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EXPERTISE

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Professor Dr. Adem Kilicman is a professor in the Department of Mathematics at University Putra Malaysia. His research interest includes Functional Analysis and Topology, Integral transforms, Special functions and differential equations. He has published several papers in national and international journals. He is an active member also in several activities in the department and Institute of mathematical research (INSPEM). He has also been active in research and successfully completed several research projects (IRPA, ScienFund and FRGS). He is also member of editorial board of the several international journals and co editors of several proceedings. Recently is head of the programme of Functional Analysis and topology in Theoretical Laboratory, of INSPEM and a reviewer for American Mathematical Society as well as reviewer for Zentralblatt Mathematik (Germany).

Current Research Interest

• Distributions and operations

Distributions also known as generalized functions are objects which generalize functions and probability distributions. They allow us to extend the concept of derivative to all continuous functions and are used to formulate generalized solutions of partial differential equations.

Covering properties in topological spaces

Since compactness is a very important property in topology and analysis it is worth to study carefully, thus mathematician studied it widely. In compact spaces one deals with open covers to get a finite subcover, e.g. A space is compact if every open cover of the space has a finite subcover.

Later compactness was generalized to countable compactness that is A space is countably compact if every countable open cover of has a finite subcover and the idea of Lindelof property came later by dealing with open covers to get countable subcover.

LINK TO POSTGRADUATE FIELD OF STUDY:

Analytical and Structural Mathematics, Financial Mathematics, Pure Mathematics





FUDZIAH ISMAIL Ph.D. (Universiti Putra Malaysia)

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Professor Dr. Fudziah Ismail is a professor in the field of Numerical Analysis at the Department of Mathematics, Universiti Putra Malaysia. Her major research areas include Runge-kutta type of methods and multistep methods for directly solving higher order ordinary differential equations. Her other research area is solving highly oscillatory problems both ordinary and delay differential equations using Phase-fitted hybrid methods. Her active participation in research has earned her awards at university and national levels. Nine PhD and seven Master students have graduated under her supervision and currently she has four PhD and two Master students. She has published more than 150 research papers in journals and proceedings and written two books on her research area. She is a member of Malaysian Mathematical Science Society, American Mathematical Society and International Association of Engineers. She is in the Editorial Board for a number journals and has been appointed as referee for many scientific papers for local and international journals.

Current Research Interest

Runge-Kutta type methods and multistep methods for directly solving higher order ordinary and delay differential equations

Phase-Fitted Runge-Kutta methods, hybrid methods and linear multistep methods for solving highly oscillatory prob-

LINK TO POSTGRADUATE FIELD OF STUDY:

Numerical Analysis, Computational Mathematics





Ph.D. (Universiti Kebangsaan Malaysia)

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Prof. Dr. Habshah Midi is a Profesor at Department of Mathematics, Faculty of Science, UPM. Her field of specialization includes computational and Applied Robust Statistics, Regression Diagnostics and Outlier Detection. Her active participation in research has earned her awards at university, national and international levels. Nine PhD students and five Masters students have graduated under her supervision. Currently she is supervising fourteen PhD students (main-8, Co- Supervisor-6). She has published more than 200 research papers (journals and proceedings) in international and local citation-indexed journals. Dr Habshah is in the Editorial Board of local and international journals and has been appointed as referee for many scientific papers for local and international journals. She is a committee member of the Malaysian Institute of Statistics and has organized many statistical workshops as speaker. Dr Habshah is very active in research, extension and also serves as a statistics consultant to several organizations including Majlis Peperiksaan Malaysia.

