CURRICULUM VITAE

PERSONAL AND CONTACT DETAILS

Full Name	: Andrew Gratien Johnpillai
Official Address (Mailing Address)	: Department of Mathematics Eastern University Chenkalady, 30350 Sri Lanka
Academic Position	: Professor in Mathematics
Nationality	: Sri Lankan Tamil
Date of Birth	: 9th November 1966
Marital Status	: Married
Telephone	: 0094 65 2240753 (Office)
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ALMA MATER

1973 – 1985: St. Michael's College Batticaloa, Sri Lanka.

HIGHER EDUCATION

2009 - 2010: Post doctoral Fellow, International Institute for Symmetry Analysis and Mathematical Modelling (IISAMM), Department of Mathematical Sciences, North-West University, Mafikeng Campus, South Africa.

2000 - 2002: PhD Student at University of the Witwatersrand, Johannesburg, South Africa Thesis Title: "Approximate Symmetries, Conservation Laws and The Inverse Problems", awarded 20th June 2002.

1998 - 1999:   MSc Student at University of the Witwatersrand, Johannesburg, South Africa Thesis Title: "The Index of Fredholm Complexes in Banach Spaces", awarded 9th December 1999.

1988 - 1992:   BSc (Hon) Student (Second Class Upper Division) in Pure and Applied Mathematics, Eastern University, Sri Lanka, awarded 1st December 1992.

EMPLOYMENT

2016 - Present   : Professor in Mathematics, Department of Mathematics, Eastern University Sri Lanka.
2008 - 2016   :   Senior Lecturer (Gr. I), Department of Mathematics, Eastern University Sri Lanka.
2002 - 2008   :   Senior Lecturer (Gr. II), Department of Mathematics, Eastern University Sri Lanka.
2000 - 2002   :   Lecturer, Department of Mathematics, Eastern University, Sri Lanka.
1996 - 2000   :   Lecturer (Probationary), Department of Mathematics, Eastern University, Sri Lanka.
1995 - 1996   :   Temporary Assistant Lecturer, Department of Mathematics, Eastern University, Sri Lanka.
1994 - 1995   :   Temporary Tutor, Department of Mathematics, Eastern University, Sri Lanka.

HONOURS AND AWARDS

2022   : Vice Chancellor's Award for Output Based Research, Eastern University, Sri Lanka.

2021   : Vice Chancellor's Award for Output Based Research, Eastern University, Sri Lanka.

2020   : Vice Chancellor's Award for Output Based Research, Eastern University, Sri Lanka.

2022   : Meritorious Service Awards, Eastern University, Sri Lanka.

2017   : President's Award for Scientific Publication (2015) by NRC (National Research Council), for the paper: F. M. Mahomed, A. G. Johnpillai and A. Aslam, Communications in Nonlinear Science and Numerical Simulation (2015), 25(1-3), 84-93.

2015   : President's Award for Scientific Publication (2013) by NRC (National Research Council), for the papers: A.G. Johnpillai and F. M. Mahomed, Applied Mathematics and Information Sciences (2013), 7(6), 2355-2359; and A. H. Bokhari, A. G. Johnpillai, A. H. Kara, F. M. Mahomed and F. D. Zaman, International Journal of Theoretical Physics (2013), 52(10), 3534-3542.

2014 : President's Award for Scientific Publication (2012) by NRC (National Research Council), for the paper: A.G. Johnpillai and C. M. Khalique and F. M. Mahomed, Nonlinear Analysis A: Theory, Methods & Applications (2012), 75(1), 30-36.

2014 : President's Award for Scientific Publication (2011) by NRC (National Research Council), for the paper: A.G. Johnpillai and C. M. Khalique, Communications in Nonlinear Science and Numerical Simulation (2011), 16(8), 3081-3089.

2014 : President's Award for Scientific Publication (2008) by NRC (National Research Council), for the papers: A.G. Johnpillai, A.H. Kara and F. M. Mahomed, J. Comput. Appl. Math. (2009), 223(1), 508-518; and O.O. Vaneeva, A.G. Johnpillai, R.O. Popovych and C.Sophocleous, Appl. Math. Lett. (2008), 21(3) 248-253.

2014 : President's Award for Scientific Publication (2007) by NRC (National Research Council), for the paper: O.O. Vaneeva, A.G. Johnpillai, R.O. Popovych and C. Sophocleous, J. Math. Anal. Appl. (2007) 330(2), 1363-1386.

2014 : NSF (National Science Foundation) International Travel Grant to present a scientific paper at the International Conference "Symmetries, Differential Equations and Applications II (SDEA II): Sesquicentennial of The Presentation of Maxwell's Theory of Electromagnetism, Islamabad, Pakistan, 27-30 January, 2014.

2012 : NSF (National Science Foundation) International Travel Grant to present a scientific paper at the International Conference "Symmetries, Differential Equations and Applications: Galois Bicentenary (SDEA 2012)" Johannesburg, South Africa, 23-27 January, 2012.

2009 - 2010 : Post doctoral Fellowship, International Institute for Symmetry Analysis and Mathematical Modelling (IISAMM), Department of Mathematical Sciences, North-West University, Mafikeng Campus, South Africa.

