Curriculum Vitae

NUR NADIAH BINTI ABD HAMID

Owner Nur Nadiah Academic Services abdhamid.nn@nn-as.com



QUALIFICATIONS

| 2016 | Ph. D. in Applied Mathematics Universiti Sains Malaysia, Penang, Malaysia 1. Title of Thesis: Splines for Two-Dimensional Differential Equations. 2. Published 3 academic papers. 3. Intern at Psychometric Lab, MIMOS Berhad. 4. Scholarship: MyPhD, Malaysian Ministry of Education. |
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| 2010 | M. Sc. in Applied Mathematics Universiti Sains Malaysia, Penang, Malaysia 1. Title of Thesis: Splines for Linear Two-Point Boundary Value Problems. 2. Published 4 academic papers. 3. Award: Malaysian Mathematical Sciences Society (PERSAMA) Consolation Prize under master's thesis category. |
| 2008 | B.Sc. in Mathematics Michigan State University, Michigan, United States Scholarship: Malaysian Public Service Department (JPA) Federal Scholarship. Worked under Department of Agricultural, Food, and Resource Economics in collecting data at a recycling center and data entry. Worked for "Promoting Rigorous Outcomes in Mathematics and Science Education (PROM/SE)" project under College of Education and College of Natural Science in preparing answer schemes for the research items and data entry. |
| PROFESSIONAL EX | EXPERIENCE |
| May 2023 – Present | Owner Nur Nadiah Academic Services Penang, Malaysia <u>https://nn-as.com/</u> 1. All-rounder |

- 2. Managing 6 tutors
- Assisting research, revising write-ups, and proofreading
 Teaching IGCSE Additional Mathematics, AP Calculus, and Statistics
- 5. Co-supervising 1 Ph.D. student
- 6. Published 3 academic papers in citation indexed journals (0 as the main/corresponding author)

| 7. Gave 1 talk to undergraduate st | students |
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| Jan 2023 – Dec 2023 (1 year) | Editor BULLETIN, Journal of the Malaysian Mathematical Sciences Society, Springer http://math.usm.my/bulletin Indexed by WoS, SCIE, Scopus, MathSciNet, zbMATH Managed the submitted academic papers Assisted in searching for potential referees |
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| Jan 2021 – Dec 2023 (3 years) | External Examiner American Degree Transfer Programme (ADTP) - Mathematics Subject, Sunway University Selangor, Malaysia 1. Reviewed assessment tasks 2. Examined samples of students' work 3. Presented reports at Programme Assessment Board meetings 4. Submitted annual reports |
| Jun 2022 – Oct 2023 (1 year 5 months) | Consultant Program empowerNCER: Akademik Pulau Pinang 2022/2023 Penang, Malaysia Gave advice on the teaching approach of around 20 coaches Assisted coaches in understanding the modules Developed assessments for students |
| Oct 2016 - Apr 2023 (6 years 7 months) | Senior Lecturer School of Mathematical Sciences, Universiti Sains Malaysia Penang, Malaysia 1. Taught a. MAA101: Calculus for Science Students 1 (Semester 1 2022/2023, Semester 1 2021/2022, Semester 2 2018/2019, Semester 1 2017/2018) b. MAT516: Curve and Surface Methods for CAGD (Semester 2 2024/2022, Semester 2 2019/2020, Semester 2 2017/2018) c. MSS381: Mathematical Software Laboratory (Semester 2 2020/2021, Semester 2018/2019, Semester 2 2017/2018) d. MAA111: Algebra for Science Students (Semester 1, 2020/2021) e. MAT382: Introductory Numerical Methods (Semester 1 2018/2019) 2. Supervised a. 15 Ph.D. students (10 as the main supervisor) b. 6 M.Sc. Mixed Mode students (6 as the main supervisor) c. 6 undergraduate students for their projects (6 as the main supervisor) 3. Published a. 14 academic papers in citation indexed journals (8 as the main/corresponding author) b. 20 academic papers in conference proceedings (3 as the corresponding author) c. 2 proceedings as the editor d. 2 microcredential courses and 1 MOOC e. 2 copyrights (1 as the principal investigator, 2 community projects) 5. Served as the a. Chairperson for Jawatankuasa MathDoctors from 2019 to 2023, <u>https://mathdoctors.usm.my</u> i. Income generation: RM14,290.00 9022 |

