

Biodata of A.A. Zainal / Z.A. Aziz

Current Address: Director, UTM Centre for Industrial and Applied Mathematics (UTM-CIAM), Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia.

www.utm.my/partners/utm-ciam

M.Sc. Universiti Kebangsaan Malaysia, Sarawak, Malaysia (UKS) (1984) (Special Programme Scholar)

B.Sc. (Hons.) University of Malaya, Kuala Lumpur, Malaysia (1982) (Special Programme Scholar)

PRE UNIVERSITY

- Anderson School, Ipoh, Perak, Malaysia (*Federal Government - Special Programme Scholar*)
- Norfolk College of Arts & Technology, Kings Lynn, Norfolk, UK (*PSD/JPA Scholar*)

CURRENT ADMINISTRATIVE/RESEARCH POSITIONS/EXTERNAL APPOINTMENT

- **Director, UTM Centre for Industrial and Applied Mathematics** (UTM-CIAM). 1 Jan 2013 - 31 Dec 2014; 1 Jan 2015 - 31 Dec 2016 (*in cooperation with Oxford Centre for Industrial & Applied Mathematics, Oxford University, UK*)
- **Head of Task Force**, "Measuring on the Critical Thinking & Problem Solving (CTPS) Skills": Office for Undergraduate Studies, UTM. 29/10/08 - currently
- **Member**, Steering Committee for UTM Scientists' Programme with Nobel Agenda (2013-2015), UTM Johor Bahru.
- **External Examiner-cum-Assessor**, BSc (Computational Mathematics), Faculty of

Science & Technology, Universiti Malaysia Terengganu, 21030 Kuala Terengganu, Malaysia (Sept. 2013 - Aug. 2015)

- **Member**, UTM Task Force on KPI Setting for Research Alliances & COEs (1 Oct. 2013 - 2 Oct 2015), UTM Johor Bahru.

- **Chairman**, International Seminar on Mathematics in Industry 2013 (ISMI2013), 27-28 Nov. 2013, UTM Johor Bahru.

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External Examiner-cum-Assessor, MSc (Applied Mathematics), Faculty of Computer Science & Mathematics, Universiti Teknologi Mara (UiTM), Shah Alam, Selangor, Malaysia (1 Jan. 2014 - 31 Dec. 2016)

- **Chairman**, 2nd Mathematics in Industry Study Group (MISG) Malaysia 2014, 17-21 March 2014, UTM Johor Bahru.

- **Interim Board Member**, Asia Pacific Consortium of Mathematics for Industry (APCMfi), 2014.

- **Chairman**, National Seminar on Mathematics in Industry 2014 : **AISMM-UTMCIAM**, 3 June 2014, UTM Johor Bahru.

- **Member**, UTM Task Force on Research, Development & Commercialisation, UTM Johor Bahru.

- **Chairman**, 3rd Mathematics in Industry Study Group (MISG) Malaysia 2015, 6-10 April 2015, UTM Kuala Lumpur.

- **External Examiner-cum-Assessor**, Institute for Teachers Education Malaysia, Malaysian Ministry of Education, Cyberjaya, Selangor (2014-2016)

- **Research Head of**

Mathematical Modelling of River Pollution by Determining the Level of DO and Pollutant Concentration Flagship Project Grant (UTM-CIAM) April 2013-March 2014, Vot No. PY/2013/00474, RM 50,000. **Approximate Analytical**

Solutions of MHD Rotating Flow of Third and Fourth Grade Fluids in Porous Space, MOE Fundamental Research Grant, RM 110,000.

Modelling & Optimization of MpHO Case Study: Taman Timor Oxidation Pond Flagship Project Grant (UTM-CIAM) April 2014-March 2015. RM 120,800.

- **Research Member of**

Free Vibration Analysis of Circular Cylindrical and Truncated Conical Shells with Fluid-Filled Vessel, MOE Fundamental Research Grant, RM 66,000. (Head: Assoc. Prof. Dr K.K. Viswanathan)

Previous Administrative/Research Positions

- **Chairman** of the Mathematics Programme, Institute Ibnu Sina for Fundamental Science Studies (IIS), UTM: 28 Feb. 2003 - 27 Feb 2005, 28 Feb 2005 – 31 May 2007.
- **Chairman**, Regional Annual Fundamental Science Seminar 2007, IIS, UTM and **Co-Chairman** of 2nd ICOMs-RAFFS2007
- **Founding Editor**, *Forum Matematik*, (A Weekly Newsletter), Mathematics Dept., Sept. 1997 – Sept. 1999.
- **Chief Editor**, *IIS Bulletin*, Institute Ibnu Sina For Fundamental Science Studies (IIS), UTM: 2004 - 2005.
- **Chairman**, M.Sc Engineering Mathematics Curriculum Committee, Maths Dept. UTM. 2004- 2007
- **Chairman**, Quality Control of 100% Page Proof of Secondary Textbooks Form 2, 4 & 5, Ministry of Education, 2004-2006
- **Head of MSIG** (Mathematics & Statistics in Industry Group), ESciNano/Nanotech Research Alliance, Universiti Teknologi Malaysia. 24 June 2009 – 23 June 2011, 1 Nov 2011 - 31 Oct 2013
- **Head of NLWMP** (Nonlinear Waves & Mathematical Physics Group), MSIG, ESciNano/Nanotech Research Alliance, Universiti Teknologi Malaysia. 24 June 2009 - 23 June 2011, 1 Nov 2011 - 31 Oct 2013
- **Chairman** of the First Mathematics in Industry Study Group (MISG), Malaysia 2011 (14 - 18 March 2011) (UTM-Oxford-Massey-MIMOS Initiative)
- **Council/Executive Member of ESciNano/Nanotech Research Alliance**, Universiti

Teknologi Malaysia. 3 August 2009 – 2 August 2011.

- **Head of the Department of Mathematical Sciences**, Faculty of Science, Universiti Teknologi Malaysia. 1 Jan 2010 – 31 Dec 2011.

- **Principal Researcher**, Ibnu Sina Institute for Fundamental Sciences Studies, UTM, Johor, 1 Oct. 2011 – 1 Sept. 2012

- **Head of the Department of Mathematical Sciences**, Faculty of Science, Universiti Teknologi Malaysia. 1 Jan 2012 - 30 Oct 2012, 1 Nov 2012 - 31 Dec 2012.

Acting Head of Department of Mathematical Sciences:

1 Jan 2013 - 30 April 2013.

Editorialships & *Reviewers

- Board of Editors: *Journal MATEMATIKA* - 2002 - presently
- Board of Editors: *Jurnal KALAM* - 2008 - presently
- Editorial Board: *Pacific Journal of Mathematics for Industry* - 2014.

- Board of Editors: *Journal Teknologi C* - 2001 -2009
- Board of Editors: *Journal of Fundamental Sciences* - 2005 - 2010.
- Book Chapters in *Research in Applied Mathematics* (2008), A.A. Zainal (ed.) Mathematics Department, UTM Skudai, Publisher UTM Skudai,
ISBN: 978-983-52-0606-1

- *MATEMATIKA Special Edition Parts 1 & 2*, December 2008 (for 2nd ICoMS 2007), Mathematics Department, UTM ISSN: 0127-8274

*Zeitschrift für Naturforschung A, World Applied Sciences Journal, ASM Science Journal, International Journal of Applied Mathematics and Information Sciences, Journal of Porous Media, International Journal of Theoretical Physics, International Journal of the Physical Sciences, Matematika, Jurnal Teknologi C, Journal of Fundamental Sciences, Jurnal Teknikal dan Kajian Sosial, International Symposium on Information and Communication Technologies 2006, Malaysia-Japan International Symposium

Advanced Technology 2007,

2
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International Conference on Mathematical Sciences 2007, 1
st

Regional Conference on Applied and Engineering Mathematics 2010, 2
nd

Regional Conference on Applied and Engineering Mathematics 2012,
Technology, Science, Social Sciences And Humanities International Conference 2012 (Tesshi
2012), American Society of Mechanical Engineers (ASME) Turbo Expo 2013, Walailak Journal
of Science and Technology, Results in Physics, Heat Transfer - Asian Research, Journal of
Theoretical & Applied Physics, British Journal of Applied Sciences & Technology, International
Journal of Computer Mathematics, Mathematical Modelling & Analysis
, AIP Advances, Jurnal Teknologi (Science & Engineering).

PROFESSIONAL AFFILIATIONS

- **Life Member** of the *Malaysian Mathematical Sciences Society (MMMSS)*. Since 1988.
Membership No: ZS2002-2 & ZB1995-3
- **Member** of the *Institute of Physics Malaysia (MIPM)*. Since 2002. Membership No: 1172.
- **Member** of the *International Association of Engineers (MIAENG)*. Since 1 Nov. 2010.
Membership No: 109609.
- **Founding Member/Fellow** of the *Malaysian Academy of Malaysian Scientists (MAMS or AI*

SMM

). Since 2012.

PUBLICATIONS

Articles (Journals & Selected Refereed Proceedings)

- "Soliton-soliton: Persamaan Korteweg-de Vries, Sinus-Gordon, Schroedinger Kubik 1". *Matematika* **2** (1986) 55-82. Errata
- 3** (1987), 117. (Indexed: MyAIS 0.13)

- "Soliton-soliton: Masalah Penyebaran Songsang 11". *Matematika*, **3** (1987), 73-101. (Indexed: MyAIS 0.13)

- "Gelombang Menyerak". *Buletin Fizik* **3** (1990), 8-13. (with Jamalludin Talib)
- "A Direct Evaluation Of The Path Integral Of A Particle In An D-Dimensions In Cartesian Coordinates", *Proceedings ITB (or ITB Journal)* **Vol. 25**, No. 1, (1993) Suplemen, H. Gunawan and A. Muchlis (eds.) 155-164. (with Shaharir Md. Zain). (Indexed: SCOPUS)

- "Penyelesaian kamiran nyata yang tepat bagi persamaan resapan linear teritlak berpotensi afin", *Jurnal Teknologi* **25** (1996), 37-43. (with Shaharir Md. Zain). (Indexed: SCOPUS)

- "Penyelesaian kamiran nyata berbentuk kamiran Feynman bagi persamaan resapan teritlak berpotensi ayunan harmonik", *Sains Malaysiana*, **25** (1996) 111-125. (with Shaharir Md. Zain). (Indexed: MyAIS, SCOPUS)

- "Penyelesaian kamiran nyata persamaan resapan kompleks berpotensi kuadratik teritlak kompleks", *Matematika*, **13** (1997), 29-40. (with Shaharir Md. Zain). (Indexed: MyAIS 0.13)

- "Evaluation of the Feynman Integral in Generalised Coordinate System." *Phys. J. Indonesian Phy. Soc* **1** (1996), 1-12.

ISSN 1410-8860.

(with Shaharir Md. Zain).

- "On exact real integral solution of the generalised linear diffusion equation", *Sing. J. Phys*

11

(1995), 81-91. (with Shaharir Md. Zain).

- "Real integral solution in term of classical path for a diffusion model with quadratic potential in one-dimensional Euclidean space", *J. Fiz. Mal.* **16** (1995), 43-58. (with Shaharir Md. Zain). (Indexed: MyAIS)

- "On the nature of exact real integral solution for the generalised linear diffusion equation", *Sing. J. Phys.* **11** (1996), 95-101. (with Shaharir Md. Zain).

- "A note on the Feynman-Inomata integral", *J. Fiz. UTM.* **4** (1997), 1-9. (with Shaharir Md. Zain).

- "Pembinaan persamaan Korteweg de Vries sebagai sistem Hamilton bermatra tidak terhingga", *Matematika*, **14** (1998), 17-26. (Indexed: MyAIS 0.13)

- "Exact real integral solution for the complex diffusion equation in n-dimensional Euclidean space" *Jurnal Teknologi* **31C** (1999), 21-38 (with Shaharir Md. Zain) (Indexed: SCOPUS)

- "Functional integral solution of complex diffusion equation with quadratic potential in classical path space" *Bull. Malaysian Math. Sc. Soc. (Second Series)* **24** (2001) 111-128. (Indexed: MyAIS, ISI: 0.696)

- "A note on the dynamics in a billiard system". *Borneo Science: A Journal of Science and Technology*, **10** (2001) 51-61 (with Loo, B.W.)

- "A glimpse of the relationship between Feynman integral and integrable systems", *Matematika* **2**

0
, (2004), 125-132.

(Indexed: MyAIS

0.13

)

- "A short note on the relation between Feynman integral and completely integrable system", *Proceedings of the Int. Conf. on Stats. And Maths and its Development of Science & Technology*

Hajarisman et al (eds.), UNISBA Bandung (2004), 29-33.

(Plenary)

- "Modelling of Semiconductor Quantum Dots", *J. Indones. Math. Soc.* **11**, (2005) 5-8. (with Al Douri et al).

- "Feynman Integral via Concepts in Integrable Systems: Theory and Applications", (2006) *Proceedings of the Int. Conf. on Mathematics and the Natural Sciences*, ITB Bandung,.

Ismunandar et al (eds.), 5-13.