2004 : NSF (National Science Foundation) International Travel Grant to present a scientific paper at the 10th International Conference In MOdern GRoup ANalysis, MOGRAN X, Larnaca, Cyprus, 24-31 October, 2004.

2000 - 2002 : Postgraduate Merit Award, University of the Witwatersrand, Johannesburg, South Africa.

2001 : The Bradlow Postgraduate Award, University of the Witwatersrand, Johannesburg, South Africa.

2000   : The ASA Educational Trust Postgraduate Award, University of the Witwatersrand, Johannesburg, South Africa.

1988 - 1992 : "Mahapola Higher Education Scholarship" awarded by the Mahapola Higher Education Scholarship Trust Fund, Sri Lanka to study at Eastern University, Sri Lanka.

MEMBERSHIP OF PROFESSIONAL SOCIETIES

(1) Sri Lanka Association for the Advancement of Science (SLAAS).

(2) General President, Eastern Chapter of the Sri Lanka Association for the Advancement of Science (SLAAS).

TEACHING EXPERIENCE AND ACTIVITIES

Eastern University, Sri Lanka

(1) **Undergraduate Courses**

First Year: AM 104 - Differential Equations and Fourier Series, PM 107 - Theory of Series, MT 1022 – Ordinary Differential Equations, and MT 1232 – Mathematical Methods.

Second Year: PM 201 - Algebra I (Vector Space and Matrices), PM 202 - Analysis II (Metric Space), PM 204 - Analysis III (Riemann Integral and Sequence and Series of Functions), PM 203 - Algebra II (Eigen Space and Quadratic Forms), and MT 2252 – Riemann-Stieltjes Integral and Sequence and Series of Functions.

Third Year: PM 302 - Complex Analysis.

Fourth Year (Special Degree in Mathematics): MT 4044 - Partial Differential Equations, MT 4173 - Lie Group Analysis of Ordinary Differential Equations, MT 4183 - Lie Group Analysis of Partial Differential Equations, and MTS 12 - Functions of Several Variables and Applications.

(2) **Postgraduate Courses**

Masters of Science Education: MSED 2543 - Advanced Calculus, and MSED 2545 Symmetry Methods for Differential Equations.

South Eastern University of Sri Lanka

Visiting Lecturer: courses taught:
Second Year: Ordinary and Partial Differential Equations.

Third Year: Analysis III (Infinite Series and Functions of Several Variables).

CONFERENCES/WORKSHOP

(1) The International Conference in "Symmetries, Differential Equations and Applications II (SDEA II): Sesquicentennial of the Presentation of James Clerk Maxwell's Theory of Electromagnetism", School of Natural Sciences, National University of Sciences and Technology, Islamabad, Pakistan, 27 - 30 January, 2014.
Presented a paper on "Travelling wave group-invariant solutions and conservation laws for θ-equation".

(2) The International Conference in "Symmetries, Differential Equations and Applications: Galois Bicentenary (SDEA 2012)", School of Computational and Applied Mathematics, University of the Witwatersrand, Johannesburg, South Africa, 23-27 January, 2012.
Presented a paper on "Lie and Backlund Linearization of a Class of Lienard-Type Equations".

(3) The 62nd Annual Scientific Sessions, Sri Lanka Association for the Advancement of Science (SLAAS), 2006.
Presented papers on "Lie Group Analysis of Nonlinear Ordinary Differential Equations" and "Symmetry Analysis of a Variable Coefficient Nonlinear Diffusion Equation".

(4) Workshop in Group Analysis of Differential Equations – Integrable Systems, Department of Mathematics and Statistics, University of Cyprus, 27th October 2005.
Presented a talk on "Nonclassical Potential Symmetries of Partial Differential Equations".

(5) The 10th International Conference in Modern Group Analysis, MOGRAN X Larnaca, Cyprus, 24 – 31 October, 2004.
Presented a paper on "Nonclassical Potential Symmetries and Exact Solutions of Partial Differential Equations".

(6) Workshop to commemorate 60th anniversary of Professor Peter Leach, University of the Witwatersrand, Johannesburg, South Africa, 4th May 2002.

(7) SAMS (South African Mathematical Society) Conference, Durban-Westville, South Africa, 7-9 November 2001.
Presented a paper on "Variational Formulation of Approximate Symmetries and Conservation Laws".

(8) 3rd Hanno-Rund Conference on Differential Equations and Applications, University of Natal, Durban, South Africa, 13-16 September, 2000.

RESEARCH PUBLICATIONS

(1) A. G. Johnpillai and A. H. Kara (2001) Variational Formulation of Approximate Symmetries and Conservation Laws, **International Journal of Theoretical Physics, 40(8), 1501-1509**.

(2) A. G. Johnpillai and A. H. Kara (2001) Variational Formulation of Approximate Symmetries and Conservation Laws, in Proceedings of **44th Annual Conference of the South African Mathematical Society, University of Durban-Westville, 7-9 November 2001, Book of Abstracts, p 54**.

(3) A. G. Johnpillai and A. H. Kara (2002) Nonclassical Potential Symmetry Generators of Differential Equations, **Nonlinear Dynamics, 30(2), 167-177**.

