008 (2024) https://doi.org/10.1063/5.0225478

5. Nurul 'Ain Mazlan, Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw, "The nonzero-divisor type graph of rings of integers modulo n and their distance-based topological indices", AIP Conference Proceedings 3189, 110009 (2024) https://doi.org/10.1063/5.0226809

6. Ghazali Semil Ismail, **Nor Haniza Sarmin**, Nuridayu Alimon and Fariz Maulana, "The first Zagreb index of the zero divisor graph for the ring of integers modulo ", AIP Conference Proceedings 3189, 110014 (2024) https://doi.org/10.1063/5.0225001

7. Nur Athirah Farhana Omar Zai, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw, Ibrahim Gambo and Nurhidayah Zaid, "The non-zero divisor graph for the ring of Gaussian integers", AIP Conference Proceedings 3189, 110015 (2024) https://doi.org/10.1063/5.0225064

8. Fong Wan Heng, Aqilahfarhana Abdul Rahman, **Nor Haniza Sarmin** and Sherzod Turaev, "Simplification process of static Watson-Crick context-free grammars", AIP Conference Proceedings 3189, 110016 (2024) https://doi.org/10.1063/5.0225525

9. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw, "The zero divisor graph of some finite ring of matrices based on its square-annihilators", AIP Conference Proceedings 3189, 110018 (2024) https://doi.org/10.1063/5.0224385

10. Nabilah Fikriah Rahin, **Nor Haniza Sarmin** and Sheila Ilangovan, "The general form of the incidence matrix for the non-normal subgroup graph of generalized quaternion

groups", AIP Conference Proceedings 3189, 110019 (2024) https://doi.org/10.1063/5.0226783

11. M. F. A. Alshammari, Hazzirah Izzati Mat Hassim and **Nor Haniza Sarmin** and Ahmad Erfanian, "The intersection power Cayley graph of cyclic groups of order ", AIP Conference Proceedings 3150, 020003 (2024) https://doi.org/10.1063/5.0229066

12. Athirah Zulkarnain, **Nor Haniza Sarmin**, Hazzirah Izzati Mat Hassim and Ahmad Erfanian, "The prime power Cayley graph for cylic groups of order pq", AIP Conference Proceedings 3150, 020009 (2024) https://doi.org/10.1063/5.0227879

13. Nurul 'Ain Mazlan, Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw, "The first and second Zagreb index of the zero-divisor type graphs of a ring", AIP Conference Proceedings 3150, 020011 (2024) https://doi.org/10.1063/5.0228071

14. Wan Heng Fong, Muhammad Nur Syiham Abdul Razak and **Nor Haniza Sarmin**. "Planarity on spliced graphs by one splicing rule in graph splicing systems", AIP Conference Proceedings 2905, 070006 (2024) https://doi.org/10.1063/5.0171633

15. Ghazali Semil Ismail, **Nor Haniza Sarmin**, Nuridayu Alimon and Fariz Maulana, "General zeroth-order randić index of the zero divisor graph for some commutative rings ", AIP Conference Proceedings 2905, 070006 (2024) https://doi.org/10.1063/5.0171669

(2023)

16. Nurul 'Ain Mazlan, Hazzirah Izzati Mat Hassim, **Nor Haniza Sarmin** and Sanhan Muhammad Salih Khasraw. "Distances of Zero-Divisor Type Graphs for Some Rings of Integers Modulo n", AIP Conference Proceedings, 2554, , 020011(1-7), 2023.

17. Ghazali Semil Ismail, **Nor Haniza Sarmin**, Nur Idayu Alimon and Fariz Maulana. "General zeroth-order randić index of zero divisor graph for the ring of integers modulo p^n", AIP Conference Proceedings, 2975, 020002(1-6), 2023.

18. Nur Athirah Farhana Omar Zai, **Nor Haniza Sarmin**, Sanhan Muhammad Salih Khasraw, Ibrahim Gambo and Nurhidayah Zaid. "The total non-zero divisor graph of some commutative rings", AIP Conference Proceedings, 2975, 020008(1-5), 2023.

19. Muhammad Nur Syiham Abdul Razak, Wan Heng Fong and **Nor Haniza Sarmin**. "Some properties of n-cut splicing on labelled semigraphs", AIP Conference Proceedings, 2975, 020010(1-9), 2023.

(2022)

20. Wan Heng Fong, Muhammad Nur Syiham Abdul Razak and **Nor Haniza Sarmin**. "On n-Cut Splicing and Its Properties", AIP Conference Proceedings, 2465: 020016, 2022.