(Plenary)

- "Feynman Integral and the t Function", *Proceedings of the Int. Conf. on Mathematical Sciences*, UKM, Bangi, 28-29 Nov. 2007.

Abdul Ghafur et al (eds.), 671-679.

(Invited)

- "The integrability of KdV hierarchies via group theoretical approach", *Journal of Fundamental Sciences*

3

, (2007), 137-149.

(Indexed: MyAIS)

- "On the Correlation of Theory and Experiment for Transversely Isotropic Nonlinear Incompressible Solids" *Proceedings of the 9th International Conference on Computational Structures Technology*, (2008) B.H.V

Toppings & M. Papadrakakis (Editors), Civil-Comp Press, Stirlingshire, Scotland, UK, Paper 258, 2008. doi:10.4203/ccp.88.258

(with M.H.B.M. Shariff & B.A. Mahad)

- "Modelling of Tsunami Waves", *Matematika* **24**, (2008), 211-230, (with Y. Nazeeruddin, M.S. Norhafizah) (2009 Malaysian

Mathematical Science Society (PERSAMA) Award for Research Paper Category

)

(Indexed: MyAIS

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- "The Feynman Integral and Completely Integrable Systems", (2007), A Book Chapter in *Recent Advances in Theoretical & Numerical Methods in Applied Mathematics*

, Y. Yaacob (ed.) Mathematics Department, UTM Skudai, Publisher UTM Skudai, 57-80.

ISBN: 978-983-52-0606-1

- "The Perturbation Pressure in Seismic Waves Modelling", (2008), A Book Chapter in *Research in Applied Mathematics*, A.A. Zainal (ed.) Mathematics Department, UTM Skudai, Publisher UTM Skudai, 1-15, ISBN: 978-983-52-0606-1 (with Dennis Ling Chuan Ching).

- "Theory and Experiment for Transversely Isotropic Nonlinear Incompressible Solids" (2008), A Book Chapter in *Research in Applied Mathematics*, A.A. Zainal (ed.) Mathematics Department, UTM Skudai, Publisher UTM Skudai, 89-101, ISBN: 978-983-52-0606-1 (with M.H.B.M. Shariff, B.A. Mahad, I. Mukheta, Y. Yusof).

- "Numerical Solution of the One-Dimensional Shallow Water Equations", (2008), *Matematika : Special Edition Part 1*, December 2008 (Norsarahaida S. Amin et al. eds.), 369-378 (with I. Salemah, M. Mohd Nor, Y. Nazeeruddin) (Indexed: MyAIS 0.13)

- "Modeling of Earthquake and Soil Dynamics via the Rayleigh waves Collision", In Yahya Abu Hasan et al. (Eds.) *5th Asian Mathematical Conference Proceedings (Volume II)*, (2009) 480 – 486. ISBN: 978-967-5417-54-2. (with Dennis Ling C.C.)

- "Soliton Solutions of the Ginzburg-Landau Equation" *Matematika* **25**, (2009), 91-113, (with Faisal Salah Yousif Rasheed) (*2010 Malaysian Mathematical Science Society (PERSAMA) Award for Research Paper Category*) (Indexed: MyAIS 0.13)

- "Displacements by SV-wave's in Fluid-Saturated Mediums" (2010) (with Dennis Ling Chuan Ching) *Proceedings 2nd ICCRD 2010*, Mahadevan et. al. (eds.), KL, Malaysia, 510-513 (included in the

IEEE Xplore and CSDL, and indexed by INSPEC, Ei Compendex, Thomson ISI for indexing.

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(Indexed: SCOPUS)

- "P-wave Diffusion in Fluid-Saturated Medium" (2010) (with Dennis Ling Chuan Ching) *Ma*
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(Indexed: MyAIS

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- "S-H waves Diffusion in Fluid Saturated Medium" (2010) (with Dennis Ling Chuan Ching,
S.Y. Faisal) *Journal of Mathematics and Statistics*, **6** (3): 205-209. (Indexed: SCOPUS)

- "Scattering of SV-waves in Fluid-Saturated Medium" (2010) (with Dennis Ling Chuan
Ching, S.Y. Faisal), *Australian Journal of Basic and Applied Sciences*, **4**(8): 3843-3853. (I
ndexed: SCOPUS)

- "Scattering of SH Waves in Fluid Saturated Medium", (2010) (with Dennis Ling Chuan
Ching, S.Y. Faisal), *Applied Mathematical Sciences*, **Vol. 4**, no. 68, 3375 – 3386. (Indexe
d: SCOPUS)

- "P-SV wave Diffusion in Fluid-Saturated Medium", (2010) (with Dennis Ling Chuan Ching)
Journal of Fundamental Sciences **Vol. 6**, No. 1 63-67. (Indexed: MyAIS)

- "Kamiran Feynman dan Sistem Terkamir Lengkap: Kerangka Kerja Baru dalam
Matematik Fizik", *Jurnal KALAM*. (2010) **3** (1) , 23-38. ISSN 1985-5222

- "The role of sine and cosine components in Love waves and Rayleigh waves for energy
hauling during earthquake" (2010), *American Journal of Applied Sciences* Vol. 7, No.
12, 1550-1557 (with Dennis Ling Chuan Ching)
(Indexed: SCOPUS)

-

"An Overview of the Importance of Industrial Mathematics", (2010), *Journal of Science &*
Mathematics **Vol.2** No.2,
9-17. ISSN 1985-7918.

- "Bifurcation of rupture zone by the Nonlinear Negative Damping Force" (2011), *Applied Mathematics and Mechanics* **32** (3) 285-292 (with Dennis Ling C.C., S.Y. Faisal) (Indexed: SCOPUS, ISI: 0.514)

- "Linear and nonlinear surface seismic Rayleigh waves with damping: A heuristic direct method" (2011) (with Dennis Ling Chuan Ching, S.Y. Faisal), *Journal of Applied Sciences* **11** (2), 275-283. (Indexed: SCOPUS)

- "Steady-state solution for MHD rotating flow of generalized Burgers' fluid in a porous medium" (2011) *Journal of Applied Sciences* **11** (5) 861-866 (ISSN 1812-5654/ DOI: 10.3923/jas.2011) (with Dennis Ling Chuan Ching, S.Y. Faisal) (Indexed: SCOPUS)

- "Scattering of P Waves in Fluid Saturated Medium" (2011), *Trends in Applied Sciences Research* **6** (7): 710-718 (ISSN 1819-3579/ DOI: 10.3923/tasr.2011) (with Dennis Ling Chuan Ching, S.Y. Faisal) (Indexed: SCOPUS)

- "New exact solutions of MHD transient second grade fluid in a rotating frame in a porous medium" (2011) , *Journal of Applied Mathematics* (with Dennis Ling Chuan Ching, S.Y. Faisal) Volume 2011, Article ID823034, 8 pages doi:10.1155/2011/823034. (Indexed: SCOPUS, ISI: 0.834)

- "New exact solutions for Rayleigh - Stokes problem of Maxwell fluid in a porous medium and rotating frame", (2011) (with S. Faisal and C.C. Dennis Ling) *Results in Physics* **1**, 9-12. DOI: 10.1016/j.rinp.2011.04.001. (Indexed: SCOPUS)

- "Free vibration of symmetric angle-ply laminated cylindrical shells of variable thickness", (2011) *Acta Mechanica* **221**, 309-319. DOI 10.1007/s00707-011-0505-z (with K.K. Viswanathan, Jang Hyun Lee, I. Hossain) (Indexed: SCOPUS, ISI: 1.292)

- "A note on the interplay between symmetries, reduction and conservation laws of Stokes' first problem for third grade rotating fluids" (2011) *PRAMANA – journal of physics* **77** (3),

439-445 DOI: 10.1007/s12043-011-0164-6 (with K. Fakhar & A.H. Kara)
(Indexed: SCOPUS, ISI: 0.561)

- "On accelerated flow for MHD generalized Burgers' fluid in a porous medium and rotating frame" (2011) (with Dennis Ling Chuan Ching, S.Y. Faisal) *IAENG International Journal of Applied Mathematics* Volume 41 Issue 3, Pages 199-205
(Indexed: SCOPUS)

- "Islamic Science and Some Physico-Philosophical Thoughts from a Mathematical Physics Point of View", Vol 7, (2011) , 65-80 '*ULUM ISLAMIYYAH - The Malaysian Journal of Islamic Science*

- "Free vibration of symmetric angle-ply laminated cylindrical shells of variable thickness including shear deformation theory: Spline method". (2011). *International Journal of the Physical Sciences* , 6 (25), 6098-6109. (with K.K.Viswanathan, Saira Javed, and I Hossain) (Indexed: ISI: 0.540)

- "Accelerated flows of a MHD Second grade fluid over an oscillating plate in a porous medium and rotating frame" (2011). *International Journal of the Physical Sciences* Vol. 6 (36), pp. 8027 - 8035
(with S. Faisal and C.C. Dennis Ling)
(Indexed: ISI: 0.540)

- "Vibration analysis of cross-ply laminated truncated conical shells using spline method", 7 6:139–156
(2012).

Journal of Engineering Mathematics

(with K.K.Viswanathan, Jang Hyun Lee, I.Hossain and H.Y. Abdullah)
(Indexed: ISI: 0.856)

- "Exact solution for Rayleigh – Stokes problem of an Oldroyd – B fluid in a porous medium and rotating frame", Vol. 15 (10) 901-908, (2012) *Journal of Porous Media* (with S. Faisal, N. Amin & C.C. Dennis Ling) (Indexed: SCOPUS, ISI: 0.707)

- "A review of the time discretization of semi linear parabolic problems", Vol. 4, (19): 3539-3543 (2012)
Research Journal of Applied Sciences, Engineering and Technology
(with Nazeeruddin Yaacob, Mohammadreza Askaripour Lahiji, Mahdi Ghanbari) (Indexed: SCOPUS)

- "A review for the time integration of semi-linear stiff problems", (2012) *Journal of Basic & Applied Scientific Research* 2 (7) 6441-6448 (ISSN: 2090-4304) (with Nazeeruddin Yaacob, Mohammadreza Askaripour Lahiji, Mahdi Ghanbari)

- "Some Numerical Methods for Solving Stochastic Impulsive Control in Natural Gas Storage Facilities" *Malaysian Journal of Fundamental & Applied Sciences* Vol.8, No 1, 31-37 (2012) (with R. Leyla & A. Bahar)

- "Results Relating to Hirota Method and Singularity Analysis on Some Nonlinear Waves Equations" Vol 4 No 1, 75-83 (2012) *Journal of Science & Mathematics* ISSN 1985-7918, (with Chia C.P.)

- "Split-step multisymplectic method for nonlinear Schrödinger equation" Vol. 4, (19): 3834-3837 (2012)
Research Journal of Applied Sciences, Engineering and Technology
(with Nazeeruddin Yaacob, Mohammadreza Askaripour Lahiji, Mahdi Ghanbari) (Indexed: SCOPUS)

- "Hirota-Sato Formalism via Maya Diagrams on KP, KdV and S-K Equations" (2012), *Jurnal KALAM*
(accepted)(with Nooraslinda Ali) ISSN 1985-5222

- "A numerical approach for solving nonlinear wave equation" Vol. 4, (19): 3858-3864 (2012) *Research Journal of Applied Sciences, Engineering and Technology*
(with Nazeeruddin Yaacob, Mohammadreza Askaripour Lahiji, Mahdi Ghanbari and Dennis Ling C.C.) (Indexed: SCOPUS)

- "Analytic Approximate Solution of KdV Equation via Homotopy Analysis Method" Vol 28 (1), (2012), 105-113
Matematika
(with Mojtaba Nazari & Faisal Salah). (Indexed: MyAIS)

- "Approximate Analytic Solution of KdV & Burgers' Equation with the Homotopy Analysis Method" (2012), *Journal of Applied Mathematics* (with Mojtaba Nazari, Merkabah Niliashi & Faisal Salah). Volume 2012, Article ID 878349, 13 pages.
doi:10.1155/2012/878349. (Indexed: SCOPUS, ISI: 0.834)

- "Constant accelerated flow for third grade fluid in a porous medium and rotating frame with the homotopy analysis method", (2012) *Mathematical Problems in Engineering* Volume 2012, Article ID 601917, 14 pages doi:10.1155/2012/601917
(with Mojtaba Nazari, Faisal Salah & Dennis Ling Chuan Ching) (Indexed: SCOPUS, ISI: 1.383)

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- "Polarized seismic and solitary waves run-up at the sea bed" (2012), *2nd International Conference on Fundamental and Applied Sciences 2012*
, ICFAS 2012; Kuala Lumpur; Malaysia; 12-14 June 2012.

AIP Conference Proceedings

, Volume 1482, 2012, Pages 103-106

DOI:

10.1063/1.4757446 (with Dennis Ling C.C. and Faisal S.Y.)