Current Research Interest

- Robust estimation techniques and Outlier Detection in Logistic Regression
- Robust Estimation and Outliers Detection in Response Surface Model
- Robust Estimation and outlier detection in Fixed Effect Panel Data
- Diagnostics and bootstrapping techniques in Logistic Regression
- Robust Diagnostics and Estimation in Autocorrelated Regression Model in the Presence of High Leverage Points
- Robust Estimation Method and Outlier Detection for regression model with errors of measurements
- Robust variables selection technique in the presence of outliers
- Application of Statistical Methods to real life problems

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistics, Applied and Computational Statistics





ISAMIDDIN S.RAKHIMOV D.Sc. (Leningrad State University)

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EXPERTISE

Algebras, rings and their applications



Professor. Dr. Isamiddin S.Rakhimov graduated from Leningrad State University (now Saint Petersburg State University) Russia, in 1979. He received his M.Sc. (Title: The decomposition of the Jacobian of the Fermat's curve) and Phd (Title: Filtrations of groups generated by some Abelian Varieties) degrees from the Leningrad State University in 1979 and 1985, respectively. In 2011 Professor. Dr. Isamiddin S.Rakhimov defended his Doctor of Science degree (equivalent to Full Professor) in Institute of Mathematics Academy of Sciences of Republic of Uzbekistan. Currently he is a professor of Department of Mathematics, Faculty of Sciences, Universiti Putra Malaysia (contract). Prof., Dr. Isamiddin also is an associate researcher of Institute for Mathematical Researches (INSPEM), UPM. Under main supervision of Prof. Dr. Isamiddin S.Rakhimov there are 8 (PhD), 5(MSc) graduated and 5 (PhD) on going students.

Current Research Interest

- Structural theory of Associative and Nonassociative Algebras
- Lie and Leibniz algebras and related to them (co)homological problems
- Commutative algebras, Algebraic geometry
- Ordinary and Differential Invariant theory
- Elliptic Curves and their applications
- Applications of Lie and Leibniz algebras to Physics
- Structure of Rings
- Bornological Structures

LINK TO POSTGRADUATE FIELD OF STUDY:

Theoretical and computational Algebra, Ring Theory, Bornological Structures, Applications of Algebras





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EXPERTISE

Professor Dr. Noor Akma Ibrahim is the Director of Institute for Mathematical Research, UPM. Her major research areas include survival analysis and diagnostics influence in regression. Her active participation in research has earned her awards at university, national and international levels. Eleven PhD students and three Masters students have graduated under her supervision. Currently she is supervising seven PhD students. She has published more than 150 research papers in journals and proceedings. She is a lifemember of ISOSS, ISM, PERSAMA and MSORSM. Currently she is the secretary of Malaysian Academy of Mathematical Scientists (MAMS). She is in the Editorial Board of local and international journals and has been appointed as referee for many scientific papers for local and international journals.

Current Research Interest

- Semiparametric inference for the accelerated failure time model with interval-censored data
- A class of extension on Burr type X distribution
- Nonparametric treatments comparison for Panel count data
- Meta-analysis and joint hierarchical modelling of longitudinal and time-to-event outcomes
- Parametric Cure models for interval-censored data
- Water Quality Index: Statistical approach
- Wellbeing index of army personnel

LINK TO POSTGRADUATE FIELD OF STUDY:

Computational Statistics and Inference, Reliability Analysis





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EXPERTISE



Prof. Dr Zanariah Abdul Majid is currently a lecturer in the Department of Mathematics, Faculty of Science at the Universiti Putra Malaysia (UPM). She has published widely in the area of numerical analysis in the special area of parallel block method and the general area of numerical analysis. Her area of research is emphasis on solving ordinary differential equation, delay differential equation, boundary value problem, volterra and fredholm integro differential equation, differential algebraic equation and higher order ODEs that will involve the multistep method. She won several awards and gold medals with her hard work and distinguished efforts in research at national and international level. She has three research copyrights for the developed software. Major sponsors of her research include the PUTRA Research Grant and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

- Numerical solutions of neutral delay differential equations using multistep block method
- Three step block method for solving nonlinear boundary value problems directly
- New approach in handaling small vanishing lag of delay differential equations using multistep block method
- Numerical Solution of Direct Multistep Block Methods For Solving Higher Order Boundary Value Problems
- Development and Implementation of multistep block method for solving voltera integro differential equations

LINK TO POSTGRADUATE FIELD OF STUDY:

Numerical Analysis, Computational Mathematics

- https://scholar.google.de/citations?user=a7jHfhwAAAAJ&hl=en
- http://www.researchsea.com/html/experts.php/eid/504/research/zanariah_bt_abdul_majid.html? PHPSESSID=