(4) A. G. Johnpillai (2004) Applications of Nonclassical Potential Symmetries, in Proceedings of **3rd Annual Research Session (ARS), 2004, Eastern University, Sri Lanka, 84-95**.

(5) A. G. Johnpillai and A. H. Kara (2005) Nonclassical Potential Symmetries and Exact Solutions of Partial Differential Equations, in Proceedings of The **10th International Conference In Modern Group Analysis, MOGRAN X, [Editors: N. H. Ibragimov, C. Sophocleous, and P. A. Damianou], (Larnaca, Cyprus, 2004), 114-119**.

(6) A. G. Johnpillai, A. H. Kara, and F. M. Mohamed (2006) A Basis of Approximate Conservation Laws for PDEs with a Small Parameter, **International Journal of Non-Linear Mechanics, 41(6-7), 830-837**.

(7) A. G. Johnpillai (2006) Lie Group Analysis of Nonlinear Ordinary Differential Equations, in Proceedings 1 of the **62nd Annual Scientific Sessions, Sri Lanka Association for the Advancement of Science (SLAAS), 91-92**.

(8) A. G. Johnpillai (2006) Symmetry Analysis of a Variable Coefficient Nonlinear Diffusion Equation, in Proceedings 1 of the **62nd Annual Scientific Sessions, Sri Lanka Association for the Advancement of Science (SLAAS), p 92**.

(9) A. G. Johnpillai and A. H. Kara (2007) On the Nonclassical Potential Symmetries and Exact Solutions of an Evolution Equation, in Proceedings of the **5th Annual Research Session (ARS) 2006 [Editor: A. G. Johnpillai], Eastern University, Sri Lanka, 60-65**.

(10) T. Ealasukanthan and A. G. Johnpillai (2007) Integration of Nonlinear Ordinary Differential Equations Using Lie Point Symmetries, in Proceedings of the **5th Annual Research Session (ARS) 2006 [Editor: A. G. Johnpillai], Eastern University, Sri Lanka, 42-50**.

(11) O. O. Vaneeva, A. G. Johnpillai, R. O. Popovych and C. Sophocleous (2007) Enhanced Group Analysis and Conservation Laws of Variable Coefficient Reaction-Diffusion Equations with Power Nonlinearities, **Journal of Mathematical Analysis and Applications, 330(2), 1363-1386**.

(12) O. O. Vaneeva, A. G. Johnpillai, R. O. Popovych and C. Sophocleous (2008) Group Analysis of a Nonlinear Fin Equations, **Applied Mathematics Letters, 21(3), 248-253**.

(13) A. G. Johnpillai, A. H. Kara and F. M. Mahomed (2009) Approximate Noether-Type Symmetries and Conservation Laws via Partial Lagrangians for PDEs with a Small Parameter, **Journal of Computational and Applied Mathematics, 223(1), 508-518**.

(14) A. G. Johnpillai, A. H. Kara and F. M. Mahomed (2010) Conservation Laws of a Nonlinear (1+1) Wave Equation, **Nonlinear Analysis: Real World Applications, 11(4), 2237-2242**.

(15) A. G. Johnpillai, A. H. Kara and F. M. Mahomed (2010) Conservation Laws of Some Non-Variational Perturbed PDEs via a Partial Variational Approach, **International Journal of Modern Physics B, 24(22), 4253-4267**.

(16) A. G. Johnpillai, C. M. Khalique and A. Biswas (2010) Exact Solutions of KdV Equation with Time-Dependent Coefficients, **Applied Mathematics and Computation, 216(10), 3114-3119**.

(17) A. G. Johnpillai and C. M. Khalique (2010) Group Analysis of KdV Equation with Time Dependent Coefficients, **Applied Mathematics and Computation, 216(12), 3761-3771**.

(18) A. G. Johnpillai and C. M. Khalique (2011) Lie Group Classification and Invariant Solutions of mKdV Equation with Time-Dependent Coefficients, **Communications in Nonlinear Science and Numerical Simulation, 16(3), 1207-1215**.

(19) A. G. Johnpillai and C. M. Khalique (2011) Conservation Laws of KdV Equation with Time-Dependent Coefficients, **Communications in Nonlinear Science and Numerical Simulation, 16(8), 3081-3089**.

(20) A. G. Johnpillai and C. M. Khalique (2011) Variational Approaches to Conservation Laws for a Nonlinear Evolution Equation with Time-Dependent Coefficients, **Quaestiones Mathematicae, 34(2), 235-245**.

(21) A. G. Johnpillai, C. M. Khalique and A. Biswas (2011) Exact Solutions of the mKdV Equation with Time-Dependent Coefficients, **Mathematical Communications, 16(2), 509-518**.

(22) A. G. Johnpillai, A. H. Kara and A. Biswas (2011) Symmetry solutions and reductions of a class of generalized (2+1)-dimensional Zakharov-Kuznetsov equation, **International Journal of Nonlinear Sciences and Numerical Simulation, 12(1-8), 45-50**.