ISBN:

978-073541094-7 (indexed: SCOPUS)

- "Free Vibration of Symmetric Angle-ply Layered Conical shell Frusta of Variable Thickness under Shear Deformation Theory using Spline Approximation" (2012), *19th International Congress on Sound and Vibration*, ICSV 2012, pp 605-612 (Vilnius, Lithuania, 8-12 July 2012) (with K.K. Viswanathan, S. Javed) (Indexed: SCOPUS)

- "Fourth-Order Time Stepping for Stiff PDEs via Integrating Factor", 19, 170-173, (2013) *Advanced Science Letters* (ISSN: 1936-6612) (with Nazeeruddin Yaacob, Mohammadreza Askaripour Lahiji, Mahdi Ghanbari and Danial Ghodsiyeh) (Indexed: SCOPUS, ISI: 1.253)

- "Free vibration of symmetric angle-ply layered conical shell frusta of variable thickness under shear deformation theory", (2013) *Structural Engineering & Mechanics, An International Journal*, Vol 45, No. 2, 259-275 (with Viswanathan K.K. & Saira, J.) (Indexed: SCOPUS, ISI: 0.863)

- "Semi-Implicit Schemes for Stiff PDEs via Newton's Form", (2013) *Journal of Optoelectronics and Biomedical Materials*, Vol. 5, Issue 3, July-September 2013, 43-50. ISSN 2066-0049 (with Mohammadreza Askaripour Lahiji, Mahdi Ghanbari and Ali Fazamnia)

- "A Note on Fourth-Order Time Stepping for Stiff PDE via Spectral Method", (2013) *Applied Mathematical Sciences* Vol. 7, no. 38, 1881 - 1889 (with Mohammadreza Askaripour Lahiji and Mahdi Ghanbari) (Indexed: SCOPUS)

- "Hirota-Sato Formalism on Some Nonlinear Waves Equations" 61, 1-6 (2013), doi: 10.11113/jt.v61.1615 *Jurnal Teknologi (Sciences & Engineering)* (with Nooraslinda Ali) (Indexed: SCOPUS)

- "Computation of Lyapunov Quantities of Homogeneous Quartic Polynomial System", (2013), *Matematika* Vol. 29, No. 1, 73-83 (with Hero Waisi Salih). (Indexed: MyAIS) (2014 *Malaysian Mathematical Science Society (PERSAMA) Award for Research Paper Category*)

- "On accelerated MHD flows of second grade fluid in a porous medium and rotating frame", (2013) Vol 43: 3, 106-113 *IAENG International Journal of Applied Mathematics*,

(with Faisal Salah and Dennis Ling Chin Chuan) (indexed: SCOPUS)

- "MHD Accelerated Flow of Maxwell Fluid in a Porous Medium and Rotating Frame" (2013), *ISRN Mathematical Physics* Vol 2013, Article ID 485805, <http://dx.doi.org/10.1155/2013/485805> (with Faisal Salah, Dennis Ling Chuan Ching, and Mahad Ayem)

- "Modeling of information flows in natural gas storage facility" *AIP Conf. Proc.* Vol.1557, pp. 500-504; doi:

<http://dx.doi.org/10.1063/1.4823965>

(5 pages) (

INTERNATIONAL CONFERENCE ON MATHEMATICAL SCIENCES AND STATISTICS 2013 (ICMSS2013): Proceedings of the International Conference on Mathematical Sciences and Statistics 2013; 5–7 February 2013 Kuala Lumpur, Malaysia (with Leyla Ranjbari, Arifah Bahar) published Mon Sep 30, 2013.

(Indexed: SCOPUS)

- "Polarized waves in hydrodynamic model and Fourier spectral method", (2013) *Modelling and Simulation in Engineering*

Volume 2013, Article ID 720590, 6 pages

<http://dx.doi.org/10.1155/2013/720590>

(with Dennis Ling Chuan Ching and Faisal Salah) (Indexed: SCOPUS)

- "Approximate analytic solution for the forced Korteweg-de Vries equation", (2013) *Journal of Applied Mathematics*

Volume 2013, Article ID 795818, 9 pages; <http://dx.doi.org/10.1155/2013/795818>

(with Vincent David, Mojtaba Nazari, Vahid Barati, Faisal Salah) (Indexed: SCOPUS, ISI: 0.834)

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"Free Vibration Of Antisymmetric Angle-Ply Laminated Annular Circular Plate", (2013) (with K.K.Viswanathan and Saira Javed) *Lecture Notes in Engineering and Computer Science* Volume 3 LNECS, 2013, Pages 2136-2141 (Indexed: SCOPUS)

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"Approximate analytic solution of KdV equation via new HAM", (2014), 7(4)): 826-831

Research Journal of Applied Sciences, Engineering and Technology

ISSN: 20407459; eISSN: 20407467

(with Vahid Barati, Mojtaba Nazari and Vincent Daniel) (Indexed: SCOPUS)

-

"River Pollution Modelling in Determining the Level of Dissolved Oxygen Concentrations Using

Laplace Transforms", Vol. 28: 1, 40-55, (2014) *International Journal of Ecology and Development* (with Nurra Mahadi & Mahad Ayem) (Indexed: SCOPUS)

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"Approximate analytical solutions of KdV and Burgers' equations via HAM and nHAM", (2014) 67:1, 77-83 *Jurnal Teknologi (Sciences & Engineering)* (with Mojtaba Nazari, Vahid Barati, Vincent Daniel Davidl, Faisal Salah) (Indexed: SCOPUS)

-

"Free vibration of symmetric angle-ply laminated circular cylindrical shells", *IOP Conf. Series: Earth and Environmental Science*

19

(2014) 012010 doi:10.1088/1755-1315/19/1/012010, IOP Publishing (with K K Viswanathan, H Z Amirah, Saira Javed) (Indexed: SCOPUS)

-

"On accelerated flows of magnetohydrodynamic third grade fluid in a porous medium and rotating frame via homotopy analysis method", Vol. 17, 11 (2014), 969-981. DOI: 10.1615/JPorMedia.v17.i11.30 *Journal of Porous Media* (with Faisal Salah and Mojtaba Nazari) (Indexed: SCOPUS, ISI: 0.707)

- "Maximum number of limit cycles of cubic Lienard differential system", Vol 8, 64 (2014): 3161-3171 *Applied Mathematical Sciences* (with Hero Waisi Salih and Faisal Salah) (Indexed: SCOPUS) <http://dx.doi.org/10.12988/ams.2014.43147>.

- "Maximum number of limit cycles of a general Lienard equation", *AIP Conference Proceedings* 1602, 121 (2014); doi:10.1063/1.4882476 (<http://dx.doi.org/10.1063/1.4882476>) (with Hero Waisi Salih) (Indexed: SCOPUS)

- "Numerical solution for Kawahara equation by spectral methods", (2014) *IERI Procedia*: 10, 259-265, DOI: 10.1016/j.ieri.2014.09.086 (with Mohammadreza Askaripor Lahiji) (Indexed: SCOPUS) ISSN: 2212-6678.

- "Determination of River Pollutants Concentration Level", (2014), 1-18, A Book Chapter in *Modelling in Industrial and Applied Mathematics*. ISBN: 978-983-52-1003-7 Y.Yaacob (Ed.) UTM PRESS Johor Bahru. (with Nurra Mahadi)

- "Stochastic Models of Natural Gas Prices", (2014), 21-50, A Book Chapter in *Modelling in Industrial and Applied Mathematics*
. ISBN: 978-983-52-1003-7 Y.Yaacob (Ed.) UTM PRESS Johor Bahru. (with Leyla Ranjbari, Arifah Bahar, Faisal Salah)

- "Review of the Role of Analytical Modelling Methods in Riverbank Filtration System", 71:1 (2014), 59-69 *Jurnal Teknologi (Sciences & Engineering)* (with Shaymaa Mustaffa, Arifah Bahar, Saim Suratman) (indexed: SCOPUS)

- "Application of Finite Difference Method on MHD Differential Type Fluid Flow in Rotating Frame", 1635, 138 (2014) *AIP Conference Proceedings* doi: 10.1063/1.4903575 (with Shafa Mahadi, Farah Suraya, Faisal Salah) (indexed: SCOPUS)

- "An Effective Technique on Solving Korteweg de Vries Equation by Combination of Homotopy Perturbation Method and Pade' Approximant", 1635, 167 (2014) doi: 10.1063/1.4903579 *AIP Conference Proceedings* (with Farah Suraya, Shafa Mahadi, Faisal Salah) (indexed: SCOPUS).

- "Numerical Solution of the Nonlinear Wave Equation via Fourth-Order Time Stepping", (2015) Vol. 729, 213-219 *Applied Mechanics and Materials* ISSN: 1660 9336 (with Mohhamadreza Askapor Lahiji) (indexed: SCOPUS)

- "A shallow water model for the propagation of Tsunami via Lattice Boltzmann method", (2014), *IOP Conference Series: Earth & Environmental Science*, IOP Publishing (accepted) (with Sara Zergani, KK Viswanathan) (indexed: SCOPUS) (
Best Paper Award at The 2nd International Conference on Geological, Geographical, Aerospace & Earth Sciences (AeroEarth 2014)
)

- "Buckling analysis of rectangular plates with variable thickness resting on elastic foundation", (2014), *IOP Conference Series: Earth & Environmental Science*, IOP Publishing (accepted) (with KK Viswanathan, PV Navaneethakrishnan) (indexed: SCOPUS)

- "Influence of heat transfer on oscillating MHD flow of second grade fluid in a porous channel", (2014), *Applied Mechanics and Materials* ISSN: 1660 9336 (accepted) (with Faisal Salah, KK Viswanathan) (indexed: SCOPUS) (
Best Oral Presentation Award at The International Conference on Mechatronics and Mechanical Design (ICMMD 2014)
)

- "Free vibration analysis of symmetric angle-ply laminated conical shell with sinusoidal variation in thickness", (2014), *Applied Mechanics and Materials* ISSN: 1660 9336 (accepted) (with KK Viswanathan, Saira Javed, Faisal Salah) (indexed: SCOPUS)

- "Pseudo wave by propagation of SH wave with sinusoidal force in saturated medium", *AIP Conference Proceedings* 1621, 462 (2014); doi: 10.1063/1.4898507 (with Teng Lie Siang, Dennis Ling Chuan Ching)

(indexed: SCOPUS)

- "Approximate analytical solution of MHD flow of an Oldroyd-8 constant fluid in a porous medium", 6:6 (2014), 2503-2511, *International Journal of Engineering and Technology* ISSN: 0975 4024. (with Faisal Salah & KK Viswanathan) (Indexed: SCOPUS)

- "Computation of Lyapunov quantities for a non homogeneous cubic Lienard Polynomial system", (2014) (accepted) *International Journal of Mathematics and Statistics* (with Hero Waisi Salihi) (Indexed: SCOPUS) ISSN: 0973-8347.

- "Enhanced Compact Artificial Bee Colony", (2015), Vol. 298, 491-511 (*in press*, 12 Dec 2014)
Information Sciences
doi: 10.1016/j.ins.2014.12.015 (with Akbar Banitalebi, M.I.A. Aziz, A.Bahar) (Indexed: SCOPUS, ISI: 3.893)

- "Vibration Analysis of Cross-ply Laminated Plates under Shear Deformation Theory", (2014), 23-56, A Book Chapter in *Advances in Industrial and Applied Mathematics* ISBN: 978-983-52-0997-0 Y. Yaacob (Ed.) UTM PRESS Johor Bahru (with K.K. Viswanathan).