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Control Theory, Differential Games



Assoc. Prof. Dr. Gafurjan Ibragimov major research areas include linear pursuit and evasion differential games, linear discrete pursuit games, and simultaneous games. Major sponsors of Gafurjan Ibragimov's research include Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS). He is currently the Coordinator of the Pure Mathematics program at the Department of Mathematics. In 1991, he received his PhD (Title: Optimal Pursuit in Some Differential Games) degree and in 2006, he received his DSc (Title: Differential Games of Many Persons with Different Constraints on Control Parameters). He has also been active in research. He has published more than 90 papers in national and international journals. He is also an associate researcher of the Institute for Mathematical Researches (INSPEM), UPM. There are 12 PhD and 7 MSc graduated and 9 PhD and 4 MSc ongoing students under his supervision.

Current Research Interest

Pursuit and Evasion Differential Games in Finite Dimensional Spaces

Here we study linear pursuit-evasion differential games with integral constraints, differential games with phase constraints, multi person differential games, evasion differential games.

Differential Games described by Infinite System of Differential Equations

Control and differential game problems are also of increasing interest for systems described by partial differential equations. Such problems by using the decomposition method can be reduced to the ones described by infinite systems of ordinary differential equations.

Linear Discrete Pursuit Games

Many real life problems can be modeled as the linear pursuit games. Moreover, linear discrete pursuit games can be obtained if we discretize the linear differential games. Here, the main problem is to construct the strategy of the pursuer to complete the game.

Simultaneous Games

Let A and B be given convex closed restricted non-empty subsets of a Hilbert space. The first player chooses points from the set A and the second one chooses points from the set B.

LINK TO POSTGRADUATE FIELD OF STUDY:

Differential games



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EXPERTISE



Assoc. Prof. Dr. Jayanthi Arasan research areas include survival/reliability analysis and computational statistics, which mostly focus on the modeling of parallel and repairable system failures. Her research is sponsored by Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

- Repairable System Model for Interval Censored, Grouped and Truncated Data with Time Varying Covariates
- Survival model of the paired organ system with dependent failures and multiple covariates
- Computational statistics and data analysis involving computer intensive techniques such as the bootstrap and
 jackknife.

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistics, Applied and Computational Statistics





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EXPERTISE



Assoc. Prof. Dr. Leong Wah June major research areas include numerical methods for unconstrained and large-scale optimization, and Newton-like methods for nonlinear systems. He is a recipient of the 2008 Chinese Academy of Sciences (CAS) Postdoctoral Fellowship and the 2008 Academy of Sciences for Developing Countries (TWAS) Fellowship. Major sponsors of Wah June's research include the ScienceFund (Ministry of Science and Innovation of Malaysia (MOSTI), Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Unconstrained Optimization

Efforts have been targeted to improve existing methods for solving unconstrained optimization problems include the gradient methods, quasi-Newton methods and conjugate gradient methods. Development of efficient codes is also an active activity within the group.

Large-scale Optimization

Apart from small and medium scale optimization problems, the group also works on large-scale optimization problems. Various low memory methods are derived include the improved gradient methods and memoryless quasi-Newton methods. These methods are particularly important to be used as the solvers for large-scale problems where the calculation of Hessian matrix is unreachable.

Nonlinear Systems

Our group also works on the development of efficient solvers for nonlinear systems. Research on methods for solving system of nonlinear equations has very promising future and since many physical problems can be reduced to find numerical solution of a nonlinear systems.