(23) L**.** D. Moleleki, **A. G. Johnpillai** and C. M. Khalique (2012) Symmetry reductions and exact solutions of a variable coefficient (2+1)-Zakharov-Kuznetsov equation, **Mathematical and Computational Applications, 17(2), 132-139**.

(24) A. G. Johnpillai, C. M. Khalique and F. M. Mahomed (2012) Lie point symmetries, partial Noether operators and first integrals of the Painleve-Gambier equations, **Nonlinear Analysis A: Theory, Methods & Applications, 75(1), 30-36**.

(25) A. G. Johnpillai, Ahmet Yildirim and A. Biswas (2012) Chiral Solitons with Bohm Potential by Lie Group Analysis and Traveling Wave Hypothesis, **Romanian Journal of Physics, 57(3–4), 545–554**.

(26) A. H. Bokhari, A. G. Johnpillai, F. M. Mahomed and F. D. Zaman (2012) Approximate conservation laws of nonlinear perturbed heat and wave equations, **Nonlinear Analysis: Real World Applications**, **13(6), 2823-2829**.

(27) A. Biswas, G. Ebadi, M. Fessak, A. G. Johnpillai, S. Johnson and E. V. Krishnan and A. Yildirim (2012) Solutions of the perturbed Klein-Gordon equations, **Iranian Journal of Science and Technology Transaction A - Science, 36 (A4), 431-452**.

(28) A. G. Johnpillai, C. M. Khalique and F. M. Mahomed (2012) Lie and Riccati Linearization of a Class of Lienard Type Equations, **Journal of Applied Mathematics, Volume 2012, Article ID 171205, 8 pages**.

(29) A. G. Johnpillai, A. H. Kara and A. Biswas (2013) Symmetry reduction, exact group-invariant solutions and conservation laws of the Benjamin-Bona Mahoney equation, **Applied Mathematics Letters, 26(3), 376-381**.

(30) A. G. Johnpillai, A. H. Kara and A. Biswas (2013) Exact Group Invariant Solutions and Conservation Laws of Complex Modified KdV Equation, **Zeitschrift für Naturforschung A, 68(8/9), 510-514**.

(31) A. H. Bokhari, A. G. Johnpillai, A. H. Kara, F. M. Mahomed and F. D. Zaman (2013) Classification of Static Spherically Symmetric Spacetimes by Noether Symmetries, **International Journal of Theoretical Physics, 52(10), 3534-3542**.

(32) A. G. Johnpillai and F. M. Mahomed (2013) On Linearization by Generalized Sundman Transformations of a Class of Liénard Type Equations and Its

Generalization, **Applied Mathematics & Information Sciences, 7(6), 2355-2359**.

(33) A. G. Johnpillai and C. M. Khalique (2013) Symmetry reductions, exact solutions and conservation laws of a modified Hunter-Saxton equation, **Abstract and Applied Analysis, 1-5**.

(34) A. G. Johnpillai and C. M. Khalique (2014) Symmetry solutions and conservation laws for Sharma-Tasso-Olver equation, **ScienceAsia, 40(6), 451-458**.

(35) A. G. Johnpillai, F. M. Mahomed and S. Abbasbandy (2014) Fundamental solution via invariant approach for a brain tumor model and its extensions, **Zeitschrift für Naturforschung A, 69a(12), 725-732**.

(36) F. M. Mahomed, A. G. Johnpillai and A. Aslam (2015) Symmetry classification and joint invariants for the scalar linear (1+1) elliptic equation, **Communications in Nonlinear Science and Numerical Simulation, 25(1-3), 84-93.**

(37) A. G. Johnpillai, K. S. Mahomed, C. Harley and F. M. Mahomed (2016) Noether symmetry analysis of the dynamic Euler-Bernoulli beam equation, **Zeitschrift für Naturforschung A, 71(5)a, 447-456**.

(38) R. Naz and A. G. Johnpillai (2018) Exact solutions via invariant approach for Black-Scholes model with time-dependent parameters, **Mathematical Methods in the Applied Sciences, 41(12), 4417-4427**.

(39) K. Sakkaravarthi, A. G. Johnpillai, A. Durga Devi, T. Kanna and M. Lakshmanan (2018) Lie symmetry analysis and group invariant solutions of the nonlinear Helmholtz equation, **Applied Mathematics and Computation, 331, 457-472**.

(40) A. G. Johnpillai, C. M. Khalique and F. M. Mahomed (2019) Travelling wave group-invariant solutions and conservation laws for θ-equation, **Malaysian Journal of Mathematical Sciences, 13(1), 13-29**.

(41) S. Jamal and A. G. Johnpillai (2020) Constitutive thermal laws and the exact solutions of Timoshenko, **Indian Journal of Physics, 94(2), 233-242**.

(42) S. Jamal and A. G. Johnpillai (2020) Fourth-Order Pattern Forming PDEs: Partial and Approximate Symmetries, **Mathematical Modelling and Analysis, 25(2), 198-207**.

(43) D. I. A. Saparamadu and A. G. Johnpillai (2021) LINEARIZING INVERTIBLE POINT TRANSFORMATIONS AND APPLICATION TO A NONLINEAR THIRD-ORDER ORDINARY DIFFERENTIAL EQUATION,

in Proceedings of **International Conference on Mathematics and Mathematics Education (ICMME) Vol. 2, PGIS, University of Peradeniya, p 1**.