- "Free vibration of anti-symmetric angle-ply laminated conical shells", (2015), Vol. 122, 488-495 (*in press*, 5 Dec.2014), *Composite Structures*, doi: 10.1016/j.compstruct.2014.11.075 (with K.K. Viswanathan, S. Javed, K. Prabakar, I. A. Bakar) (Indexed SCOPUS, ISI: 3.120)

- "The solution of Falkner-Skan flow and heat transfer over a wedge by homotopy analysis method", (2015), (*revised*) *Jurnal KALAM* (with Y.S. Daniel and Faisal Salah)

- "Number of limit cycles for homogeneous polynomial system", (2015) (accepted)
International Journal of Mathematical Analysis
(with Hero Waisi Salihi and Faisal Salah) (Indexed SCOPUS)

Current Works (2013 & 2014) - submitted articles & preprints

- "Ilmu Matematik dan Keupayaan Berfikir: Ke Arah Minda Progresif dan Dinamik " (2011)
- "Stochastic Models of Natural Gas Prices" (2011) (with R. Leyla & A. Bahar)
- "Applications of Stochastic Control Theory to Gas Market"(2011) (with R. Leyla & A. Bahar)
- "Modelling of River Pollution: Determination of the Levels of Pollutants Concentrations" (2012) (with Nurra Mahadi)
- "Polarized Seismic and Solitary Waves Run-up at the Sea Bed" (2012) (with S. Faisal and C.C. Dennis Ling)
- "On accelerated MHD flows of second grade fluid in a porous medium and rotating frame" (2012) (with Faisal Salah & Dennis Ling Ching Chuan)
- "Measuring Problem-Solving Ability: Use of the Rasch's Model" (2012) (with Rohanin Ahmad, Shariffah Suhaila Syed Jamaludin, Zarina Hj. Mohd Khalid, Zaitul Marlizawati Zainuddin)
- Book Chapters in *Mathematical Modelling in Industrial & Applied Mathematics* (2012), A.A. Zainal & Y. Yaacob (ed.) Department of Mathematical Sciences, UTM Skudai, Publisher UTM Skudai.
- "Ulasan Terhadap Karya Monograf Penyelidikan oleh Profesor Dr Shaharir Mohd Zain, "Kritikan Teori Kenisbian dan Teori Quantum", " ASASI: Petaling Jaya, 2011. 410 ms. (2012)
- Book Chapter on "*Optimization and Statistical Modelling* " (2012) A.A. Zainal, Y. Yaacob (ed.) Mathematics Department, UTM Skudai, Publisher UTM Skudai.
- "SH Waves Diffusion with Constant Force in Fluid-Saturated Medium" (2012) (with L.S. Teng & Dennis Ling C.C.)
- "Displacement by SV Waves with Constant Force in Fluid-Saturated Medium", (2012) (with L.S. Teng & Dennis Ling C.C.)
- "Variable accelerated flow for third grade fluid in a porous medium and rotating frame via homotopy analysis method", (2012) (with Mojtaba Nazari, Faisal Salah)
- "Variable accelerated flows for MHD third grade fluid in a porous medium and rotating frame via HAM", (2012) (with Mojtaba Nazari, Faisal Salah)
- "Exact Solutions And Lattice Boltzmann Modeling For Shallow Water Equations", (2012)

(with Sara Zerghani)

- "Calculation of Lyapunov quantities for homogeneous polynomial system", (2012) (with Hero Waisi Salihi)
- "Computation of Lyapunov quantities for non-homogeneous polynomial system", (2012) (with Hero Waisi Salihi)
- "Free vibration of symmetric angle-ply laminated annular circular plate of variable thickness under shear deformation theory," (2013) (with Kodakkal Kannan Viswanathan, Saira Javed, Jang Hyun Lee)

Articles (Refereed Proceedings & Conferences/Workshops)

- "A Direct Evaluation of The Path Integral For A Particle in an d-dimensional Potential Well in Cartesian Coordinates.", Franco-Seams Conference on Applied Mathematics, ITB, Bandung, Indonesia. 22-24 June, 1992. Published in *Proceedings ITB* Vol. 25, No. 1, 1993 Suplemen, H. Gunawan and A. Muchlis (eds.) 155-164. (with Shahrir Md. Zain).
- "Kamiran Feynman Dalam Koordinat Kutub Dan Sfera Bagi Zarah Dalam Potensi Telaga", *Prosiding Simposium Kebangsaan Sains Matematik UTM*, (1992); Mohammad Rashidi b. M.R . *et al.*, 291-304. (with Shahrir Md. Zain).
- "Catatan mengenai penyelesaian kamiran nyata yang tepat bagi persamaan resapan teritlak", *Prosiding Simposium Kebangsaan Sains Matematik V1*, (1994); Karunathan and Suzeini (eds.), Universiti Malaya, K.L.; 254-260 (with Shahrir Md. Zain).
- "Penyelesaian kamiran nyata berbentuk kamiran Feynman bagi persamaan resapan teritlak berpotensi linear", in Aziz, b. D. *et al.* (eds.), *Seminar Siswazah FSMK 11*, (1994) Universiti Kebangsaan Malaysia, Bangi (with Shahrir Md. Zain).
- "Pembinaan penyelesaian kamiran nyata bagi persamaan resapan kompleks dengan potensi am dalam ruang Euklidian bermatra-n", *Simposium Kebangsaan Sains Matematik ke V11*, 3-5 Disember 1996, Shah Alam. (preprint) (with Shahrir Md. Zain).
- "Kaedah Mudah Menyelesaikan Satu Kelas Persamaan Gelombang Tidak Linear Berkepentingan Fizikal ", *Prosiding Simposium Kebangsaan Sains Matematik ke-9*,

A.Ibrahim et al (eds.), UKM, Bangi (2001), 175-179. (with Ng Tee Seng)

- "Permodelan Gelombang Permukaan : Persamaan Jenis KdV bagi Topografi Permukaan Tidak Rata",

Prosiding Simposium Kebangsaan Sains Matematik ke-9

, Ibrahim et al (eds.), UKM, Bangi (2001), 155-160. (with Salemah Ismail, Mohd Nor Mohamad)

- "Surface Waves above a Rectangular Submerged Bar", *Prosiding Simposium Kebangsaan Sains Matematik ke-10*

, M.M. Ali Hassan et al (eds.), UTM, Skudai,

(2002), 149-157. (with Salemah Ismail, Mohd Nor Mohamad)

- "On the Splitting of a Solitary Wave Propagating over a Slowly Varying Topography", *Prosiding Simposium Kebangsaan Sains Matematik ke-11*

, Amran Ahmed et al (eds.), UMS, Kota Kinabalu

(2003), 149-157. (with Tiong K.M.)

- "Exact real integral solution via Fourier Transformation", *Proceedings of the Annual Fundamental Science Seminar 2003*

, Noordin I. et al (eds.), IIS Johor Bahru (2003), 1-5.

- "Reflection and Transmission of Water Waves over Bottom Topography", *Proceedings of the Annual Fundamental Science Seminar 2003*

, Noordin I. et al

(eds.), IIS Johor Bahru (2003), 50-55. (with Salemah Ismail, Mohd Nor Mohamad)

- "Kamiran Feynman dan Sistem Terkamir Lengkap", *Prosiding Seminar Mengenang Jasa Prof. Dr Shaharir Mohd Zain*

, Alawiah et al (eds.) (2004) UKM, Bangi, 30-53.

(
Plenary Lecture

)

- "A short note on the relation between Feynman integral and completely integrable system", *Proceedings of the Int. Conf. on Stats. And Maths and its Development of Science & Technology*

, Hajarisman et al (eds.), UNISBA Bandung (2004), 29-33.

(
Plenary Lecture

)

- "Modelling of semiconductor quantum dots", *Proceedings of the Joint Seminar Indonesia-Malaysia*

Mashuri et al (eds.), Dept. Maths., ITB, Bandung (2004) (a 2 page extended abstract). (

Invited Lecture

).

- "Ilmu Matematik dan Keupayaan Berfikir: Ke Arah Minda Progresif dan Dinamik", *Prosiding Seminar Islam Hadhari "Pengenalan Semula dan Penguasaan Cabang-cabang Ilmu Asas di Kalangan Umat Islam*

",
(2005), IKIM KL, 1-16. (

Invited Lecture

)

- "The integrability of KdV equation via Kirillov-Konstant-Souriau group theoretical approach", *Proceedings of the First Int. Conf. On Maths. & Stats.*, Suwanda et al (eds.), Bandung (2006), 1-12. (

Invited Lecture

)

- "Feynman Integral via Concepts in Integrable Systems: Theory and Applications", *Proceedings of the Int. Conf. on Mathematics and the Natural Sciences*, ITB Bandung, 29-30 Nov. 2006.

Ismunandar et al (eds.), 5-13.

(

Plenary Lecture

)

- "Ilmu Matematik sebagai Pemacu Pembangunan Modal Insan Bersepadu dalam Peradaban Bangsa Terbilang", *Prosiding Persidangan Antarabangsa Peradaban Melayu Ke-3*, UPSI Tanjung Malim, 2-3 Feb. 2007.

- "Numerical solutions of the one-dimensional shallow water equations", (*submitted for proceedings publication of ICOMS2007*)

(with Salemah Ismail et al) (

Invited Expert Paper

)

- "Membudayakan Matematik Tambahan", *Prosiding Konvensyen Pendidikan Guru- Guru Matematik Tambahan Peringkat Negeri Sembilan Tahun 2007*

,
6-8 Ogos 2007, Port Dickson. (

Invited Lecture

) (with Norsarahaida S.A., Ramli S., Shamsuddin A., Ismail M., Khairil Anuar A., Zuhaimy I., Ismail K., Hamisan R.)

- "Feynman Integral and the t Function", *Proceedings of the Int. Conf. on Mathematical Sciences*, UKM, Bangi, 28-29 Nov. 2007.

Abdul Ghafur et al (eds.), 671-679

(
Invited Expert Paper

)

- "Mathematical Modelling for Nonlinear Mechanism of Tsunami Waves Generation", *presented at the Int. Conf. on Mathematical Sciences*

, UKM, Bangi, 28-29 Nov. 2007

preprint (17 pages) (with Nazeeruddin Yaacob, Norhafizah M.S., Mohd Anuar J.) (

Invited Expert Paper

)

- "Model Matematik Dalam Mekanisma Ketaklinearan Penjanaan Gelombang Tsunami" (with Norhafizah Md. Sarif and Rozieana Khairuddin), *Seminar Kebangsaan Matematik dan Masyarakat 2008* (SKMM'08),

13-14 Feb. 2008,

HOTEL GRAND CONTINENTAL,

Kuala Terengganu, Terengganu Darul Iman, Malaysia.

- "On the Correlation of Theory and Experiment for Transversely Isotropic Nonlinear Incompressible Solids" *The Ninth International Conference on Computational Structures Technology*, Athens, Greece, 2-5 September 2008 (with M.H.B.M. Shariff & B.A. Mahad) B.H.V. Toppings & M. Papadrakakis (Editors), Civil-Comp Press, Stirlingshire, Scotland.

- "A Revival of Islamic Science: A Working Philosophy of a Mathematical Physicist" *The International Seminar on Islamic Science & Technology 2008*

, 18-19 March 2008, Kuala Lumpur. (

Invited Lecture

).

- "Empowering Engineering Mathematics Education in The 21st Century", *Slides Presentation on the launching of The Institute of Engineering Mathematics, UNIMAP, Kangar, Perlis, 25 June 2008 (with Norsarahaida S. Amin)*

- "Feynman Diagrams and the t Function", *Proceedings of the 3rd Int. Conf. on Mathematics and Statistics (IcoMS2008)*

, Bogor Agricultural University, Bogor, Indonesia, 5-6 August. 2008.

Asep Saifuddin et al (eds.)

- "The Nonlinear Mechanism of Tsunami Wave Generation", *Proceedings of the 3rd Int. Conf. on Mathematics and Statistics (IcoMS2008)*

, Bogor Agricultural University, Bogor, Indonesia, 5-6 August. 2008.

Asep Saifuddin et al (eds.)

- "Fast Fourier Transform and Wavefront Approach for Seismic Modelling", *Seminar Kebangsaan Pengoptimuman Berangka dan Penyelidikan Operasi ke-2*

,
13-14

Dec. 2008, Universiti Malaysia Terengganu, Kuala Terengganu. (

Invited

Lecture

).

Prosiding

Seminar

Kebangsaan Pengoptimuman Berangka dan

Penyelidikan Operasi ke-2,

ISBN 978-983-2888-89-5, Ismail Mohd et al (eds.), Publisher UMT, Kuala Trengganu, 48-60.

- "Industrial Mathematics in the New Millennium", *Kolokium Jabatan Matematik/Statistik 2009*, jointly organized by the Fakulti Teknologi Maklumat & Sains Kuantitatif, UiTM Terengganu and Persatuan Sains Matematik Malaysia (PERSAMA)

,
21 March 2009, UiTM, Dungun, Terengganu (

Invited Lecture

), (with powerpoint presentation).

- "Kamiran Feynman dan Sistem Terkamir Lengkap: Suatu Kerangka Kerja Baru Matematik Fizik", *Seminar Pemikiran Fizik Semasa ASASI*, jointly organized by the Fakulti Teknologi Maklumat & Sains Kuantitatif, UiTM Terengganu and Persatuan Sains Matematik Malaysia (PERSAMA), 18 April 2009, UKM, Bangi. (

Invited Lecture

), 1-13.

- "Modelling of Earthquake and Soil Displacements Dynamics via the Rayleigh Waves Collision", *5th Asian Mathematics Congress*, 26-28 June 2009, PWTC, KL. (with Dennis Ling C.C.)

- "Physical Representation of the Correlation Theory and Experiment for Transversely Isotropic Nonlinear Incompressible Solids", *2nd ICOWOBAS* 3-4 June 2009, The Zone, JB. (with M.H.B.M. Shariff, B.A. Mahad, I. Mukheta)

- "Surface seismic Rayleigh waves with damping: A heuristic direct method", *ESciNano Annual Symposium 2009*

, The Zon Regency Hotel, Johor Bahru, 30 Nov. – 1 Dec. 2009. (with Dennis Ling, C.C.)

- "Displacements by SV-wave's in Fluid-Saturated Mediums" (2010) (with Dennis Ling Chuan Ching)

The

International Conference on Applied Physics and Mathematics (ICAPM 2010),
May 2010.

- "Polarized Seismic Waves and Solitary Waves in Hydrodynamics" 5-7 OCTOBER 2010,
FACULTY OF SCIENCE POSTGRADUATE CONFERENCE 2010

ISBN: 978-983-9805-93-2, 40-47 (editor: N.H. Sarmin et al.) (with Dennis Ling C.C., Faisal Salah)

- "Hirota method, singularity analysis and multi-soliton solutions of physically significant nonlinear waves equations", *4th Seminar on Numerical Optimization & Operation Research 2010*, Jurnal Kalam Enterprise, Kuantan, 24-25 Sept. 2010 (
Invited Lecture
)

- "Diffusion of *P* waves in fluid-saturated medium", *Regional Annual Fundamental Science Symposium 2010* (RAFFS 2010) 8-9 June 2010 (with Dennis Ling Chuan Ching, Faisal S.Y.)