LINK TO POSTGRADUATE FIELD OF STUDY:

Applied Mathematics, Computational Mathematics





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EXPERTISE



Assoc. Prof. Dr. Lee Lai Soon major research areas include applications of metaheuristics approaches specifically on population-based metaheuristics in Combinatorial Optimization problems. His research also covers the areas in fuzzy logic and Data Envelopment Analysis. He has published more than 80 research papers in (local and international) journals and conference proceedings. He has also been appointed as referee for many scientific manuscripts for journals and proceedings. His professional affiliation includes the International Federation of Operational Research Societies (IFORS), Institute for Operations Research and the Management Sciences (INFORMS), The Association of European Operational Research Societies (EURO), The Operational Research Society (The OR Society), and German Society of Operations Research (GOR). He is a life-member of Malaysian Mathematical Sciences Society (PERSAMA) and is currently the Honorary Treasurer of Management Science/Operations Research Society of Malaysia (MSORSM). Presently, he is the Head of Program in Laboratory of Computational Statistics and Operations Research, Institute for Mathematical Research, UPM.

Current Research Interest

Population-based Metaheuristics

Genetic Algorithm, Ant Colony Optimisation, Particle Swarm Optimisation, Differential Evolution

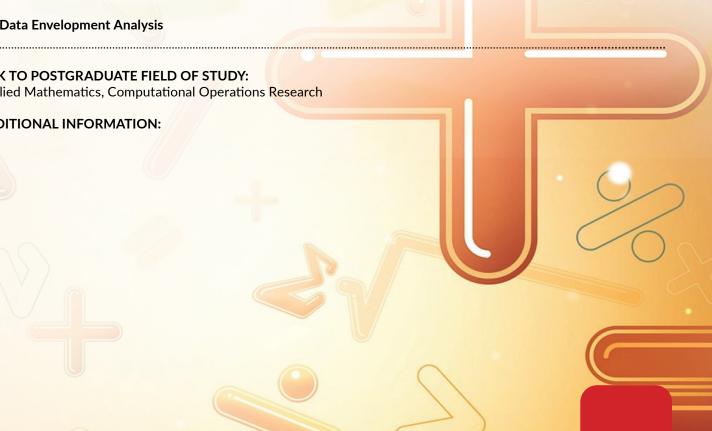
Combinatorial Optimisation

Machine Scheduling, Cutting and Packing, Knapsack, Traveling Salesman, Vehicle Routing, Urban Transit Network Design, Timetabling, Facility Layout, Supply Chain.

Data Envelopment Analysis

LINK TO POSTGRADUATE FIELD OF STUDY:

Applied Mathematics, Computational Operations Research





MOHD BAKRI ADAM Ph.D. (University of Lancaster)

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EXPERTISE



Dr. Mohd Bakri Adam is a young lecturer of statistics, UPM. He obtained his Ph.D. from Lancaster University specialized in Extreme Sports Modeling in 2007. His major research areas include extreme value theory, non -parametric regression, extreme-environmental statistics, extreme-sports statistics, extreme missing data and extreme data mining.

Current Research Interest

Extreme Value Theory, EVT

Dealing with extreme phenomena i.e. maximum, minimum of precipitation, the fastest athlete performance in the world etc. EVT not just limited to the above applications. The blend of mix field applications are much popular. Non-parametric regression Alternative to parametric approaches in statistics field. It also involve many part of statistics such as kernel analysis, penalized statistics, generalized additive modelling, smoothing, etc. Usually the data speak for themselves. Model selection criteria sometimes being used to select the best model.

Bayesian Extreme

The combination knowledge of EVT and Bayesian in modelling new group of data. Some inferential method will be introduced. Much work can be carried out as these Bayesian extreme need more exploration and results to be put forward.

Sports Statistics

More accurate and rigorous statistics will be introduced to Malaysia community. More advanced method of statistics methodology should be used to improve the performance of athletes.

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistics, Applied and Computational Statistics





MOHD RIZAM ABU BAKAR Ph.D. (University of Bradford)

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EXPERTISE



Assoc. Prof. Dr. Mohd Rizam Abu Bakar, obtained his PhD in Applied Statistics ("Multivariate Survival Analysis for Split Populations with Application to Patterns of Domestic Violence") from University of Bradford, United Kingdom. His research interest includes: Survival data analysis, data envelopment analysis and epidemic modelling. Currently he is an associate professor in the Department of Mathematics at Universiti Putra Malaysia (UPM). He is also an associate researcher of Institute for Mathematical Researches (INSPEM), UPM. Recently is head of the programme of Survival Analysis in Computational Statistics and Operations Research Laboratory of INSPEM.