| | b. Committee member of the International Conference on Mathematical Sciences and Technology 2020 and 2022 (MathTech 2020 and MathTech 2022), <u>https://mathtech.usm.my</u> 6. Recognition / Award: a. Blended Learning for MAA101, Semester 1, 2022/2023 7. Others: a. Conducted 8 professional trainings (3 public, 6 university-level) |
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| Nov 2016 – Dec 2022 (6 years and 2 months) | Associate Editor BULLETIN, Journal of the Malaysian Mathematical Sciences Society, Springer <u>http://math.usm.my/bulletin</u> 1. Indexed by WoS, SCIE, Scopus, MathSciNet, zbMATH 2. Assisted in searching for potential referees |
| Jul 2015 – Apr 2016 (10 months) | Graduate Research Assistant School of Mathematical Sciences, Universiti Sains Malaysia Penang, Malaysia 1. Conducted research 2. Assisted in supervising masters and doctoral students |
| Dec 2013 – Dec 2014 (1 year, 1 month) | Intern Psychometric Lab, MIMOS Berhad Kuala Lumpur, Malaysia 1. Lead a project entitled "Intelligent Essay Scoring": prepared paper work, managed 8 team members, conducted pilot tests, and planned the research framework 2. Conducted early research work on "Concerto and R" and "Licensure Testing" 3. Carried out some Structural Equation Modelling analyses |
| Sep 2012 – Jan 2013 Sep 2011 – May 2012 (1 year, 2 months) | Tutor School of Mathematical Sciences, Universiti Sains Malaysia Penang, Malaysia 1. Taught tutorials for Calculus and Introduction to Analysis 2. Graded the assessments |
| Feb 2011 – Dec 2011 Jul 2010 – Dec 2010 Jan 2010 – Mar 2010 Jun 2009 – Dec 2009 (1 year, 5 months) | Research Officer Research Officer Research Assistant Student Assistant School of Mathematical Sciences, Universiti Sains Malaysia 1. Conducted research work 2. Trained masters and doctoral students |
| Jul 2008 – Nov 2008 (5 months) | Replacement Teacher Datuk Haji Ahmad Said Secondary School Penang, Malaysia 1. Taught Form 1 English 2. Developed and graded the assessments |