- "Mathematical Considerations for Induction Motors", REPORT for the *Third Workshop on Industrial Applications*, City University of Hong Kong, Hong Kong, Dec 7-11, 2009, 60-71. (with C. Bohun et al.)

- "Hirota Method and Singularity Analysis on Physically Significant Nonlinear Waves Equations"(with Chia C.P.) and "KPI 2010/11 of MSIG" *Nanotechnology Annual Symposium 2010*, The Zon Regency Hotel, Johor Bahru, 23 Dec. 2010.

- "Free vibration of symmetric angle-ply laminated cylindrical shells of variable thickness including shear deformation theory: spline method", *The 7th East Asia SIAM Conference (EASIAM 2011)*, Waseda University, Kitakyushu, Japan, June 27-29 2011. (with K.K. Viswanathan, Saira Javed)

- "Analisis Ujian Pemikiran Kritis dan Penyelesaian Masalah", *Workshop on the Implementation of Generic Skills*, Awana Genting Highlands Golf & Country Resort, Pahang, 14-16 July 2011 (with Rohanin Ahmad, Zaitul Marlizawati Zainuddin, Zarina Mohd Khalid, Shariffah Suhaila Syed Jamaludin) (
Invited Presentation
)

- "Flexural Free Vibration Analysis of Cross-Ply Layered Conical Shell Frusta Under Shear

Deformation Theory using Spline Method”, *Intellectbase International Consortium Academic Conference* in Sydney, NSW – Australia, November 24-26, 2011.

Proceedings of Intellectbase International Consortium Vol 19,
108-119

(with K. K. Viswanathan, I. Hossain, H. Y. Abdullah)

- “On the Importance of Industrial Mathematics: UTM Experience”, *Workshop on the ICM-ICIAM Study on the "Educational Interfaces between Mathematics and Industry"* University of Macau, Macau, 3-4 November 2011. (

Invited Talk

)

- “Hirota Method, Sato Theory and Plucker Relations of KP and KdV Equations via Maya Diagrams”, *International Conference on Financial Mathematics and Numerical Optimization (ICFMNO 2012)*, Legend Resort of Cherating, Kuantan, 31 May – 1 June 2012. (**Invited Talk**)

- “Free Vibration of Symmetric Angle-ply Layered Conical shell Frusta of Variable Thickness under Shear Deformation Theory using Spline Approximation”, *International Congress on Sound and Vibration*, Vilnius, Lithuania, 8-12 July 2012 (with K.K. Viswanathan, S. Javed)

- “Free vibration of symmetric angle-ply laminated annular circular plate of variable thickness under shear deformation theory”, *The 17th Asian Technology Conference in Mathematics 2012*, Bangkok, Thailand, 16-20 Dec. 2012 (with K.K. Viswanathan, S. Javed).

- "Stochastic Models of Natural Gas Prices ", *International Conference on Global Optimization*, University of Pandjajaran, Bandung, Indonesia, 4-6 Dec. 2012. (

Invited Speaker

)

- “Analytical Solution for River Pollution Modelling in Determining the Level of Dissolved Oxygen Concentrations Using Laplace Transforms”, *Proceedings International Science Postgraduate Conference 2012 (ISPC2012)*, 315-328. (with Nurra Mahadi)

- "Approximate analytic solution of KdV equation via new HAM", *Proceedings of International Conference on Numerical Optimization and Operations Research (ICNOOR-V)*, 26 – 28 June 2013, Universitas Abulyatama, Banda Aceh, Indonesia (

Invited Speaker

)

Ismail Mohd et al. (editor)
51-62. (with Vahid Barati)

- "Tsunami Buoy based on Nonlinear Shallow Water Wave Model", (2013) *Joint Conference: The Fourth International Conference and Workshops on Basic and Applied Sciences (4th ICOWOBAS) and Regional Annual Fundamental Science Seminar 2013 (RAFSS 2013)* Sept 3rd - 5th, 2013 Le Grandeur Palm Resort, Senai, Johor, Malaysia. (with Dennis L.C.C. and Faisal Salah)

- "Mathematics is Alive! Sharing some thoughts", *National Seminar 2013: "Best Practices : Representational, Reasoning and Assessment"* Empress Hotel, Sepang, Selangor, 9-11 May 2013. (**Invited Speaker**)

- "Free Vibration Of Antisymmetric Angle-Ply Laminated Annular Circular Plate", (2013) (with K.K.Viswanathan and Saira Javed) *IAENG The World Congress on Engineering 2013*, London, U.K., 3-5 July, 2013. Proceedings of the World Congress on Engineering 2013 Vol III, ISBN: 978-988-19252-9-9.

- "MHD Accelerated Flow of Maxwell Fluid in a Porous Medium and Rotating Frame", (2013). *Seminar Hasil Penyelidikan, Kementerian Pengajian Tinggi 2013 - Sains Tulin dan Gunaan*, 2 & 3 July 2013, EDC Hotel, Universiti Utara Malaysia, Kedah. (with Faisal Salah): published as

- *PROSIDING SEMINAR HASIL PENYELIDIKAN □ SEKTOR PENGAJIAN TINGGI KE-3 2013 Sains Tulin dan Gunaan Sains Kesihatan dan Klinikal* (edited by Azizan Baharuddin, Roslan Abd. Shukor, Ibrahim Che' Omar and Mashitah Mohd. Yusof) (ISBN 978-967-0334-83-7 (Versi Cetak) ISBN 978-967-0334-84-4 (Versi DVD)) 280-292

- "Numerical Solution For Constant Accelerated Flow For A Third-Grade Fluid In Rotating Frame " (2013) *4th International Conference and Workshops on Basic and Applied Sciences and 11th Regional Annual Fundamental Science Symposium 2013 (ICOWOBAS-RAFSS 2013)* 3-5 September

2013, Le Grandeur Palm Resort, Senai, Johor, Malaysia. (with Norizzati Salleh & Faisal Salah) (Poster Presentation Abstract Number : P-021
- Norizzati Salleh; UTM YES Programme)

- "Maximum Number of Limit Cycles of a General Lenard Equation", (2013) *The 3rd International Conference on*

Mathematical Sciences (ICMS3)

, Putra World Trade Centre, Kuala Lumpur on 17 – 19 December 2013 (with Hero Waisi Salih)

- "Analysis of Flexural Free Vibration of Antisymmetric Angle-Ply Laminated Plates using Spline Function Approximation" (2013). *The 2nd International Conference on Mathematics & Technology in Mathematics Education*, 4-6 March 2013. Cambodia-Japan Cooperation Centre, Phnom Penh, Cambodia (with K.K.Viswanathan), 1-11.

-
"Free vibration of symmetric angle-ply laminated circular cylindrical shells" (2013) *International Conferences on Geological, Geographical, Aerospace and Earth Sciences (AeroEarth 2013)* 23–24 January 2014, Jakarta, Indonesia (with K K Viswanathan, H Z Amirah, Saira Javed)

- "Application of homotopy analysis method for nonlinear partial differential equations" (2014), *Proceedings of 2nd International Science Postgraduate Conference 2014* (ISPC2014) 10-12 March 2014, Faculty of Science, UTM: 934-941 (with Mojtaba Nazari & Faisal Salah) ISBN: 9789760194394 (eds: Wan Aini Wan Ibrahim et al.)

- "Stability and the unique limit cycle of Lienard equation" (2014), *Proceedings of 2nd International Science Postgraduate Conference 2014* (ISPC2014) 10-12 March 2014, Faculty of Science, UTM: 779-785 (with Hero Waisi Salih) ISBN 9789760194394 (eds: Wan Aini Wan Ibrahim et al.)

-
"Approximate Analytical Solutions Of Magnetohydrodynamics Rotating Flow Of Third Grade Fluid In Porous Space", *The 3rd International Conference on Global Optimization and Its Applications* (ICOGOIA 2014), Yogyakarta, 10-12 September 2014. (**Plenary Speaker**) (with Mojtaba Nazari & Faisal Salah)

- "Effects of pressure gradient on steady forced convection in boundary layer problem by using homotopy analysis method", *Proceedings of the 3rd International Conference on Global Optimization and its Applications (ICoGOIA 2014)*, H. Napitupulu & G.K. Wen (eds.) ISBN 978-967-0524-64-1, pp 211-231 (with Y.S. Daniel & Faisal Salah) (**Plenary Speaker**)

- "Stochastic modelling for predicting the outcome of professional squash matches", *Procee*

dings of the 3rd International Conference on Global Optimization and its Applications (ICoGOIA 2014)

H. Napitupulu & G.K. Wen (eds.) ISBN 978-967-0524-64-1, pp 86-94 (M.I.A. Aziz, A. Banitalebi, A. Hamzah) (

Plenary Speaker

)

Research Monographs

- "*The Exact Connection between Feynman Integral and Completely Integrable Systems*", (2006). UTM Press, Skudai. ISBN 978-967-353-352-7

- "*Mathematical Modelling of Surface Waves*", (2007). UTM Press, Skudai.
- "*A New Review of Exponential Integrator*", Vol.1 (February 20, 2012), CreateSpace (accessible from Amazon.com). ISBN: 978-147-010-141-1 (with Mohammadreza Askaripour Lahiji, Mahdi Ghanbari)
- "*Teori dan Aplikasi Soliton*", (June 2013) (Draft - DBP)

RESEARCH GRANTS (Project Leader)

- ***Mathematical Modelling of Surface Waves*** : Oct. 2000 - Feb. 2004; IRPA Grant Vot. No. 72359, RM 35,150.
- ***The Exact Connection between Feynman Integral and a Completely Integrable System*** . 2004 - 2005 RMC Fundamental Grant Vot No 75086, RM 20,000.
- ***Mathematical Modelling of Tsunami Wave Generation***. 2007-2009 MOHE Fundament

al Research Grant, Vot. No. 78082, RM 41,000

- ***Nonlinear Transversely Isotropic Constitutive Equation for Passive and Active Soft Tissues***

Nov. 2008-Oct. 2010

MOHE Fundamental Research Grant, Vot. No. 78333,
RM 61,000 (with Assoc. Prof. Dr Mukheta Isa)

- ***Mathematical Modelling of Nonlinear Effects of Seismic Waves***. Nov. 2009-Oct. 2011
MOHE Fundamental Research Grant, Vot. No. 78485, RM 32,000

- ***Modelling and Analysis of MHD Flows of Some Non Newtonian Fluids in Porous Medium***

Sept 2010-Nov 2012

MOHE Fundamental Research Grant, Vot. No.78675, RM
59,000

- ***Homotopy Analysis Method (HAM) for solving on MHD rotating Flows of Some Non Newtonian Fluids*** Research University Grant (RUG) May 2012-April 2013, RM 30,000
Vot. No. 05J13 (PY/2011/02329)

RESEARCH GRANTS (Research Member)

- ***Mathematical Modelling of Free Convective Heat Transfer in Micropolar Fluids*** IRPA
8th
Malaysia Plan Project, 2001-2004, Vot. No. 74046, RM 79,000.(Leader: N. Amin)

- ***Mathematical Modelling of Low-Gravity Fluid Flows and Heat Transfer*** Scientific
Advancement Grant Allocations (SAGA), Dec. 2004 -2007, RM 94,200.(Leader: N.Amin)

- ***Free Vibration of Anti-symmetric Angle-ply Laminated Cylindrical and Conical Shells with Variable Thickness*** , (GUP) March 1, 2011 – Feb 29, 2012, RM 30,000.

(Leader: K.K. Viswanathan)

- ***Flexural Free Vibration of Symmetric and Anti-symmetric Angle-ply Laminated Circular Plates of Variable Thickness Including Shear Deformation Theory***, (GUP) May 1, 2012 – April 30, 2013. RM 31,800 (Leader: K.K. Viswanathan) Vot. No. / Reference No. : PY/2011/02418

- ***Determination Of Constitutive Model For Soft Tissues Using Physical Interpretation Parameters*** (GUP) May 1, 2012 – April 30, 2013. RM 40,000. (Leader: B.A. Mahad) Vot No. / Reference No. : Q.J130000.2626.04J79

- ***The Modelling and Simulation of Quantum Nanostructures for SET (Single-Electron Transistors)*** Top-Down IRPA Research Programme RMK-8, Aug 2004 - July 2007, RM 11.3 million (Leader: S. Sakrani) Grant Code: 09-02-06-0159-SR0000

- ***Static Electric Field Study in the Vicinity of Quantum Dot***. MOHE Fundamental Research Grant, 2009-2011. RM 42,000. (Leader: A.R. Mat Isa)

Research Collaboration

- ***"Tsunami Early Warning System"*** (2013) - Department of Fundamental and Applied Sciences, Universiti Teknologi PETRONAS (with Dennis Ling, C.C. et al.)