Current Research Interest

Survival analysis models typically assume that everybody in the study population is susceptible to the event under study and will eventually experience this event with sufficient follow-up. However, there are situations when a group of individuals are not expected to experience the event of interest; that is, those individuals are cured or insusceptible. For example, researchers may be interested in analyzing the recurrence of a disease. Many individuals may never experience a recurrence; therefore, a cured fraction of the population exists.

Data Envelopment Analysis (DEA) is an increasingly popular management tool. It is used to empirically measure productive efficiency of decision (or DMUs). Non-parametric approaches have the benefit of not assuming a particular functional form/shape for the frontier; however they do not provide a general relationship (equation) relating output and input. There are also parametric approaches in which requires that the shape of the frontier be guessed beforehand by specifying a particular function relating output to input.

LINK TO POSTGRADUATE FIELD OF STUDY: Statistics, Applied and Computational Statistics





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EXPERTISE



Assoc. Prof. Dr. Mohamad Rushdan Md Said is the Head of Laboratory of Cryptography, Analysis and Structure at the Institute for Mathematical Research (INSPEM), UPM. He received his PhD in cryptography from Macquarie University, Sydney. His research interest is in public key cryptography and number theory. His professional affiliation includes the International Association for Cryptologic Research (IACR) and the Malaysian Society for Cryptology Research (MSCR) and is currently the chief editor of the MSCR journal, International Journal of Cryptology Research.

Current Research Interest

- Public Key Cryptography: Designing public key cryptosystems
- Efficiency and security aspects of the RSA-type cryptosystems
- Finite Fields and Discrete Log Problem in Elliptic Curve Cryptography (ECC)
- Public Key Systems Based on Iterated Function Systems

LINK TO POSTGRADUATE FIELD OF STUDY:

Mathematical Cryptography, Pure Mathematics





MUHAMMAD REZAL BIN DATO' DR. KAMEL ARIFFIN Ph.D. (Universiti Kebangsaan Malaysia)

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EXPERTISE



Assoc. Prof. Dr. Muhammad Rezal bin Dato' Dr. Kamel Ariffin is Program Head for Mathematical Cryptography at the Institute for Mathematical Research, UPM. He focuses in designing and cryptanalyzing public key cryptography primitives. Since appointed as Lecturer in 2005, has published various 74 scientific writings (22 in indexed proceedings), acquiring 5 research grants totaling >RM450,000, obtained 8 innovation awards (5 international), reviews submissions for a number of international conferences, invited as Visiting Researcher at the Universite de Caen, France and the Chinese Academy of Science, China, 2 research products patented in Malaysia and 1 in USA and has generated more than RM 1 million in sales and services through UPM (either in cash or in kind). Occasionally he is invited to give presentations and expert opinions for organizations in Malaysia. He is on the International Journal of Cryptology Research editorial board and has chaired 5 International cryptology conferences since 2008.

Current Research Interest

Post Quantum Public Key Cryptosystems (PQPKC)

Post 2010, a number of PQPKC based on various NP-hard problems have been put forward, but setbacks not favorable for large scale implementation can be found and need to be addressed. The subset sum problem, one of the earliest NP hard problems to be utilized, can be explored. Previous attempts have failed due to the need to design a trapdoor. It is conjectured that maybe one needs to generalize the subset sum problem in order to successfully utilize it.

Integer Factorization Problem (IFP)

IFP has been utilized as a source of difficulty in designing public key cryptography since late 1970's. Research in identifying cases where factoring product of integers is not difficult has become popular. Integers have many internal structures not yet properly understood. It is through this research, one can understand this issue, and avoid such integers to be utilized for cryptography.