(44) A. G. Johnpillai and F. M. Mahomed (2022) Closed-form solutions via the invariant approach for one-factor commodity models, **Quaestiones Mathematicae, 45(10): 1545–1558**.

(45) Karabo Plaatjie, Tanki Motsepa, A. G. Johnpillai, Chaudry Masood Khalique (2022) Symmetry solutions and conserved vectors of the two-dimensional Korteweg-de Vries equation, **International Journal of Applied and Computational Mathematics, 8:227**.

(46) W. M. R. D. Weerakoon and A. G. Johnpillai (2023) Linearizing invertible point transformation for a nonlinear second-order ordinary differential equation arising in epidemiology, in Proceedings of **ARS-FOS-2023, Eastern University, Sri Lanka, p 12**.

(47) B. Gwaxa, S. Jamal and A. G. Johnpillai (2023) On the conservation laws, Lie symmetry analysis and power series solutions of a class of third-order polynomial evolution equations, **Arabian Journal of Mathematics, 12:553-564**.

(48) B. Gwaxa, S. Jamal and A. G. Johnpillai (2023) On the Optimal System and series Solutions of Fifth-Order Fujimoto-Watanabe Equations, **Malaysian Journal of Mathematical Sciences, 17(4), 557-573**.

(49) W. M. R. D. Weerakoon and A. G. Johnpillai (2024) Symmetry reduction and exact solution of an epidemiological model, in Proceedings of **Second International Conference on Multidisciplinary Research (ICMR), Eastern University, Sri Lanka**, p 4.

(50) R. Naz, A. G. Johnpillai and F. M. Mahomed (2024) The exact solutions of a diffusive SIR model via symmetry groups, **Journal of Mathematics, Volume 2024, Article ID 4598831, 14 pages**.

(51) R. Naz, A. G. Johnpillai and F. M. Mahomed (2024) CLOSED-FORM SOLUTIONS FOR A REACTION-DIFFUSION SIR MODEL WITH DIFFERENT DIFFUSION COEFFICIENTS. (**to appear in Discrete and Continuous Dynamical Systems Series S**).

(52) B. Gwaxa, S. Jamal and A. G. Johnpillai (2024) Conserved vectors and symmetry invariant solutions to polynomial wave models. (**to appear in Journal of Applied Nonlinear Dynamics**).

RESEARCH SUPERVISION

(a) **Postgraduate Degrees**

(1) S. Thilaganathan, Department of Physical Science, Faculty of Applied Science, University of Vavuniya. PhD in Mathematics (In Progress).

(2) Mr. T. Ealasukanthan, MSc in Industrial Mathematics at Postgraduate Institute of Science (PGIS), University of Peradeniya, Sri Lanka. Completed 18th September, 2011.
Title of the research project is "Approximate First Integrals of Perturbed Ordinary Differential Equations".

(b) **Honours Fourth Year Research Projects**

(1) Linearizing Invertible Point Transformations for Nonlinear Second-Order Ordinary Differential Equations Arising in Epidemiology and Diffusion Process (2024).

(2) Lie Symmetry Group Methods of Linearization of Nonlinear Third-order Ordinary Differential Equations (2019).

(3) Lie Symmetry Group Methods of Linearization of Nonlinear Second-order Ordinary Differential Equations (2017).

(4) Exact Group-Invariant Solutions of Time Dependent Variable Coefficients KdV Equation (2011).

(5) Symmetry Solutions of Diffusion Equations (2007).

(6) Lie Group Method of Integration of Nonlinear Ordinary Differential Equations (2005).

External Examiner of Postgraduate Thesis/Dissertation of Universities

(a) PhD thesis, Faculty of Science, University of Colombo (2021).
(b) PhD thesis, School of Mathematics, University of the Witwatersrand, Johannesburg, South Africa (2013, 2018, 2021 and 2023).
(c) MSc dissertation, School of Mathematics, University of the Witwatersrand, Johannesburg, South Africa (2013, 2016).
(d) PhD thesis, Department of Mathematical Sciences, Faculty of Natural and Agricultural Science, North-West University, Mafikeng Campus, South Africa (2022).

(e) MSc dissertation, Department of Mathematical Sciences, Faculty of Natural and Agricultural Science, North-West University, Mafikeng Campus, South Africa (2016, 2017, 2020 and 2022).

(f) MSc dissertation, Faculty of Science, University of Johannesburg, South Africa (2021).

REVIEWER FOR JOURNALS/PROCEEDINGS

(1) Proceedings of the 10th International Conference in Modern GRoup ANalysis, MOGRAN X, [Editors N. H. Ibragimov, C. Sophocleous, and P. A. Damianou], (Larnaca, Cyprus, 2004).

(2) Applied Mathematics Letters.

(3) Nonlinear Dynamics.

(4) Journal of Porous Medium.

(5) Journal of Nonlinear Analysis Series B: Real World Applications.

(6) Quaestiones Mathematicae.

(7) Mathematical and Computer Modelling.