RESEARCH INTEREST

Numerical Analysis, Computer-Aided Geometric Design

PUBLICATIONS AND INTELLECTUAL PROPERTIES

Citation Indexed Journal

- Okeke, A. A., Abd Hamid, N. N., Ong, W. E., & Abbas, M. (2025). A numerical algorithm based on extended cubic B-spline functions for solving timefractional convection-diffusion-reaction equation with variable coefficients. *Journal of the Nigerian Society of Physical Sciences*, 7(1), 2323. <u>https://doi.org/10.46481/jnsps.2025.2323</u>
- Al Kathiri, S., Abdullah, F. A., Abd Hamid, N. N., Bashier, E., Bhat, A. A., & Sunny, D. A. (2024). Applications of the nonstandard finite difference method to a fractional model explaining diabetes mellitus and its complications. *Contemporary Mathematics*, 5(4), 6296-6319. <u>https://doi.org/10.37256/cm.5420245701</u>
- 3. Al Kathiri, S., Bashier, E., Abd Hamid, N. N., & Ramli, N. (2024). Development of a non-standard finite difference method for solving a fractional decay model. *Journal of Applied Mathematics & Informatics*, 42(3), 695–708. https://doi.org/10.14317/JAMI.2024.695
- Mohd Rahan, N. N., & Abd Hamid, N. N. (2023). Besse extended cubic B-spline collocation method for solving Benjamin-Bona-Mahony equation. *MATEMATIKA*, 39(1), 33–42. https://doi.org/10.11113/matematika.v39.n1.1448
- Salama, F. M., Abd Hamid, N. N., Hj. Mohd. Ali, N., & Ali, U. (2022). An efficient modified hybrid explicit group iterative method for the time-fractional diffusion equation in two space dimensions. *AIMS Mathematics*, 7(2), 2370–2392. <u>https://doi.org/10.3934/math.2022134</u>
- Salama, F. M., Abd Hamid, N. N., Ali, U., & Hj. Mohd. Ali, N. (2022). Fast hybrid explicit group methods for solving 2D fractional advection-diffusion equation. *AIMS Mathematics*, 7(9), 15854–15880. <u>https://doi.org/10.3934/math.2022868</u>
- Iqbal, A., Abd Hamid, N. N., Md. Ismail, A. I. (2021). Galerkin approximation with quintic B-spline as basis and weight functions for solving second order coupled nonlinear Schrödinger equations. *Mathematics and Computers in Simulation*, 187, 1–16. <u>https://doi.org/10.1016/j.matcom.2021.02.012</u>
- Khan, M.A., Hj. Mohd. Ali, N., & Abd Hamid, N. N. (2021). The design of new highorder group iterative method in the solution of two-dimensional fractional cable equation. *Alexandria Engineering Journal*, 60(4), 3553–3563. https://doi.org/10.1016/j.aej.2021.01.008
- Khan, M.A., Ali Akbar, M., & Abd Hamid, N. N. (2021). Traveling wave solutions for space-time fractional Cahn Hilliard equation and space-time fractional symmetric regularized long-wave equation. *Alexandria Engineering Journal*, 60(1), 1317–1324. <u>https://doi.org/10.1016/j.aej.2020.10.053</u>
- Salama, F. M., Hj. Mohd. Ali, N., & Abd Hamid, N. N. (2021). Fast O(N) hybrid Laplace transform-finite difference method in solving 2D time fractional diffusion equation. *Journal of Mathematics and Computer Science*, 23(2), 110– 123. <u>http://dx.doi.org/10.22436/jmcs.023.02.04</u>
- Iqbal, A., Abd Hamid, N. N., & Md. Ismail, A. I. (2020). Cubic B-spline Galerkin method for numerical solution of the coupled nonlinear Schrödinger equation. *Mathematics and Computers in Simulation*, 174. <u>https://doi.org/10.1016/j.matcom.2020.02.017</u>
- 12. Khan, M.A., Hj. Mohd. Ali, N., & Abd Hamid, N. N. (2020). A new fourth-order explicit group method in the solution of two-dimensional fractional Rayleigh–Stokes problem for a heated generalized second-grade fluid. *Advances in Difference Equations*, 598. https://doi.org/10.1186/s13662-020-03061-6

- Salama, F. M., Hj. Mohd. Ali, N., & Abd Hamid, N.N. (2020). Efficient hybrid group iterative methods in the solution of two-dimensional time fractional cable equation. *Advances in Difference Equations*, 257. <u>https://doi.org/10.1186/s13662-020-02717-7</u>
- Iqbal, A., Abd Hamid, N. N., & Md. Ismail, A. I. (2019). Numerical Solution of Nonlinear Schrödinger Equation with Neumann Boundary Conditions Using Quintic B-spline Galerkin Method. *Symmetry*, 11(4), 469.
- Iqbal, A., Abd Hamid, N. N., & Md. Ismail, A. I. (2019). Soliton Solution of Schrödinger Equation Using Cubic B-Spline Galerkin Method. *Fluids*, 4(2), 108. <u>https://doi.org/10.3390/fluids4020108</u>
- 16. Liew, K. J., Ramli, A., Abd Hamid, N. N., & Abd. Majid, A. (2017). Sharp edge preservation using bicubic B-spline surfaces. *SCIENCEASIA*, *43*, 20–26.
- 17. Heilat, A. S., Abd Hamid, N. N., & Md. Ismail, A. I. (2016). Extended cubic B-spline method for solving a linear system of second-order boundary value problems. *SpringerPlus*, *5*, 1314. <u>https://doi.org/10.1186/s40064-016-2936-4</u>
- Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2011). Extended cubic B-spline method for linear two-point boundary value problems. *Sains Malaysiana*, 40(11), 1285–1290. <u>http://journalarticle.ukm.my/2940/</u>
- Conference Proceeding
 Ahmad, A., Saiful Anuar, H. S., Azmi, A., Abd Hamid, N. N., & Abbas, M. (2024). Improved order of convergent of cubic B-Spline collocation method for the nonlinear Schrödinger equation on single soliton. *AIP Conference Proceedings*, 3150, 030022. <u>https://doi.org/10.1063/5.0228240</u>
 - Okeke, A. A., Abd Hamid, N. N., & Abbas, M. (2024). A numerical technique for solving time-fractional Navier-Stokes equation with Caputo's derivative using cubic B-spline functions. *AIP Conference Proceedings*, 3016, 020011. https://doi.org/10.1063/5.0193362
 - Khan, M. A., Hj. Mohd Ali, N., & Abd Hamid, N. N. (2021). Compact high-order implicit iterative scheme for the two-dimensional time-fractional diffusion equation. *AIP Conference Proceedings*, 2423, 020036. <u>https://doi.org/10.1063/5.0075743</u>
 - Ahmad, A., Azmi, A., Abd Hamid, N. N., & Md. Ismail, A. I. (2019). A comparative numerical study based on cubic exponential B-splines and finite difference method for the nonlinear Schrödinger equation. *AIP Conference Proceedings*, 2184, 060008. <u>https://doi.org/10.1063/1.5136440</u>
 - Mohd Rahan, N. N., Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2019). Cubic B-spline collocation method for solving Benjamin-Bona-Mahony equation. *AIP Conference Proceedings*, 2184, 060020. <u>https://doi.org/10.1063/1.5136452</u>
 - Mohd Rahan, N. N., Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2019). Solving Benjamin-Bona-Mahony equation using Besse B-spline relaxation scheme. *AIP Conference Proceedings*, 2138, 030029. https://doi.org/10.1063/1.5121066
 - Rosman, N. A. I., Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2019). Bspline alternating group explicit (BSPAGE) in solving heat equation. *AIP Conference Proceedings*, 2184, 060011. <u>https://doi.org/10.1063/1.5136443</u>
 - Rosman, N. A. I., Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2019). Solving heat equations using extended B-spline alternating group explicit. *AIP Conference Proceedings*, 2138, 030033. <u>https://doi.org/10.1063/1.5121070</u>
 - 9. Saiful Anuar, H. S., Azmi, A., Md. Ismail, A. I., & Abd Hamid, N. N. (2019). Solving coupled nonlinear Schrödinger equations using finite difference method and