LINK TO POSTGRADUATE FIELD OF STUDY:

Mathematical Cryptography, Pure Mathematics





NIK MOHD ASRI BIN NIK LONG Ph.D. (University of Manchester)

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EXPERTISE



Assoc. Prof. Dr. Nik Mohd Asri Bin Nik Long is the Head of Mathematics Department and also member of Laboratory of Computational Sciences and Informatics, Institute for Mathematical (INSPEM) UPM. His major research areas include fracture mechanics (investigating the behavior of solution of crack in two and three dimension), numerical solution to the integral equations (with weak, Cauchy, strong/hypersinguler kernel). Major sponsors of research work include the ScienceFund (Ministry of Science and Innovation of Malaysia (MOSTI), Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Cracks problem in plane elasticity

The crack problems in plane elasticity are formulated into hypersingular integral equations through complex potential method. These equations are then solved numerically for the unknown coefficients, and subsequently, other physical properties of the crack can be determined.

Apart from numerical approach, analytical effort are also being made to solve the closed curved crack problems. The main tool is the modified complex potential method.

Integral equations

Develop an approximate solution of the integral equations (with weak, Cauchy, strong/hypersingular kernel). These equations appear in many engineering problems, most of them have no analytical solutions, and therefore searching a good approximation solution becomes a vital work.

LINK TO POSTGRADUATE FIELD OF STUDY:

Applied Mathematics





NORAZAK SENU Ph.D. (Universiti Putra Malaysia)

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EXPERTISE



Assoc. Prof. Dr. Norazak Senu research areas include Numerical Analysis and Web Based Learning and Teaching System. He is also an associate researcher of Institute for Mathematical Research (INSPEM). He has also been active in research and successfully completed several research projects under ScienceFund (Ministry of Science and Innovation of Malaysia (MOSTI), Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Solution of Ordinary Differential Equations(ODEs)

Dr. Norazak's research is in the general area of numerical analysis; her specialties include the numerical solution of ordinary differential equations, focusing on first order and higher order ordinary differential equations in which the solutions are in the oscillatory functions: The methods are includes Runge-Kutta methods, Runge-Kutta-Nystrom methods, Runge-Kutta type methods for solving high order ODEs, block method, and parallel computing using MPI for solving large scale problem.

Web Based Learning and Teaching System

The research is focusing on developing very interactive, attractive and user friendly mathematics software based on wab based and stand alone basis. With this system students or users can access or use the material of learning and teaching system at anywhere and anytime. User interface embedded in the website with the numerical and graphical output illustration are criteria of the software. The software developed is called Numerical Computations Laboratory(NCL).

LINK TO POSTGRADUATE FIELD OF STUDY:

Numerical Analysis, Computational Mathematics

- http://profile.upm.edu.my/norazak/en/profail.html
- https://scholar.google.com/citations?user=KzMsloEAAAAJ&hl=en
- https://www.researchgate.net/profile/Norazak_Senu/publications





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Assoc. Prof. Dr. Norfifah Bachok obtained her Bachelor of Science (Hons.) and Master of Science from Universiti Putra Malaysia. She is currently an associate researcher in the Institute for Mathematical Research (INSPEM). Her active contribution in teaching and research has earned her a number of awards, namely Anugerah Penyelidik Muda Cemerlang INSPEM (2015), Anugerah Perkhidmatan Cemerlang UPM (2006, 2013), Anugerah Adi Pengajar Muda Fakulti Sains UPM (2006) and Anugerah Saguhati PERSAMA 2013 (Kategori: Tesis Doktor Falsafah).

Current Research Interest

Fluid Dynamics

LINK TO POSTGRADUATE FIELD OF STUDY:

Fluid Dynamics, Applied Mathematics





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EXPERTISE

Assoc. Prof. Dr. Norihan Md. Arifin major research areas include fluid mechanics and heat transfer with application to the thermal convection and boundary-layer theory, heat transfer in Newtonian and non-Newtonian as well as in fluid saturated porous media and nanofluids. She has contributed to more than 60 technical papers. Major sponsors of Norihan's research include the ScienceFund (Ministry of Science and Innovation of Malaysia (MOSTI), Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Marangoni convection in micropolar fluids and porous medium

Convection has been the subject of many investigations as it is becoming important to the industry as in crystal growth, weld penetration and in coating process. The surface tension gradients that are responsible for Marangoni convection can be due to gradients of temperature and/or concentration. Our group focus on Marangoni convection in a horizontal fluid layer due to imposed temperature gradients.