AWARDS

- Excellent Service Awards: 1998, 2007 & 2011 (UTM), 2008, 2010 & 2012 (Faculty of Science, UTM)

- Loyalty/Allegiance Service Award: 2004 (UTM)

- First Prize: Pertandingan Tunas Saintis. Minggu Terbuka Fakulti Sains, Persatuan Sains & Teknologi (PESAT), UTM. 2 Sept. 2009. (with supervised PSM student Aziana bt Ashaari). Title of Project:

Developing an Understanding of Washing Machine Dynamics.

- 2009 Faculty of Science Publication Award
- 2009 Malaysian Mathematical Sciences Society (PERSAMA) Award for Research Paper Category: "Modelling of Tsunami Waves",
Matematika
24
, (2008), 211-230, (with Y. Nazeeruddin, M.S. Norhafizah)

- 2010 Malaysian Mathematical Sciences Society (PERSAMA) Award for Research Paper Category, "Soliton Solutions of the Ginzburg-Landau Equation",
Matematika
25
, (2009), 91-113, (with Faisal Salah Yousif Rasheed)

- 2014 Malaysian Mathematical Sciences Society (PERSAMA) Award Research Paper Category, "Computation of Lyapunaov quantities of homogeneous quartic polynomial system",
MATEMATIKA
29, 73-83. (with Hero Waisi Salih)

- Best Paper Award at the 2nd International Conference on Geological, Geographical, Aerospace and Earth Sciences (AeroEarth 2014), "A shallow water model for the propagation of Tsunami via Lattice Boltzmann method", (2014) *IOP Conference Series: Earth and Environmental Sciences*, IOP Publishing (with Sara Zergani, KK Viswanathan)

TEACHING

Undergraduate:

Tensor Analysis (Analisis Tensor: Mat 3561), Advanced Mathematics 1 (Matematik Lanjutan 1:

Mat 2252), Dynamics (Dinamik: Mat 0662 & 0622), Statics & Dynamics (Statik & Dinamik: Mat 0603), Algebra I & II (Aljabar I & II: Mat 0312 & Mat 1332), Algebra (Aljabar: Mat 1352), Calculus I & II (Kalkulus I & II: Mat 0222, SSM 1262, SSM 1203 & SSM 2292, 2272, SSM 2233, SSH 1713), Elementary Mathematics (Matematik Asas (SSM 1063), Mathematics 1 (Matematik 1: SSM 3032), Differential Equations I & II (Persamaan Terbitan: SSM 2533, 2532, 3513, 2513, DSM 2533, SSM 2543, SSE 1793 & SSM 4542), Engineering Mathematics (SSE 1893), Differential Geometry (SSH 3613) , History & Philosophy of Mathematics (Sejarah & Falsafah Matematik: SSM 3812), Linear Algebra (SSM XXXX), Mathematical Modelling (SSH 3713), Calculus of Variations (SSM 4533), Research Methodology & Information Retrieval (SSU 2623), Quantum Mechanics (SSH 3783)

Postgraduate:

Mathematical Methods (MSM 1573, M.Sc.), Theoretical Mechanics (MSM 5213, M.Sc.), Nonlinear Waves (MSM 1133, M.Sc), Research Methodology (ULP 0010) – *Report Writing/Thesis: Planning, Style and Format* , Methods in Engineering Mathematics (MSJ 1523, M.Sc), Solitons & Nonlinear Waves (MSJ 1733, M.Sc).

SUPERVISION

B.Sc. final year projects (58) supervisor , 1990 - 1991, 1992 - 1993, 1997 - 1998, 1998 - 1999, 1999 – 2000, 2000 –2001, 2001- 2002, 2002-2003, 2003-2004, 2004-2005, 2005-2006, 2006 – 2007, 2007 – 2008, 2008 - **currently.**

UTM YES (Young Excellent Scientist) Programme:

- Norizzati Salleh (3 SSE- Cohort 1, Sem 1 2012/13) (completed)

Postgraduate in Mathematics, MSc research students:

- Fazlina Aman (M.Sc), research title: '*Multidimensional solitons*'. Commencing Semester 1 Session 1999/2000 and terminated on 18-4-2000.
- Ng Tee Seng (M.Sc), research title : '*Kaedah Mudah bagi menyelesaikan Satu Kelas Persamaan Gelombang Tidak Linear Berkepentingan Fizikal*'. Sem. 2 2000/01 (completed).
- Loo Bee Wah (M.Sc), research title: '*Chaotic Hamiltonian System: Dynamics in a Billiard System*'. Sem. 2 2000/01 (completed).
- Tiong Kung Ming (M.Sc), research title: '*On the Splitting of a Solitary Wave Propagating over a Slowly Varying Topography*' . Sem. 2 2001/02 (completed).
- Tan Siew Eng (M.Sc), research title: '*Mathematical Modelling of Optical Soliton Transmission*'. Sem. 2 2005/06 (completed).
- Norhafizah Mohd Sarif (M.Sc), research title: '*Mathematical Modelling for the Nonlinear Mechanism of Tsunami Wave Generation*'. Sem. 2 2005/06 (completed)
- Zunaidah Sabudin (MSc Physics, co-supervisor) Sem 1 2005/06 (and terminated on Sem 1. 2008/09).
- Annie a/p Gorgey (MSc)) research title: '*The use of Riemann-Hilbert Problem in Solving the KdV Equation*' , Sem 2. 2006/07 (completed).
- Mohd Anuar Jamaludin (MSc) research title: '*Numerical Schemes for Tsunami Modelling*', Sem 1. 2007/08 (terminated Dec. 2007)
- Dennis Ling Chuan Ching (MSc): research title: '*Seismic Modelling in Petroleum exploration*' . Sem 2 2007/08. (completed)

- Nurul Hidayah (MSc) research title: *'Thermal Buckling of Composite Plates'* Sem 2 2008/09. (completed)
- Chia Chee Pen (MSc) research title: *'Hirota Bilinear Method'* Sem 2 2009/10. (completed)
- Farah Suraya Nasruddin (MSc) research title: *Painleve Analysis on Nonlinear Evolution Equations* Sem 2 2009/10 (completed)
- Shafa (MSc), research title: *Solving Beams Problems Using Green Function* Sem 22009/10 (completed)
- Nadzmi (MSc), research title: *Modelling of run-off flood water*, Sem 1 2010/11 (terminated)
- Sara Zergani(MSc), research title: *Analytical Solutions and Lattice Boltzmann Method on SWE*, Sem 2 2010/11 (completed)
- NorNadiyah Kamarudin (MSc), research title: *Mathematical Modelling of Water Pollutant Transport*, Sem 2 2010/11 (completed)
- Muna Maryam Azmy (MSc), research title: *Water Quality Modelling Using Mathematical Formulation in QUAL2E*, Sem 2 2010/11 (completed)
- Nurul Syazwani Mohd Affandi (MSc), research title: *Analytical Solution of Contaminant Transport in Streams* , Sem 2 2010/11 (completed)
- Hanafi Ithnin (MSc Res. (Physics), main supervisor: Ahmad Radzi Isa) research title: *Static Electric Field in the Vicinity of a Quantum Dot* Sem 2 2009/10. (completed)
- Nur Farhana Che Mansor (MSc Res.), research title: *Modelling of run-off flood water*, Sem 1 2011/12 (terminated)
- Noraslinda Ali (MSc Res.), research title: *Hirota Method and Sato Tau Function*, Sem 12010/11. (completed)
- Nurellimia (MSc), research title: *River pollution in Skudai River*. Sem. 2 2011/12 (completed)
- Syariffuddin (MSc), research title: *River pollution with EM*. Sem. 2 2011/12 (completed)
- Nurra Mahadi (MSc Res.), research title: *Mathematical Modelling of River Pollution by Determining the Level of DO and Pollutants* , Sem 2 2010/11. (completed)
-

Syazwani Mohd Zokri (MSc). Research title: *River Pollution with EM via HAM*. Sem 2 2012/13

(completed)

- Yahaya Shagaiya Daniel (MSc) Research title: *Effects of pressure gradient on steady forced convection using HAM.* Sem 1
2013/14. (completed)

Current MSc students (2013)

- NorHusna (MSc) (Sem. 2 2014/15) (co-supervisor: Arifah Bahar)

Postgraduate in Mathematics, PhD research students:

- Tan Wooi Nee (PhD): '*Theory of Bichromatic Wave Groups Amplitude Amplification using Implicit Variational Method*' . (completed, Sem 1, 2006/07); (MMU);
(with co-supervisor: N. Amin)
- Salemah Ismail (PhD): research title: "*One dimensional Surface Waves above varying bottom topography*"
.Sem. 2 2007/08 (completed). (UiTM);
(with co-supervisor: M.N. Mohamad)
- Dennis Ling Chuan Ching (PhD) (NSF scholar): research title: "*Mathematical modelling of seismic wave propagation*".
(completed, Sem 2 2010/11). (UTP)
Anugerah PERSAMA 2012/ 2012 PERSAMA Award
- Faisal Salah Yousif Rasheed (PhD) research title: *Exact Solution for MHD Non-Newtonian Fluids in Porous Mediums with and without rotation* -
Sem. 2 2011/12 (completed)
(with co-supervisor: N. Amin.) (Univ. Kordofan, Sudan).

- Saira Javed (PhD) research title: *Free vibration of angle-ply laminated cylindrical shells of variable thickness including shear deformation theory: spline method*
. -Sem. 1 2010/2011 (completed) (with main supervisor: K.K. Viswanathan)

- Leyla Ranjbari (PhD) research title: *Natural gas storage modelling based on observable gas prices*
. Sem. 1 2010/2011 (completed) (with co supervisor: Arifah Bahar)

- Mojtaba Nazari (PhD) research title: *Approximate analytical solution of viscoelastic differential flow models using homotopy analysis method.*
Sem. 1 2011/12 (completed) (with co-supervisor: Faisal Salah Yousif)

- Mohammadreza Askaripour Lahiji (PhD) research title: *Numerical integration of certain semi-linear partial differential equations*
. Sem. 2 2010/11 (with co-supervisor: Nazeeruddin Yaacob)

Current PhD students (2013-2014)

- Mahad Ayem (PhD): research title: *Nonlinear elasticity* Sem 2 2007/08. (with main supervisor: M. Isa, M.H.B.M. Shariff)

- Seyed Soheil (PhD) research title: *Integrable Systems* .Sem 2 2008/09. (terminated)

- Teng Lie Siang (PhD), research title: *Seismic, Acousto-Gravitational Waves*. Sem. 1 2011/12. (with co-supervisor: C.C. Dennis Ling)

- Hero Waisi Salih (PhD), research title: *Limit Cycles and Dynamical Systems*. Sem. 1 2011/12

- Sara Zergani(PhD), research title: *Lattice Boltzmann Method in Seismology*, Sem 2 2011/12

- Vincent Daniel David (PhD), research title: "*Mathematical Modelling of Tsunami Waves*", Sem. 1 2012/13

- Vahid Barati (PhD), research title: "*Nonlinear Waves and New HAM*", Sem. 1 2012/13 (terminated)

- Amber Nehan Kashif (PhD), research title: “*Nonlinear Waves and HPM*”, Sem. 2 2012/13 (with co-supervisor: Faisal Salah Yousif Rasheed)
- Kashif Bin Zaheer, (PhD), research title: “*Financial Modelling of Portfolio Management*”, Sem. 2 2012/13 (with main-supervisor: Mohd Ismail Abd Aziz)
- Farah Suraya Nasruddin (PhD), research title: “*Nonlinear PDE and HPM*”, Sem. 2 2012/13 (co-supervisor: Faisal Salah Yousif Rasheed)
- Shafaruniza Mahadi (PhD), research title: “*Nonlinear PDE and Numerical Schemes*”, Sem.1 2013/14 (co-supervisor: Faisal Salah Yousif Rasheed)
- Shaymaa Mustafa (PhD), research title. “*Groundwater Modelling*”, Sem. 1 2013/14 (co-supervisor: Arifah Bahar)
- Fawzia (PhD), research title, “*Nonlinear PDE and Adomian Method*”, Sem. 1 2013/14 (co-supervisor: Faisal Salah Yousif Rasheed)

Postdoctoral (2013-2014)

- Dr Faisal Salah Yousif Rasheed, Dept of Mathematics, Univ of Kordofan, Sudan

Internationalisation (Activation of MOU)

- Oxford University, UK: OCIAM (Oxford Centre for Industrial & Applied Mathematics)
- UTM Strategic Alliance in Industrial & Applied Mathematics and UTM Centre for Industrial

& Applied Mathematics in collaboration with OCIAM. (PIC: Prof J.Ockendon, FRS)

- Kent University, UK: Double Degree Programme; BSc (Industrial Mathematics) UTM – BSc (Actuarial Science) Kent. (PIC: N. Wood)
- Massey University, UK: Collaboration with CMI (Centre for Mathematics in Industry, Massey Univ.) on the launching of the First Malaysian Mathematics in Industry Study Group (MISG) Feb 2011. (PIC: Prof. G. Wake, FRSNZ)
- Coimbra University, Portugal: Collaboration with CMI (Centre for Mathematics in Industry, Coimbra Univ.) 9 months internship of PhD student; Nor Farahain Sept 2012. (PIC: Prof Aderito Aruyo)
- ETH Zurich (Swiss Federal Institute of Technology Zurich), Switzerland: Planned collaboration with Seminar für Angewandte Mathematik in Industrial Mathematics; January 2013 (PIC: Prof. em. Dr. Rolf Jeltsch, President of ICIAM – International Council on Industrial and Applied Mathematics)

Local Partnership (present collaboration in MISG (Mathematics in Industry Study Group & industrial links)

- Johore Bio-Tech
- Forest Research Institute of Malaysia (FRIM)
- The National Institute of Hydraulics Malaysia (NAHRIM)
- Perusahaan Otomobil Nasional Sdn Bhd (PROTON)
- Department of Civil Aviation Malaysia (DCA)
- Hospital Universiti Sains Malaysia (HUSM)
- KPJ Healthcare Bhd. : Cardiology (Dr Mohd Shahrom Ujang)

Other Write-ups (General articles/research reports/working papers)

- "A Technical Evaluation of Heavy Duty Offset Printing Machines 13"x 17", Technical Report No. 47, Defence Research Centre, Mindef. July, 1983.
- "Ketulenan dan Kegunaan Matematik: Satu Pandangan Peribadi", *Warta Matematik* 5 (1989), 12-16.