hybrid cubic B-spline collocation method. *AIP Conference Proceedings*, 2184, 060002. <u>https://doi.org/10.1063/1.5136434</u>

- Saiful Anuar, H. S., Azmi, A., Abd Hamid, N. N., & Abd. Majid, A. (2018). Solving coupled nonlinear Schrodinger equations using cubic B-spline interpolation and finite difference methods. *AIP Conference Proceedings*, 1974, 020095. <u>https://doi.org/10.1063/1.5041626</u>
- Suseelan, M., Ahmad, A., Abd Hamid, N. N., & Md. Ismail, A. I. (2018). Numerical solution of the Degasperis-Procesi equation using the quartic B-spline collocation method. *AIP Conference Proceedings*, 1974, 020082. <u>https://doi.org/10.1063/1.5041613</u>
- Hanoon, A., Mohd Rahan, N. N., Abd Hamid, N. N., & Md. Ismail, A. I. (2018). Solving the nonlinear Camassa Holm equation using quartic trigonometric Bspline collocation method. *AIP Conference Proceedings*, 1974, 020034. <u>https://doi.org/10.1063/1.5041565</u>
- Misro, M. Y., Ramli, A., Md Ali, J., & Abd Hamid, N. N. (2017). Pythagorean Hodograph Quintic Trigonometric Bezier Transtion Curve. *Proceedings - 2017* 14th International Conference on Computer Graphics, Imaging and Visualization, CGiV 2017, 1–7. <u>https://doi.org/10.1109/CGiV.2017.26</u>
- Misro, M. Y., Ramli, A., Md Ali, J., & Abd Hamid, N. N. (2017). Cubic Trigonometric Bezier Spiral Curves. Proceedings - 2017 14th International Conference on Computer Graphics, Imaging and Visualization, CGiV 2017, 14–20. https://doi.org/10.1109/CGiV.2017.27
- Mohd Rahan, N. N., Ishak, S. N. S., Abd Hamid, N. N., Abd. Majid, A., & Azmi, A. (2017). Solving nonlinear Benjamin-Bona-Mahony equation using cubic Bspline and cubic trigonometric B-spline collocation methods. *AIP Conference Proceedings*, 1830, 020032. <u>https://doi.org/10.1063/1.4980895</u>
- Saiful Anuar, H. S., Mafazi, N. H., Abd Hamid, N. N., Abd. Majid, A., & Azmi, A. (2017). Solving Dym equation using quartic B-spline and quartic trigonometric B-spline collocation methods. *AIP Conference Proceedings*, 1870, 040028. <u>https://doi.org/10.1063/1.4995860</u>
- Ahmad, A., Azmi, A., Abd. Majid, A., & Abd Hamid, N. N. (2017). Solving the nonlinear Schrödinger equation using cubic B-spline interpolation and finite difference methods. *AIP Conference Proceedings*, 1870, 040030. <u>https://doi.org/10.1063/1.4995862</u>
- Chanthrasuwan, M., Mohd Asri, N. A., Abd Hamid, N. N., Abd. Majid, A., & Azmi, A. (2017). Solving Buckmaster equation using cubic B-spline and cubic trigonometric B-spline collocation methods. *AIP Conference Proceedings*, 1870, 040027. <u>https://doi.org/10.1063/1.4995859</u>
- Zakaria, N. F., Abu Hassan, N., Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2017). Solving Boussinesq equation using quintic B-spline and quintic trigonometric B-spline interpolation methods. *AIP Conference Proceedings*, 1830, 020041. <u>https://doi.org/10.1063/1.4980904</u>
- Ahmad, A., Azmi, A., Abd. Majid, A., & Abd Hamid, N. N. (2017). Solving the nonlinear Schrödinger equation using cubic B-spline interpolation and finite difference methods on dual solitons. *AIP Conference Proceedings*, *1830*, 020045. <u>https://doi.org/10.1063/1.4980908</u>
- 21. Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2015). Bicubic B-spline interpolation method for two-dimensional heat equation. *AIP Conference Proceedings*, 1682, 020031. <u>https://doi.org/http://dx.doi.org/10.1063/1.4932440</u>