(8) Applied Mathematics and Computation.

(9) International Journal of Nonlinear Sciences and Numerical Simulation.

(10) Zeitschrift für Naturforschung A - Physical Sciences.

(11) Acta Mathematica Scientia.

(12) Applied Mathematics and Information Sciences.

(13) Mathematical Problems in Engineering.

(14) Abstract and Applied Analysis.

(15) IMA Journal of Applied Mathematics.

(16) Modern Physics Letters B.

(17) Discrete and continuous dynamical systems - Series S.

(18) Advances in Mathematical Physics.

(19) Journal of Differential Equations.

(20) Journal of Ocean Engineering and Science.

(21) Mathematical Methods in the Applied Sciences.

(22) Quaestiones Mathematicae.

(23) Computation.

(24) Applicable Analysis and Discrete Mathematics.

(25) Journal of Thermal Analysis and Calorimetry.

(26) Waves in Random and Complex Media.

(27) Journal of Applied Analysis.

(28) International Journal of Applied and Computational Mathematics.

(29) International Journal of Dynamical Systems and Differential Equations.

(30) Symmetry.

(31) Mathematics.

(32) International Journal of Biomathematics.

(33) International Journal of Modern Physics B.

(34) Arabian Journal of Mathematics.

(35) Heliyon.

(36) Journal of Mathematics and Computer.

(37) Examples and Counter Examples.

COLLABORATIVE SCIENTIFIC RESEARCH VISIT

(1) Professor F. M. Mahomed, Centre of Excellence in Mathematical and Statistical Sciences, Faculty of Science, University of the Witwatersrand, Wits 2050, Johannesburg, South Africa, from 24-9-2017 to 6-10-2017.

(2) Professor M. Lakshmanan, Centre for Nonlinear Dynamics, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India, from 7-2-2016 to 13-2-2016.

(3) Professor F. M. Mahomed, Centre for Differential Equations, Continuum Mechanics and Applications, School of Computational and Applied Mathematics, University of the Witwatersrand, Wits 2050, Johannesburg, South Africa, from 23-1-2012 to 27-1-2012.

(4) Professor F. M. Mahomed, Centre for Differential Equations, Continuum Mechanics and Applications, School of Computational and Applied Mathematics, University of the Witwatersrand, Wits 2050, Johannesburg, South Africa, from 15-9-2010 to 18-9-2010.

(5) Professor Chaudry. M. Khalique, International Institute for Symmetry Analysis and Mathematical Modelling (IISAMM), Department of Mathematical Sciences, North-West University, Mafikeng Campus, South Africa, from October 2009 to October, 2010.

(6) Professor Christodoulos Sophocleous, Department of Mathematics and Statistics, University of Cyprus, from 21st October 2005 until 6th November 2005.

Seminar/Invited Lectures

(a) **A. G Johnpillai**, Linearizing Lie and Riccati transformations for a class of Liénard type equations and exact solutions, APCTP (Seminar), Asia Pacific Center for Theoretical Physics (APCTP), **Pohang, SOUTH KOREA**, 16 November 2021.

(b) **Invited Lecture**: **A. G Johnpillai**, Lagrangian and partial Lagrangian approaches to conservation laws for a time dependent coefficients nonlinear evolution equation, International Conference on the Numerical and Analytical Techniques in Differential Equations (ICNATDE-2021), November 16 – 18, 2021 (An Online Event), Department of Mathematics, Ramanujan School of Mathematical Sciences, Pondicherry University, Puducherry, India.

REVIEWER FOR NATIONAL RESEARCH FOUNDATION (NRF) SCIENTISTS RATING, SOUTH AFRICA

Peer Reviewer for the Research Ratings of Researchers by the National Research Foundation (NRF), South Africa (2018, 2020, 2021, 2022, and 2023).

Contributions to Department/Faculty/University

(1) Senate member, EUSL.
(2) Faculty Board of Science, EUSL.
(3) Member of Board of Study of Sciences, Faculty of Graduate Studies, EUSL.
(4) Senate nominee for the Management Committee, Staff Development Centre, Eastern University, Sri Lanka.
(5) Member of the Research Council, EUSL.
(6) Member of Curriculum Development Committee, Faculty of Science, EUSL.
(7) Member of Research Development Committee, Faculty of Science, EUSL.
(8) Member of Higher Degree Committee, Faculty of Science, EUSL.
(9) Activity Coordinator 2, AHEAD Program: ELTA-ELSE, Faculty Development Project.
(10) Team Leader Criterion 5 – Teaching and Learning, Programme Review, Faculty of Science.
(11) Team Leader Criterion 4 – Teaching-Learning, SER Writing Institutional Review, EUSL.
(12) Evaluation Panel member for promotion to the Post of Senior Lecturer Gr. I, Faculty of Science and Faculty of Arts & Culture.
(13) Examination Disciplinary Committee, Faculty of Science & Faculty of Technology.
(14) Mentor for undergraduate students, Faculty of Science.
(15) Editor-in-Chief, ARS 2021, Faculty of Science.
(16) Editor-in-Chief, ARS 2022, Faculty of Science.
(17) Resource Person for Probationary Academic Staff Induction Programme – 2022.
(18) Resource Person for "Guru Sisu Nena Paura" Teachers' and Students' Programme, Ministry of Education.
(19) Editor, Journal of Science, Faculty of Science, Eastern University, Sri Lanka.
(20) Editorial Panel member of International Conference on Multidisciplinary Research (ICMR – 2023), EUSL.
(21) Editor, Sri Lanka Journal of Multi-Disciplinary Research (SLJMR), EUSL.
(22) Internal Reviewer for Internal Review, EUSL.
(23) Chairman/Annual Research Session (ARS-FOS-2023).
(24) General President, Eastern Chapter of the Sri Lanka Association for the Advancement of Science (SLAAS) (2023).
(25) Chairman/International Conference on Multidisciplinary Research (ICMR-2024).
(26) Member of Sports Advisory Board of the Eastern University, Sri Lanka.
(27) Student Counsellor, Faculty of Science, Eastern University, Sri Lanka.
(28) Coordinator/Optional Courses and Core Courses, Faculty of Science.
(29) Member of the Local Organizing Committee of the International Conference on