- "Matematik: Suatu Catatan Peribadi", *Warta Matematik* 199002 1990, 13-18 dan 199101 (1990), 10-15.
- "Ahli Matematik Profesional: Suatu Catatan Pengembara", *Warta Matematik* Bil. 2 (1995), 2-4.
- "Islam, Sains & Teknologi : Matematik dan Peranannya", Program Bina Sahsiah, UTM. 26-7-97 (with Ali Abd. Rahman & Samsudin Abdullah). (unpublished)
- "Complex Diffusion Equation's Solutions Which Conform to the Notion of Feynman Path Integral", Final Short-Term Research Report submitted to Research Management Centre, UTM. 2000.

- "Direct Evaluation of Feynman Integral in Cartesian, Polar and Spherical Coordinate Systems", Final Short-Term Research Report submitted to Research Management Centre, UTM. 1993.

- "Non Linear Waves via Global Analytical Perspective", Final Short-Term Research Report submitted to Research Management Centre, UTM. 2000.

- "Mathematical Modelling of Surface Waves", Interim IRPA Report submitted to Research Management Center, UTM, Nov. 2000.

- "Mathematical Modelling of Surface Waves", IRPA Report submitted to Research Management Center, UTM, June 2002.

- *Proceedings Annual Fundamental Science Seminar 2003*, (eds.) Noordin, I, Samsudi, S, Mustafa, S, Zainal, A.A.
- "The Exact Connection of Feynman Integral and Completely Integrable Systems", RMC Fundamental Science Interim Report submitted to Research Management Center, UTM, August 2004.

- *IIS Bulletin*, Vol. 4, No. 1, June 2004. (Chief Editor)
- *IIS Bulletin*, Vol. 4, No. 2, Dec. 2004. (Chief Editor)
- *IIS Bulletin*, Vol. 5, No. 1, June. 2005. (Chief Editor)
- *Proceedings Annual Fundamental Science Seminar 2004*, (eds.) Samsudi, S, Mustafa, S, Yusoff, W., Zainal, A.A., Hadi Nur.
- *Proceedings Annual Fundamental Science Seminar 2005*, (eds.) Samsudi, S, Mustafa, S, Yusoff, W., Zainal, A.A., Hadi Nur.

- "Mathematics and Life" (2005) (Powerpoint presentation available, presented at the IIS Youth Science Camp 2005; 21 June 2005) (with Mohd Ismail A. A., Zaitul Marlizawati Z., Nur Arina Bazilah A., Nur Ilyana A. A.)
- "The Exact Connection of Feynman Integral and Completely Integrable Systems", RMC Fundamental Science Final Report submitted to Research Management Center, UTM, October 2006. (
also in CD form
)

- “Mathematical Modelling of Tsunami Wave Generation”, FRGS Quarterly Report, submitted to Research Management Center, UTM, June 2007, Dec 2007, June 2008.
- “Laporan Program Lawatan Kerja Ke Centre For Mathematics in Industry (CMI), Institute of Information and Mathematical Sciences (IIMS), University of Massey, Auckland, New Zealand” 22/5/2008.
- “A Working Paper on M.Sc. Programme in Engineering Mathematics”, *approved by* MOHE, Malaysia, Jan. 2008, Dept. of Mathematics, Faculty of Science, UTM Skudai. (with Mukheta, I, Mohd Ismail, A.A. & Shamsuddin, A).
- Report on PhD Thesis entitled "Mathematical Modelling of g-Jitter Induced Free Convection", by Sharidan Shafie, submitted to Department of Mathematics, Faculty of Science, Universiti Teknologi Malaysia, Skudai, Johor (8 Dec. 2005)
- Report on PhD Thesis entitled “On Some Problems of Integral Equations and Integro-Partial Differential Equations with Fractional Orders”, by Maha Mohamed Kasem El-Kojok, submitted to the Department of Mathematics, Faculty of Science, Alexandria University, Egypt (31 August 2007).
- Report on PhD Thesis entitled “Two-Dimensional Mathematical Models for Micropolar Fluid Flow Through an Arterial Stenosis”, by Ilyani Abdullah, submitted to the Department of Mathematics, Faculty of Science, Universiti Teknologi Malaysia, Skudai, Johor (9 March 2009).
- Report on 2009 KPI Achievements of Mathematics & Statistics in Industry Group (MSIG), ESciNano Research Alliance, 17/12/09.
- “Mathematical Modelling of Tsunami Wave Generation”, FRGS Final Report, submitted to Research Management Center, UTM, Feb. 2010
- “Laporan Program Bengkel Kerja: The Third Workshop on Industrial Applications, City University of Hong Kong, 7-11 Dec. 2009 (in collaboration with Liu Bie Ju Centre for Mathematical Sciences, Hong Kong; Fields Institute for Research in Mathematical Sciences, Canada; Oxford Centre for Collaborative Applied Mathematics, England) Feb 2010.
- Working Paper (July 2010): The First Malaysian MISG Workshop on Industrial Application Department of Mathematics, Faculty of Science Universiti Teknologi Malaysia, Skudai, Johor Malaysia & Centre for Advanced Analysis & Modelling (ADAM), MIMOS, KL, Malaysia; in Collaboration with the *Centre for Mathematics in Industry (CMI)*, Massey University, Auckland, New Zealand, *Oxford Centre for Collaborative*

Applied Mathematics (OCCAM)

, University of Oxford, Oxford, United Kingdom.

- Working Paper (December 2010): "Cadangan Perubahan Nama Jabatan Matematik kepada Jabatan Sains Matematik", (with PM Dr Shamsuddin Ahmad)
- A write-up on an interview with Professor Dr Motohico Mulase, Univ. California at Davis, USA; *Forum Mathematics*, February 2011.
- Report on PhD Thesis entitled "Model Peringkat Terturun Bagi Sistem Berdinamik Linear Menggunakan Subruang Krylov Dan Kaedah Wavelet", by Farikhin, submitted to the Department of Mathematics, Faculty of Science, Universiti Malaysia Terengganu (UMT), Kuala Terengganu, Terengganu (4 March 2011).

- Working paper (April 2011): "Cadangan Penubuhan UTM Centre for Industrial & Applied Mathematics - UTMCIAM".
- Report on the First Mathematics in Industry Study Group (MISG), Malaysia 2011 (14 - 18 March 2011) (with Rohanin Ahmad).
- Working paper on "UTM-MIT (USA) BLOSSOMS Initiative" (September 2011), (with Mohd Ismail Abd Aziz, Baharuddin Aris)
- "Mathematical Modelling of Nonlinear Effects of Seismic Waves", FRGS Final Report Vot No. 78485, submitted to Research Management Center, UTM, Jan. 2012

- Report on MSc Thesis entitled "Neutrino-Electron Annihilation in the Higgs Triplet Model", by Ong Jui Feh, submitted to the Department of Physics, Faculty of Science, University of Malaya, KL (29 January 2012).
- Report on PhD Thesis entitled "Peristaltic Motion of MHD Non-Newtonian Fluids", by Khalid Ahmed Zakaria Ibrahim, submitted to the Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (16 Nov. 2012).
- Report on PhD Thesis entitled "Dark Bright Soliton Conversion in Ring Resonators with Add Drop Filter for Nanobiomedicine Applications", by Muhammad Arif Jalil, submitted to the Department of Physics, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (8 Mar. 2013).
- Report on PhD Thesis entitled "Secured and High Capacity Optical Communication Using Micro and NanoRing Resonator", by Iraj Sadegh Amiri, submitted to the Department of Physics, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (19 Mar. 2013).
- Report on MSc Thesis entitled "An Efficient Method for Discovering All the Extreme Points of Function with One Variable", by Ridwan Pandiya, submitted to the Department of Mathematics, Faculty of Science & Technology, Universiti Malaysia Terengganu (UMT), Kuala Terengganu, Terengganu (23 April 2013)
- Report on PhD Thesis entitled "Modulation of Nonlinear Waves in a Fluid-Filled in Thin Elastic Stenosed Tube", by Choy Yaan Yee, submitted to the Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (5 Sept. 2013).
- Report on MSc Thesis entitled "Optimal Harvesting Strategy for *Tenualosa* Toll in Sarawak Using the Schaefer Model", by Noriham Bujang, submitted to the Faculty of Computer Science & Mathematics, Universiti Teknologi MARA (UiTM), Shah Alam, Selangor (4 December 2013)
- Report on PhD Thesis entitled "Optical Soliton Control in Ring Resonator Systems", by

Suzairi bin Daud, submitted to the Department of Physics, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (27 Jan. 2014).

- "Modelling and Analysis of MHD Flows of Some Non Newtonian Fluids in Porous Medium", FRGS Final Report Vot No. 78675, submitted to Research Management Center, UTM, Feb. 2013

- "Homotopy Analysis Method (HAM) for solving on MHD rotating Flows of Some Non Newtonian Fluids", Research University Grant (RUG) Final Report Vot. No. 05J13, submitted to Research Management Center, UTM, Okt. 2013

- **Assessment Report on BSc (Computational Mathematics) Programme**, Mathematics Department, Faculty of Science & Technology, Universiti Malaysia Terengganu, 21030 Kuala Terengganu, Malaysia (15 Dec. 2013)

- **Assessment Report on MSc (Computational Mathematics) Programme**, Pusat Pengajian Matematik, Faculty of Computer Science & Mathematics, Universiti Teknologi Mara (UiTM), Shah Alam, Malaysia (2 Jan. 2014)

- Report on PhD Thesis entitled "Unsteady free convection flows of Newtonian and Non-Newtonian fluids", by Farhad Ali, submitted to the Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (16 April 2014)

- Report on PhD Thesis entitled "Arah carian sejagat kaedah quasi-Newton dalam menyelesaikan masalah pengoptimuman tak berkekangan", by Afzi Zaidi Mohamad Sofi @ Aziz, submitted to Centre for Informatics Studies and Applied Mathematics, Universiti Malaysia Terengganu, Kuala Terengganu (2 September 2014)

- Report on PhD Thesis entitled "Numerical computation of transient hydrogen natural gas mixture in a pipeline using reduced order modelling", by Baba Galadima Agaie, submitted to Department of Mathematical Sciences, Faculty of Science, Universiti Teknologi Malaysia, Johor Bahru (17 September 2014).

- Report on PhD Thesis entitled "Oscillation criteria for forced second order nonlinear differential equations", by Ambarka Abdalla Sahin, submitted to Centre for Mathematical Sciences Studies, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, Bangi (29 September 2014)

- Report on PhD Thesis entitled "Design and Optimization of the Standing-wave Thermoacoustic Refrigerator with Lagrange Multiplier Method", by Mawahib Hassan Ahmed Elfawal, submitted to Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor Bahru (17 September 2014).

INVITED, KEYNOTE, PLENARY SPEAKERS, FORUM PANELIST, INTERNATIONAL COMMITTEE MEMBER, APPOINTMENTS & cited in BOOK/PROJECT

- "Kamiran Feynman dan Sistem Terkamir Lengkap", *Prosiding Seminar Mengenang Jasa Prof. Dr Shaharir Mohd Zain*, Alawiah et al (eds.) (2004) UKM, Bangi, 30-53. (

**Plenary
Lecture**
)

- "A short note on the relation between Feynman integral and completely integrable system", *Proceedings of the Int. Conf. on Stats. And Maths and its Development of Science & Technology*, Hajarisman et al (eds.), UNISBA Bandung (2004), 29-33. (**Plenary Lecture**)

- "Modelling of semiconductor quantum dots", *Proceedings of the Joint Seminar Indonesia-Malaysia*, Mashuri et al (eds.), Dept. Maths., ITB, Bandung (2004). (with Al Douri et al) (**Invited Lecture**).