| | 22. | Awang, N., & Abd Hamid, N. N. (2015). Students attitude towards calculus subject: A case-study using structural equation modeling. <i>AIP Conference Proceedings</i> 1682, 050012, https://doi.org/10.1063/1.4932503 |
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| | 23. | Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2013). Bicubic B-spline interpolation method for two-dimensional Laplace's equations. <i>AIP Conference Proceedings</i> , <i>1522</i> , 1033–1038. <u>https://doi.org/10.1063/1.4801243</u> |
| | 24. | Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2012). Quartic B-spline interpolation method for linear two-point boundary value problem. <i>World Applied Sciences Journal</i> , <i>17</i> , 39–43. |
| | 25. | Abd Hamid, N. N., Majid, A. A., & Md Ismail, A. I. (2010). Cubic Trigonometric B-Spline Applied to Linear Two-Point Boundary Value Problems of Order Two. <i>International Journal of Mathematical and Computational Sciences</i> , <i>4</i> (10), 1377–1382. <u>https://publications.waset.org/vol/46</u> |
| | 26. | Abd Hamid, N. N., Abd. Majid, A., & Md. Ismail, A. I. (2010). Extended Cubic B- spline Interpolation Method Applied to Linear Two-Point Boundary Value Problems. <i>International Journal of Mathematical and Computational Sciences</i> , 4(2), 276–278. <u>https://publications.waset.org/vol/38</u> |
| Editor | 1. 2. | Mohd Kasihmuddin, M. S., Teh, W. C., Abd Hamid, N. N., Sek, S. K., Kong, V. P., & Chong, Z. L. (Eds.). (2020). <i>Proceedings of the International Conference on Mathematical Sciences and Technology 2020 (MathTech 2020)</i> . AIP Conference Proceedings (2423). AIP Publishing. <u>https://doi.org/10.1063/12.0006948</u> Mohd, M. H., Abdul Rahman, N. A., Abd Hamid, N. N., & Mohd Yatim, Y. (Eds.). (2019). <i>Dynamical Systems, Bifurcation Analysis and Applications</i> (Vol. 295). Springer Singapore. https://doi.org/10.1007/078.091.22.0922.2 |
| Microcredential Course and MOOC | 1. 2. 3. | Abd Hamid, N. N.*, Abdul Rahman, N. A., & Azahar, A. A. (2021). <i>Calculus 1:</i> <i>Differentiation</i> . <u>https://www.openlearning.com/usmmooc/courses/calc1-diff</u> Abd Hamid, M. S., Abd Hamid, N. N.*, Ng, Z. C., & Rosman, N. A. I. (2021). <i>Matematik Tambahan Tingkatan Bab 1.1 Fungsi.</i> <u>https://learning4life.usm.my/courses/f4addmath-1-1</u> Abd Hamid, N. N., Abdul Rahman, N. A., & Azahar, A. A.* (2021). <i>Calculus 1:</i> <i>Functions</i> . <u>https://learning4life.usm.my/courses/calc1-func</u> |
| Copyright | 1. 2. | Abd Hamid, N. N.* & Salama, F. M. Z. (2023). Computationally Efficient Hybrid Laplace Transform Finite Difference Methods for Two-Dimensional Time- Fractional Differential Equations. MyIPO LY2023P00266 Azahar, A. A.*, Abdul Rahman, N. A., & Abd Hamid, N. N. (2021). Calculus 1: Function. MyIPO FM2021P04835 |
| GRANTS | | |
| Principal Investigator | 1. | Community Engagement Project , Universiti Sains Malaysia <i>Pengukuhan Pengetahuan Matematik Bagi Pelajar SPM Daerah Barat Daya,</i> <i>Pulau Pinang</i> Nur Nadiah binti Abd Hamid*, Majid Khan bin Majahar Ali, Ng Zhen Chuan, Norazrizal Aswad bin Abdul Rahman, Norshafira binti Ramli, Siti Noor Farwina binti Mohamad Anwar Antony RM 16,000.00, December 1, 2020 – May 31, 2022 Fundamental Research Grant Scheme Malaysian Ministry of Education |
| | 4. | The Design of New High Order Accuracy Iterative Schemes in the Solution of Fractional Diffusion and Cable Equations |