• Boundary layer problem in nanofluids

A nanofluid is a colloidal mixture of nano-sized particles (< 100nm) in a base fluid. It is known that nanofluids can tremendously enhance the heat transfer characteristics of the original (base) fluid. Thus, nanofluids have many applications in industry such as coolants, lubricants, heat exchangers, microchannel heat sinks, etc. The study of nanofluids is still at its early stage and it seems very difficult to have a precise idea on the way the use of nanoparticles acts in heat transfer.

LINK TO POSTGRADUATE FIELD OF STUDY:





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EXPERTISE

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Dr. Siti Hasana Sapar is a Senior Lecturer, UPM. Her major research areas include Estimation of exponential sums and Diophantine Equations and major sponsors of her research are Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Estimation of Exponential Sums

This research will concentrate on the problem of determining an estimation of the exponential sums for multi-variable polynomials, estimation of the multiple exponential sums for two-variable polynomials of higher degree and also to find the p-adic sizes of factorial functions which involve Bernoulli functions, left Kurepa's factorial functions and other functions.

• Diophantine Equations

This research will concentrate on the problem of finding an integral solution to vary types of Diophantine equation.

LINK TO POSTGRADUATE FIELD OF STUDY:





ZARINA BIBI IBRAHIM Ph.D. (Universiti Putra Malaysia)

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EXPERTISE

Assoc. Prof. Dr. Zarina Bibi Ibrahim is currently a lecturer in the Department of Mathematics, Faculty of Science and an associate researcher at Institute for Mathematical Research (INSPEM), Universiti Putra Malaysia (UPM). PhD in Applied Mathematics (Numerical Analysis), UPM, 2006. Masters in Mathematics, California State Univ. Long Beach, United States of America, 1985. Bachelor Degree in Mathematics, California State University Long Beach, United States of America, 1984.

Current Research Interest

- Developing Code For Solving Higher Order Ordinary Differential Equations (ODEs) Directly Using Implicit
- Block Methods
- Solving Boundary Value Problems by Multiple Shooting using the multistep method in its Backward
- Difference Formulations
- Block Multistep Formulas for Solving Ordinary Differential Equations (ODEs)
- Parallel Partitioning Technique Using Multistep Formulas for Solving Ordinary Differential Equations (ODEs)
- Developing Code For Solving Delay Differential Equations (DDEs) Using Multi Step Block Methods

LINK TO POSTGRADUATE FIELD OF STUDY:

Numerical Analysis, Computational Mathematics

ADDITIONAL INFORMATION:

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EXPERTISE



Dr. Anwar Fitrianto is a senior lecturer of Department of Mathematics, Universiti Putra Malaysia. He is also an associate researcher at the Institute for Mathematical Research, UPM. His B.Sc (Hons), M.Sc (Research), and Ph.D are all majoring Statistics. He has excellent capability in Computational Statistics on major statistics sofwares, includes SAS, Mintab, SPSS, Statistica, Genstat, etc. He is also a Certified Minitab Trainer, His research areas include survival analysis, experimental designs, statistical quality control, robust statistics, mediation analysis and statistical modeling.

Current Research Interest

Robust Mediation Models, Optimization of Experimental Designs, Multiple Responses Optimizations, Statistical Quality Analysis

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistics, Applied and Computational Statistics





ATHIRAH NAWAWI @ MOHAMED NAWAWI Ph.D. (University of Manchester)