Mathematical Modelling which was organized by the Department of Mathematics, University of Colombo - 2015.

(30) Member of the Progress Review Committee on Corporate Plan, Faculty of Science, EUSL.
(31) Member of University Higher Degree Committee, Eastern University, Sri Lanka.
(32) Head of the Department of Mathematics, Eastern University, Sri Lanka.
(33) Member of the Editorial Committee of the International Conference EUSL (ICE – 2014).
(34) Deputy Coordinator for Activity 3 of the Quality Innovation Grant (QIG) of BSc. (General) study programme, Eastern University, Sri Lanka.
(35) Senior Student Counsellor, Eastern University, Sri Lanka.
(36) Member of the Organizing Committee of the Annual Research Session (ARS), Eastern University, Sri Lanka.
(37) Member of the Organizing Committee of the Annual Research Session (ARS), Faculty of Science, Eastern University, Sri Lanka.
(38) Coordinator Career Guidance, Faculty of Science, Eastern University, Sri Lanka.
(39) Senior Treasurer, Students' Union, Faculty of Science, Eastern University, Sri Lanka.
(40) Member of Curriculum Evaluation Committee, Eastern University, Sri Lanka.
(41) Senate nominee for Campus Board, Trincomalee Campus.
(42) Coordinator and Editor of the Book of Abstracts and Proceedings of the 5th Annual Research Session (ARS) 2006, Eastern University, Sri Lanka.
(43) Faculty of Science Representative to the Quality Assurance Unit, Eastern University, Sri Lanka.
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(45) Act. Head/Department of Chemistry, Eastern University, Sri Lanka.
(46) Faculty of Science Representative to Senate, Eastern University, Sri Lanka.
(47) Director, Staff Development Centre, Eastern University, Sri Lanka.
(48) Member of the Library Committee, Eastern University, Sri Lanka.
(49) Senior Treasurer, Catholic Association, Eastern University, Sri Lanka.
(50) Coordinator, "Publication of Academic Materials through the H. E. President's Fund and the University Grants Commission".
(51) Chief Counsellor, Catholic Association, Eastern University, Sri Lanka.

RESEARCH INTERESTS

1) **Main Field**: Lie Group Analysis of Ordinary and Partial Differential Equations.

2) **Current Research Interests**: Lie Linearization, Symmetries and First Integrals, Sundman Symmetries of Nonlinear Ordinary Differential Equations, Symmetries and Conservation Laws, Potential Symmetries, Nonclassical symmetries and Nonclassical Potential Symmetries of Partial Differential Equations, Approximate Symmetries, Approximate Potential Symmetries and Approximate Conservation Laws of Perturbed Ordinary and Partial Differential Equations. Invariant characterization of scalar linear (1+1) parabolic equations.

REFEREES

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The Open University of Sri
Lanka.

Please Turn Over

Milestones in the Field of Sports

Dedicated to my Parents, my Coaches and Mentors Rev. Fr. Eugene John Herbert (S.J), Rev. Fr. Harold John Weber (S.J), Rev. Fr. Paul Satkunanayagam (S.J) and Mr. Arul Daniel

Basketball

(I) At St. Michael's College Batticaloa

(1) Sri Lanka Schools under 15 Basketball Tournament 1980, organised by the Sri Lanka Schools Basketball Association. **Runners up (Captain)**.
(2) Sri Lanka Schools under 17 Basketball Tournament 1981, organised by the Sri Lanka Schools Basketball Association. **2nd Runners up**.
(3) Sri Lanka Schools under 19 Basketball Tournament 1982, organised by the Sri Lanka Schools Basketball Association. **Runners up**.
(4) Sri Lanka Schools under 19 Basketball Tournament 1983, organised by the Sri Lanka Schools Basketball Association. **Champion**.
(5) Sri Lanka Schools under 19 Basketball Tournament 1984, organised by the Sri Lanka Schools Basketball Association. **Runners up (Captain)**.
(6) Sri Lanka Schools under 19 Basketball Tournament 1984, organised by the Ministry of Sports, Jathika Basketball Kreeda - I. **Champion**.