| | Norhashidah binti Mohd Ali, Farah Aini binti Abdullah RM 77,400.00, September 1, 2019 - May 31, 2022 Research University Grant, Universiti Sains Malaysia Splines for Solving Benjamin-Bona-Mahony Equations Ahmad Izani bin Md. Ismail, Hayati binti Samsudin and Siti Ainor binti Mohd Yatim RM 67,000.00, April 1, 2018 - June 30, 2020 Short Term Grant, Universiti Sains Malaysia Solving Camassa Holm Equation Using Splines Ahmad Izani bin Md. Ismail RM 28,925.70, September 15, 2017 - September 14, 2019 |
|-----------------|---|
| Co-Investigator | 1. Short Term Grant , Universiti Sains Malaysia Solving One-Dimensional Newtonian and Polymer Models Using Splines Adila Aida binti Azahar, Amirah binti Azmi |
| | RM 33,900.00, January 1, 2023 – December 31, 2024 Community Engagement Project, Universiti Sains Malaysia Pendekatan Gamifikasi dalam Meningkatkan Prestasi dan Inovasi dalam Matematik untuk Murid Negeri Kedah Ahmad Lutfi Amri bin Ramli, Adila Aida binti Azahar, Maisarah binti Haji Mohd, Siti Amirah binti Abd Rahman, Yazariah binti Mohd Yatim PM 7,401,00, May 0, 2022 April 9, 2022 |
| | 3. Fundamental Research Grant Scheme, Malaysian Ministry of Education High Order Implicit Numerical Scheme for Atmospheric Chemical Kinetic Equations Siti Ainor binti Mohd Yatim, Lok Yian Yian, Nur Intan Raihana binti Ruhaiyem, Zarina Bibi binti Ibrahim RM 52.000.00, January 1, 2019 – September 30, 2021 |
| | 4. Research University Grant, Universiti Sains Malaysia BULLETIN, The USM Iconic Journal Rosihan bin Mohamed Ali, Lee See Keong, Shamani a/p Supramaniam RM 100,000.00, November 1, 2018 – July 31, 2022 |
| | Research University Grant, Universiti Sains Malaysia Porous Sago Starch: Application for Controlled Release Active Packaging and Predictive Release Modeling Hayati binti Samsudin, Abd Karim bin Alias, Razaina binti Mat Taib, Uthumporn Utra @ Sapina Abdullah RM 81.468.00, May 1, 2018 – May 31, 2022 |
| | 6. Fundamental Research Grant Scheme, Malaysian Ministry of Education Modeling the Controlled Sorption and Release of Active Compounds from Functional Membranes via Polymer Modification for Securing Fresh Produces Safety and Extending Their Shelf Life Hayati binti Samsudin, Abd Karim bin Alias, Mohd Firdaus bin Yhaya, Rafael Antonio Auras RM 99,640.00, August 15, 2017 – September 1, 2021 |
| RESEARCH SUPERV | ISION |
| Active | 1. 2023, Hamad Asma Lutfi Abdel Latef, Solving Fully Fuzzy Linear Systems with Arbitrary Trapezoidal Fuzzy Numbers. |