- "Ilmu Matematik dan Keupayaan Berfikir: Ke Arah Minda Progresif dan Dinamik", *Prosiding Seminar Islam Hadhari "Pengenalan Semula dan Penguasaan Cabang- cabang Ilmu Asas di Kalangan Umat Islam"*, (2005), IKIM KL, 1-16. (**Invited Lecture**)

- "Nonlinear Schroedinger Equation: A Basic Model of Optical Soliton Transmission", *Seminar Sains Matematik 2005*, Sekolah Sains dan Matematik, Universiti Malaysia Sabah, Kota Kinabalu (**Invited Lecture**)

- "The integrability of KdV equation via Kirillov-Konstant-Souriau group theoretical approach", *Proceedings of the First Int. Conf. on Maths. & Stats.*, Suwanda et al (eds.), Bandung (**Invited Lecture**).

(Originally being invited as **a keynote speaker** to present at the *Indonesian National Conference on Algebra*, ITB, Bandung, 25 May 2005) (2006), 1-12.

- Cited in Shaharir, M.Z. (2005), "*Kuliah Shaharir dalam Tabii Zarah Atom: Penjana Sains Matematik Baru dan Terserlahnya Alam Metafizik*", as "Sarjana Malaysia Pilihan yang ada Sumbangan dalam Bidang Mekanik Kuantum", pg 135e, Siri Catatan Kuliah PELANDOK 8, Pusat Pengajian Sains Matematik, FST, Universiti Kebangsaan Malaysia, Bangi, Selangor.

- "Feynman Integral via Concepts in Integrable Systems: Theory and Applications", *Proceedings of the Int. Conf. on Mathematics and the Natural Sciences, ITB Bandung, 29-30 Nov. 2006*.

Ismunandar et al (eds.), 5-13.

(
Plenary Lecture

)

- "Numerical solutions of the one-dimensional shallow water equations", (*submitted for proceedings publication of ICOMS2007, 28-29 May. 2007*)

(with Salemah Ismail et al.) (

Invited Expert Paper

)

- "Feynman Integral and the t Function", *Proceedings of the Int. Conf. on Mathematical Sciences, UKM, Bangi, 28-29 Nov. 2007*.

Abdul Ghafur et al (eds.), 671-679

(
Invited Expert Paper

)

- "Mathematical Modelling for Nonlinear Mechanism of Tsunami Waves Generation", *presented at the Int. Conf. on Mathematical Sciences, UKM, Bangi, 28-29 Nov. 2007*

preprint (with Nazeeruddin Yaacob, Norhafizah M.S.) (

Invited Expert Paper

)

- "Membudayakan Matematik Tambahan", *Prosiding Konvensyen Pendidikan Guru- Guru Matematik Tambahan Peringkat Negeri Sembilan Tahun 2007*,

6-8 August 2007,

Port Dickson. (

Invited Lecture

)

- "A Revival of Islamic Science: A Working Philosophy of a Mathematical Physicist", *Proceedings of the International Seminar on Islamic Science & Technology 2008*

, 18-19 March 2008, Kuala Lumpur. (

Invited Lecture

).

- "Fast Fourier Transform and Wavefront Approach for Seismic Modelling", *Seminar Kebangsaan Pengoptimuman Berangka dan Penyelidikan Operasi ke-2*, 13-14 Dec. 2008, Universiti Malaysia Terengganu, Kuala Terengganu. (

Invited Lecture

).

- "Kamiran Feynman dan Sistem Terkamir Lengkap: Suatu Kerangka Kerja Baru Matematik Fizik", *Seminar Pemikiran Fizik Semasa ASASI*, 18 April 2009, UKM, Bangi. (

Invited Lecture

).

<http://www.kesturi.net/archives/author/zainal-abdul-aziz>

- "Industrial Mathematics in the New Millennium", *Kolokium Jabatan Matematik/Statistik 2009*, jointly organized by the Fakulti Teknologi Maklumat Sains Kuantitatif, UiTM Terengganu and Persatuan Sains Matematik Malaysia (PERSAMA)

,
21 March 2009, UiTM, Dungun, Terengganu (

Invited Lecture

), 1- 6.

- "Sine-Gordon alike model for Rayleigh Wave Collision and Surface Displacement" *Proceedings of the Fourth Int. Conf. on Maths. & Stats.*, Universitas Malahayati, Bandar Lampung, Sumatera, 13-15 August 2009. (supposed to be presented as a

Keynote Invited Lecture

).

- "Hirota method, singularity analysis and multi-soliton solutions of physically significant nonlinear waves equations", *4th Seminar on Numerical Optimization & Operation Research 2010*

,
Jurnal Kalam Enterprise, Kuantan, 24-25

Sept. 2010 (

Invited Lecture

)

- Cited "tokoh mengimbangi matematik & fizik" in a student's (Nadia) final year project, Faculty of Education, UTMJB <http://mathed.utm.my/duniamatematik/index.php/tokoh-/502>

- "On the Importance of Industrial Mathematics: UTM Experience", *Workshop on the ICM-ICIAM Study on the "Educational Interfaces between Mathematics and Industry"*, University of Macau, Macau, 3-4 November 2011. (

Invited Talk

)

- Cited in research monograph by Shaharir Md Zain (2011), "Kritikan Teori Kenisbian & Teori Quantum" (*Critics on Relativity Theory & Quantum Theory*), Akademi Sains Islam Malaysia, Petaling Jaya.

- "Hirota Method, Sato Theory and Plucker Relations of KP and KdV Equations via Maya Diagrams", *International Conference on Financial Mathematics and Numerical Optimization (ICFMNO 2012)* , Legend Resort of Cherating, Kuantan, 31 May – 1 June 2012. (**Invited Talk**)

- "Review on monograph by Shaharir Mohammad Zain (2011) entitled "Kritikan Teori Kenisbian dan Teori Kuantum" (or *Critics on the Relativity Theory and Quantum Theory*), ASASI (Akademi Sains Islam), Petaling Jaya, KL", Perbadanan Perpustakaan Awam Selangor, Shah Alam, 11 March 2012. (

Invited Forum Reviewer

)

- *The Tenth Year Anniversary Celebration of INSPEM* (Mathematics Research Institute), UPM, Serdang; Mines Wellness Hotel, 10 April 2012. (

Invited Forum Panelist

)

- *Workshop on "Innovative Knowledge Transfer"* , Malaysian Mathematical Science Society (PERSAMA) and Ibnu Sina Institute for Fundamental Sciences Studies, UTM, 9 May 2012. (

Invited Forum Panelist

)

- "Stochastic Models of Natural Gas Prices " , *International Conference on Global Optimization*, University of Pandjajaran, Bandung, Indonesia, 4-6 Dec. 2012. (

Invited Speaker

)

- "Approximate analytic solution of KdV equation via new HAM", *International Conference on Numerical Optimization and Operations Research (ICNOOR-V)* , 26 – 28 June 2013, Universitas Abulyatama, Banda Aceh, Indonesia (

Invited Speaker

)

-

"Mathematics is Alive! Sharing some thoughts", *National Seminar 2013: "Best Practices : Representational, Reasoning and Assessment"* Empress Hotel, Sepang, Selangor, 9-11 May 2013. (

Invited Speaker

)

- **Member**, Subcommittee of Mathematical Application, International Scientific Committee: *International Conference on Mathematical Research, Education and Applications, ICMREA-UJEL 2013*, 21-23 Dec. 2013. Faculty of Economic Mathematics, University of Economics and Law, Vietnam National University, Ho Chi Minh City, 3 Quarter, LINH XUAN Ward, THU DUC District, HO CHI MINH City, VIET NAM

- **Evaluator**, FRGS proposal : Phase 2/2013. Ministry of Education Malaysia; 6-10 Oct. 2013, UTEM Melaka.

- "On the Importance of Industrial Mathematics: UTM-CIAM Experience", *International Seminar on Mathematics in Industry 2013 (ISMI2013)*, UTM Johor Bahru, 27-28 Nov. 2013. (

Invited Speaker

)

-
"Approximate Analytical Solutions Of Magnetohydrodynamics Rotating Flow Of Third Grade Fluid In Porous Space", *The 3rd International Conference on Global Optimization and Its Applications* (ICOGOIA 2014), Yogyakarta, 10-12 September 2014. (**Plenary Speaker**

)

- Organizational Meeting for the Formalization & Launch of the Asia-Pacific Consortium of Mathematics-for-Industry (APCMfi), ANU Canberra, Australia; 31 March - 3 April 2014 (**Invited Participant**

)

- **Interim Board Member**, Asia Pacific Consortium of Mathematics for Industry (APCMfi) 2014.

- *Forum Mathematics for Industry 2014: "Applications + Practical Conceptualization + Mathematics = fruitful Innovations"*; Institute of Mathematics for Industry, Kyushu University, Fukuoka, Japan. 27-31 Oct. 2014. (**Invited Speaker**); title: "UTM-CIAM: Transformation & Beyond Malaysian Mathematics for Industry".

- *Simposium Kebangsaan Sains Matematik ke 22: "Penguatan Penyelidikan dan Kolaborasi Sains Matematik di Malaysia"*, Institut Sains Matematik, Universiti Malaya & PERSAMA, Grand Blue Wave, Shah Alam. 24-26 Nov 2014. (

Keynote Speaker

); title: "Industrial Mathematics: An Enabling Technology for Malaysian Industries"

- **Evaluator**, FRGS proposal: Phase 1/2014. Ministry of Education Malaysia; 6-8 May 2014, MMU Cyberjaya.

- *Minisymposium APCMfi (Asia Pacific Consortium of Mathematics for Industry) session for*

ICIAM 2015 (International Congress on Industrial & Applied Mathematics 2015) , 10 -14 August 2015, Beijing, China. (

Invited Speaker

); title: "The Dawn of Malaysian Mathematics in Industry".

- "UTM-CIAM: Pelopor Matematik dalam Industri", *National Seminar on Mathematics in Industry 2014, AISMM-UTMCIAM* ; 3 June 2014, UTM Johor Bahru. (

Invited Speaker

)

- **Member**, Panel of Evaluators, *Seminar on Research Findings under MOE FRGS 2011*, Ministry of Education, Hotel Royale Resort & Spa, Seremban. 2 October 2014 & Jabatan Pengajian Tinggi, MOE, Presint 5, Putrajaya, 13 November 2014.

- IMI, Kyushu University, Japan meeting & conference in conjunction of IMI Australian branch launching at La Trobe University, Melbourne, Australia, 12-13 March 2015. (**Invited Speaker**

)

SPORTS

- Representing **Mathematics Dept. and Science Faculty in Table-Tennis** (Double: Runner-up inter-Faculty competition, 1998; Champion inter-Faculty, 1999; for record's sake we were always the top three in inter-Faculty Sports till 2005, third 2012 championship).

- Representing **Mathematics Dept. and Science Faculty in Volley Ball** (since 1998), **Bowling** (2008, 2009)

- Representing **UTM at the "Kejohanan Ping Pong Melayu Johor Bahru"**, Dewan Kenanga, Tampoi, Johor. 16/3/02.

- Representing **UTM in Table-Tennis (Double) at the Sukan Staf Antara Universiti** ke

28, UMS Sabah 2003, ke 30, UM KL 2005, and ke 32 UNIMAP Perlis 2007, and ke 33 Universiti Malaysia Sarawak, Kuching, 15-20 June 2008.

COMMUNITY SERVICES

- **Committee member (Secretary)** - Surau Al-Kautsar, Jalan Belibis/Undan, Taman Perling, Johor Bahru. 2008 - 2010, 2011 - 2013.
- **Committee member**, KRT (Neighbourhood Watch Programme) Jalan Belibis/Undan, Taman Perling, Johor Bahru. 2010 - 2012.
- **Interim Committee member**, Akademi Sains Matematik Malaysia (ASMM), Dec 2010.
- **Exco Member**, Council of Head of Mathematics Department & Professors of Mathematics, Malaysia, Dec 2010.
- **Exco Member**, Akademi Ilmuan Sains Matematik Malaysia (AISMM) (or Malaysian Academy of Mathematical Scientists/ MAMS), 10 Feb. 2012-.
- **Member**, UTM Community Outreach in Mathematical Sciences (2013-)
- **Member**, Working Committee for UTM Scientists' Programme with Nobel Agenda (2013-2015)
- **Committee member (Secretary)** - Surau Al-Kautsar, Jalan Belibis-Undan, Taman Perling, Johor Bahru. 2014 - 2016.

CURRENT GENERAL READING:

- "Interpretation of the Meanings of THE NOBLE QUR'AN", (1996); Muhammad Tai-ud-Din Al-Hilali & Muhammad Muhsin Khan, Dar-us-Salam Publications, Riyadh, Saudi Arabia.
- "Doktor Umum: memoir Tun Dr Mahathir Mohamad", (2012); Mahathir Mohamad, MPH Group Publishing Sdn Bhd, Petaling Jaya, Malaysia.
- "Portrait of a Thousand Smiles/ Tan Sri Dato' Seri Salleh Mohd Nor", (2010); Salleh Mohd

Nor, Academy of Sciences Malaysia, Kuala Lumpur, Malaysia

MOTTO: *Making my life simply my own masterpiece.*

- *Based on hard work with dedication, truthfulness and humility.*
- *Always with patience and passion.*
- *Moga hidup-matiku dirahmati ALLAH SWT.*

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