(II) At District/Provincial

(1) Batticaloa District Basketball Team 1988, the Tournament was organised by the Ministry of Sports & Parliamentary Affairs, Education National Festival of Sports. **Champion**.
(2) Batticaloa District Basketball Team 1989, the Tournament was organised by the North-East Region Ministry of Sports & Youth Affairs. **Champion**.
(3) Batticaloa District Basketball Team 1991, the Tournament was organised by the North-East Ministry of Sports & Youth Affairs. **Champion**.
(4) Batticaloa District Basketball Team 1991, North-East Province Inter District Competitions, the Tournament was organised by the Ministry of Education & Cultural Affairs and Sports. **Champion**.
(5) Batticaloa District Basketball Team 1992, the Tournament was organised by the North-East Region Ministry of Sports & Youth Affairs. **Champion**.
(6) Entertainers Club of Batticaloa, Bishop L. R. Antony Cup 1980, the Tournament was organised by the Eastern Province Basketball Association. **Champion**.
(7) Michaelmen Sports Club of Batticaloa, Bishop L. R. Antony Cup 1986, the Tournament was organised by the Michaelmen Sports Club of Batticaloa. **Champion**.
(8) Michaelmen Sports Club of Batticaloa, Herbert Basketball Tournament 1991, the Tournament was organised by the Herbert Club of Batticaloa. **Champion**.

(9) Michaelmen Sports Club of Batticaloa, Batticaloa Rotaract Sports 1992, the Tournament was organised by the Rotaract Club of Batticaloa. **Runners up**.

(III) At National

(1) Batticaloa District Basketball Association 1985. Senior Nationals – 1985. The 26th Men's Basketball Championships held at Sugathadasa Indoor Stadium. The Tournament was organised by Sri Lanka Basketball Federation. **2nd Runners up**.
(2) Batticaloa District Basketball Association 1986. Junior Nationals – 1986. The Men's Basketball Championships held at Sugathadasa Indoor Stadium. The Tournament was organised by Sri Lanka Basketball Federation. **Champion**.
(3) Batticaloa District Basketball Association 1987. Junior Nationals – 1987. The Men's Basketball Championships held at Sugathadasa Indoor Stadium. The Tournament was organised by Sri Lanka Basketball Federation. **Champion**.
(4) Batticaloa District Basketball Association 1988. Junior Nationals – 1988. The Men's Basketball Championships held at Sugathadasa Indoor/Outdoor Stadium. The Tournament was organised by Sri Lanka Basketball Federation. **Champion**.
(5) Batticaloa District Basketball Association 1987. Senior Nationals – 1987. The Men's Basketball Championships held at Sugathadasa Indoor Stadium. The Tournament was organised by Sri Lanka Basketball Federation. **2nd Runners up**.
(6) Batticaloa District Basketball Association 1990. Junior Nationals – 1990. The Men's Basketball Championships held at Sugathadasa Indoor Stadium. The Tournament was organised by Sri Lanka Basketball Federation. **2nd Runners up**.

(IV) At Eastern University, Sri Lanka

(1) Eastern University, Sri Lanka 1992. Fourth Sri Lanka University Games (SLUG) 1992. The Men's Basketball Championships. Organised by Sri Jayewardenepura University. **2nd Runners up**.
(2) Eastern University, Sri Lanka, Inter Faculty Sports Competition 1992. Faculty of Science. The Men's Basketball Championships. **Champion**.
(3) Eastern University, Sri Lanka, Inter Faculty Sports Competition 1993. Faculty of Science. The Men's Basketball Championships. **Champion**.

Football

(I) At St. Michael's College Batticaloa

(1) Sri Lanka Schools' under 15 Football Tournament, Sports Ministry Shield 1980, organised by the Sri Lanka Schools Football Association. **Runners up**.
(2) Batticaloa District National Schools Football Tournament 1980. Department of Education, Batticaloa. **Champion**.

(II) At Eastern University, Sri Lanka

(1) Eastern University, Sri Lanka 1992. Fourth Sri Lanka University Games (SLUG) 1992. Member of Men's Football Team. Organised by Sri Jayewardenepura University.
(2) Eastern University, Sri Lanka, Inter Faculty Sports Competition 1992. Faculty of Science. The Men's Football Championships. **Champion**.
(3) Member of the Football Team, Eastern University, Sri Lanka. Inter Departments Men's Football Tournaments, 1996-1997.

Tennis

(I) At District

(1) Annual Tennis Tournament 1997. Batticaloa Tennis Association. Men's Open Singles. **Champion**.
(2) Annual Tennis Tournament 1997. Batticaloa Tennis Association. Men's Open Doubles. **Champion**.
(3) Annual Open Tennis Championship 2004. Lake View Tennis Club, Batticaloa. Men's Open Singles. **Champion**.
(4) Annual Open Tennis Championship 2004. Lake View Tennis Club, Batticaloa. Men's Open Doubles. **Champion**.

Athletics

(I) At St. Michael's College Batticaloa
75 Meters, 100 Meters, High Jump, Pole Vault, Discus throw and Shot Put.