Graduated

1. 2022, Al-Khateeb Ammar Rateb Oleiwi, M.Sc. Dissertation: *Hybrid Quartic B-spline Collocation Method for Solving the Nonlinear Degasperis-Procesi Equation*

- 2. 2022, Alsaleh Mohammad Hasan Mohammad, M.Sc. Dissertation: *Hybrid Quartic B-spline Collocation Method for Solving the Nonlinear Camassa Holm Equation*
- 3. 2022, Ezryn Natasha binti Saipol, Undergraduate Minor Project: Extended Cubic B-spline Collocation Method for Solving Linear Two-Point Boundary Value Problems
- 4. 2022, Hanis Safirah binti Saiful Anuar, Ph.D. Thesis: *B-spline Collocation Methods for Coupled Nonlinear Schrödinger Equation*, Co-Supervisor
- 5. 2022, Nursyafeeqa binti Mohamad Nasir, Undergraduate Minor Project: Exponential B-spline Collocation Method for Solving Linear Two-Point Boundary Value Problems
- 6. 2022, Nurul Jannah binti Ahmad Munawwir and Noor Jannatul Alma' binti Zarul Fuad, Undergraduate Final Year Project: *Fourth-Order Cubic B-spline Collocation Method for Solving Linear Two-Point Boundary Value Problems*
- 7. 2022, Raja Nur Shafini Dania binti Raja Zainuri and others, Undergraduate Project: *Cabaran Isu-isu Semasa ICT (Berita Palsu)*
- 8. 2021, Azhar bin Ahmad, Ph.D. Thesis: *Fourth-Order Spline Methods for Solving Nonlinear Schrödinger Equation*, Co-Supervisor
- 9. 2021, Fouad M. Z. Salama, Ph.D. Thesis: Computationally Efficient Hybrid Laplace Transform Finite Difference Methods for Two-Dimensional Time-Fractional Differential Equations
- 10. 2021, Mohamad Amirul Amin bin Roslan and others, Undergraduate Project: *Cabaran Isu-isu Semasa ICT di Malaysia dan Langkah Mengatasi*
- 11. 2021, Nur Aliah Izzati binti Rosman, Ph.D. Thesis: *B-spline Alternating Group Explicit Iterative Method for Solving the Heat Equations*
- 12. 2020, Azhar Iqbal, Ph.D. Thesis: *The Numerical Solution of Nonlinear* Schrödinger Equations Based on B-spline Galerkin Finite Element Method
- 13. 2019, Ahmed Salem Sa'ed Heilat, Ph.D. Thesis: *Extended and Hybrid Cubic B-splines for Second Order Two-Point Boundary Value Problems*, Co-Supervisor
- 14. 2019, Yusuf Mohammed Usman, M.Sc. Dissertation: Solving the Buckmaster Equation Using the Exponential B-spline Collocation Method
- 15. 2017, Farah Zafirah binti Ibrahim, M.Sc. Dissertation: Solving Nonlinear Boussinesq Equation Using Hybrid Cubic B-spline Collocation Method
- 16. 2017, Md Yushalify bin Misro, Ph.D. Thesis: *Trigonometric Bézier Transition Curves and Applications,* Co-Supervisor
- 17. 2017, Nur Tasnem binti Jaaffar, M.Sc. Dissertation: Solving Buckmaster Equation Using Hybrid Cubic B-spline Collocation Method
- 18. 2017, Wafa I. Yahya, M.Sc. Dissertation: Solving the Nonlinear Harry Dym Equation Using Hybrid Quartic B-spline Collocation Method

Discontinued / Transferred to Another Supervisor

- 1. 2022 2023, Altahat Emad Omar Haza, *Splines for Two-Dimensional Fractional Schrödinger Equation*.
- 2. 2021 2023, Al Kathiri Said Salim Masoud, Non-Standard Finite Difference Methods for Fractional Differential Equations with Applications to Mathematical Biology Problems
- 3. 2021 2023, Bani Issa Ahmad Jehad Mohammad, Application of Homotopy Analysis Method for Solving Linear and Non-Linear Delay Differential Equations
- 4. 2021 2023, Jabbar Ahlam Khalaf Jabbar, A Study on Fuzzy Impulsive Fractional Differential and Integro Differential Equations with Boundary Value Problems in Banach Space, Co-Supervisor