(2020)

21. Athirah Zulkarnain, **Nor Haniza Sarmin**, Hazzirah Izzati Hassim and Ahmad Erfanian, "The direct product of pi-Cayley graph for Alt(4) and Sym(4)", AIP Conference Proceedings 2266, 060001 (2020). https://doi.org/10.1063/5.0018452

22. Adnin Afifi Nawi, Nor Muhainiah Mohd Ali and **Nor Haniza Sarmin**, "The computation of Schur multiplier and capability of pairs of groups of order p^4", AIP Conference Proceedings 2266, 060002 (2020); https://doi.org/10.1063/5.0018340

23. Muhammad Azrin, **Nor Haniza Sarmin**, Fong Wan Heng, Yuhani Yusof and Noraziah Adzhar, "On the new relation of second order limit language and other different types of splicing system", AIP Conference Proceedings 2266, 060003 (2020); https://doi.org/10.1063/5.001807

24. Mathuri Selvarajoo, Fong Wan Heng, **Nor Haniza Sarmin** and Sherzod Turaev, "The characteristics of simple splicing languages over permutation groups", AIP Conference Proceedings 2266, 060004 (2020); https://doi.org/10.1063/5.0018731
25. Aqilahfarhana Abdul Rahman, Wan Heng Fong, **Nor Haniza Sarmin** and Sherzod Turaev, "Closure properties of static Watson-Crick linear and context-free grammars", AIP Conference Proceedings 2266, 060005 (2020); https://doi.org/10.1063/5.0018350
26. Nuridayu Alimon, **N. H. Sarmin** and A. Erfanian, "The Szeged and Wiener indices for coprime graph of dihedral groups", AIP Conference Proceedings 2266, 060006 (2020); https://doi.org/10.1063/5.0018270
27. Nurul Izzaty Ismail, Wan Heng Fong and **Nor Haniza Sarmin**, "Molecular aspects on generalisations of splicing languages", AIP Conference Proceedings 2266, 060008 (2020); https://doi.org/10.1063/5.0018377
28. Nabilah Fikriah Rahin, **Nor Haniza Sarmin** and Sheila Ilangovan, "The incidence matrix of the non-normal subgroup graph for some dihedral groups", AIP Conference Proceedings 2266, 060009 (2020); https://doi.org/10.1063/5.0018554
29. Nurhidayah Zaid, **Nor Haniza Sarmin** and Sanhan Khasraw, "On the probability and graph of some finite rings of matrices", AIP Conference Proceedings 2266, 060010 (2020); https://doi.org/10.1063/5.0018067
30. Muhammad Nur Syiham Razak, Wan Heng Fong and **Nor Haniza Sarmin**, "Folding technique on n-cut spliced semigraph in splicing system", AIP Conference Proceedings 2266, 060011 (2020); https://doi.org/10.1063/5.0026045

ACTIVE RESEARCH GRANTS

<u>Co-Researcher</u>

1. Title : Topological Indices and Energies of the Digraph for the Non-Normal Cyclic Subgroup Graph Associated with Dihedral Groups
   Date of research : 1 January 2026 – 31 December 2028
   Sponsor : Xiamen University Malaysia Research Fund - XMUMRF (Grant No: XMUMRF/2026-C17/IMAT/0040)
   Amount : RM 60,000.00
   Researchers : Dr. Athirah Zulkarnain, **Prof. Dr. Nor Haniza Sarmin,** Dr. Hazzirah Izzati Mat Hassim, Dr. Nabilah Fikriah Rahin

2. Title : Orthogonal Graph Design of New Algebraic Graph Model for Error-Detecting
   and Error Correcting Codes in Data Security Management
   Date of research : 15 November 2024 – 14 May 2026
   Sponsor : Potential Academic Staff Grant (Vote No. Q.J130000.2754.04K27)
   Amount : RM 20,000.00
   Researchers : Dr. Hazzirah Izzati Mat Hassim, Dr. Shazirawati Moh Puzi, **Prof. Dr. Nor Haniza Sarmin**

APPOINTMENT AT OTHER ORGANIZATION

Lecturer
Pusat Pengajian Persediaan (PPP)
ITM Shah Alam, Selangor
February-March 1991

Adjunct Lecturer
State University of New York at Binghamton
Binghamton, New York, USA
1989-1990, 1994-1998

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