- 5. 2021 2023, Okeke Anthony Anya, *Numerical Solutions of Ordinary Differential Equations*
- 6. 2019 2023, Suhair Sery binti Tajudin, Brains Microcirculation in Fractal Branching Networks Using the Properties of Splines
- 7. 2017 2023, Nur Nadiah binti Mohd Rahan, *B-Spline for Solving Generalized Benjamin-Bona-Mahony Equation*

TALKS

Trainer

Invited Speaker /

- 1. 4 Jun 2024, Kolej Pengajian Pengajian Pengkomputeran, Informatik dan Matematik, Universiti Teknologi MARA (Melaka) Kampus Jasin, *Bézier Curve, Exploring Its Real-World Applications and Emerging Trends.*
 - 2. 13 Apr 2023, Centre for Development of Academic Excellence, Universiti Sains Malaysia, *eLearn@USM: Setting Up Gradebook.*
 - 3. 15 Nov 2022, Centre for Development of Academic Excellence, Universiti Sains Malaysia, *Panopto: Video Management.*
 - 4. 2 Nov 2022, Centre for Development of Academic Excellence, Universiti Sains Malaysia, *eLearn@USM: Grading Assignments and Quizzes*
 - 5. 14 Oct 2022, Centre for Development of Academic Excellence, Universiti Sains Malaysia, *eLearn@USM: Setting Up Online Classes and Recording the Attendance*
 - 6. 26-30 Sep 2022, School of Mathematical Sciences, Universiti Sains Malaysia, *Short Course on Mathematica and MATLAB*
 - 7. 1 Apr 2022, Centre for Development of Academic Excellence, Universiti Sains Malaysia, *Panopto: Video Management*
 - 8. 21-25 Mar 2022, School of Mathematical Sciences, Universiti Sains Malaysia, *Short Course on Mathematica and MATLAB*
 - 9. 10-12 Dec 2018, International Conference on Mathematical Sciences and Technology 2018, Penang, Malaysia, *Math Made Easy with Technology*

Conference Presenter

- 1. The 4th International Conference on Mathematical Sciences (ICMS4); Putrajaya, Malaysia, *Solving Boussinesq Equation Using Quintic B-spline and Quintic Trigonometric B-spline Interpolation Methods*, November 15-17, 2016
- 24th Mathematical Sciences National Symposium (SKSM 24); Terengganu, Malaysia, Solving Buckmaster Equation Using Cubic B-Spline and Cubic Trigonometric B-Spline Collocation Methods; September 27-29, 2016
- 3. 24th Mathematical Sciences National Symposium (SKSM 24), Terengganu, Malaysia; Solving Dym Equation using Quartic B-spline and Quartic Trigonometric B-spline Collocation Methods; September 27-29, 2016
- 22nd Mathematical Sciences National Symposium (SKSM 22), Selangor, Malaysia; Bicubic B-spline Interpolation Method for Two-Dimensional Heat Equation; November 24-26, 2014
- 5. 20th Mathematical Sciences National Symposium (SKSM 20), Putrajaya, Malaysia; *Bicubic B-spline Interpolation Method for Two-Dimensional Laplace's Equations;* December 18-20, 2012
- 6. The International Conference in Mathematics and Applications, Ho Chi Minh City, Vietnam; *Cubic B-spline Interpolation Method for Two-Dimensional Laplace's Equation;* December 20-22, 2011
- 7. 19th Mathematical Sciences National Symposium (SKSM 19), Penang, Malaysia; *Quartic B-spline for Second Order Linear Two-Point Boundary Value Problem;* November 9-11, 2011

- 8. 18th Mathematical Sciences National Symposium (SKSM 18), Johor, Malaysia; *Cubic Beta-spline Applied to Linear Two-Point Boundary Value Problems of Order Two;* December 8-10, 2010
- 9. International Conference on Applied Science, Engineering and Technology (WASET), Clarke Quay, Singapore; *Cubic Trigonometric B-spline Applied to Linear Two-Point Boundary Value Problems of Order Two;* August 25-27, 2010
- 10. International Conference on Mathematics, Statistics and Scientific Computing (WASET), Penang, Malaysia; *Extended Cubic B-spline Method for Linear Two-Point Boundary Value Problems;* February 24-26, 2010

OTHERS

1. Lifetime membership of the Malaysian Mathematical Sciences Society.