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EXPERTISE

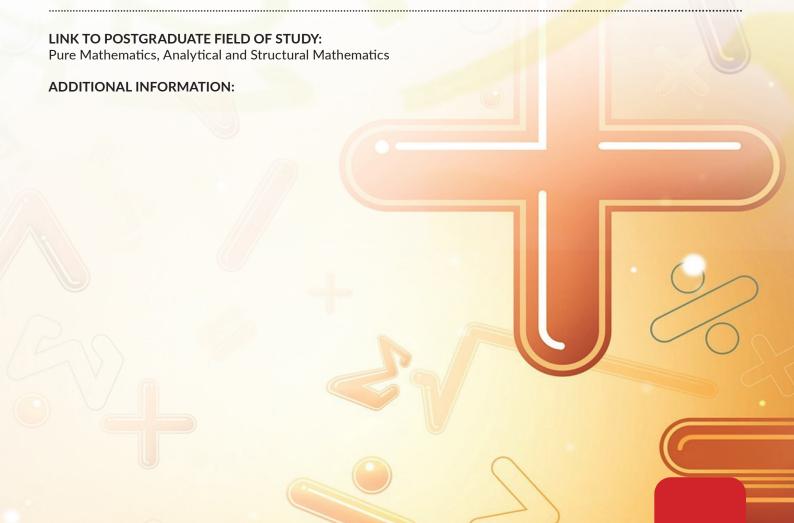
Pure Mathematics, Computational Algebra, Computational Group Theory



Athirah Nawawi @ Mohamed Nawawi, is currently a Senior Lecturer at the Department of Mathematics, Faculty of Science and an associate researcher in the Laboratory of Cryptography, Analysis and Structure at the Institute for Mathematical Research (INSPEM), UPM. She received her PhD. and MSc. in Pure Mathematics from University of Manchester, United Kingdom, in year 2013 and 2008, respectively. Prior to that, she received her BSc (Hons.) in Mathematics (with Education) from Universiti Putra Malaysia in year 2006. Her research is sponsored by Putra Grant - Putra Young Initiative (GP - IPM) and Fundamental Research Grant Scheme (FRGS). She has been actively involved with schools and community outreach activities as well as collaborates with the Ministry of Education Malaysia and Malaysian Examinations Council for numerous programs.

Current Research Interest

Her research interest centers on the group theory, specifically the study of finite groups in connection to graph theory involving extensive computations using software package such as MAGMA and GAP (Groups, Algorithms, Programming).





CHEN CHUELYEE DPhil. (University of Oxford)

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Calculus of Variations, Optimization Techniques



Chen Chuei Yee received her DPhil from University of Oxford in 2014 with the thesis entitled Quasiminimality and Coercivity in the Calculus of Variations. Prior to that, she received her MSc in Applied Mathematics and BSc (Hons.) in Mathematics from Universiti Putra Malaysia in year 2009 and 2007, respectively. Major sponsors of her research include the PUTRA Research Grant and Fundamental Research Grant Scheme (FRGS). She is an associate researcher at the Institute for Mathematical Research (INSPEM), UPM. She is currently supervising a MSc student and co-supervising a PhD student.

Current Research Interest

- Calculus of Variations, particularly on quasiminimizers and regularity theory
- Optimization Techniques, particularly on Quasi-Newton methods
- Optimal Control

LINK TO POSTGRADUATE FIELD OF STUDY:

Analytical and Structural Mathematics, Computational Mathematics, Pure Mathematics

- http://profile.upm.edu.my/cychen/profail.html
- https://www.researchgate.net/profile/Chuei_Yee_Chen
- https://scholar.google.com/citations?user=OnU98k4AAAAJ&hl=en





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EXPERTISE

Dr. Fadzilah Md Ali is currently a senior lecturer at the Department of Mathematics and an associate researcher at the Institute for Mathematical research. She received her Ph.D from Universiti Kebangsaan Malaysia. Her major research areas include fluid mechanics and heat transfer in boundary layer (Applied Mathematics). Major sponsor research includes the ScienceFund (Ministry of Science and Innovation of Malaysia (MOSTI), Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Boundary layer problem and heat transfer characteristics towards a stretching and shrinking sheet.

LINK TO POSTGRADUATE FIELD OF STUDY:

Fluid Dynamics, Applied Mathematics





FARIDAH YUNOS Ph.D. (Universiti Putra Malaysia)

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EXPERTISE



Dr. Faridah Yunos is currently a senior lecturer at the Department of Mathematics and an associate researcher at the Institute for Mathematical Research, UPM. She received her Ph.D from Universiti Putra Malaysia in 2015 with the thesis entitled A pseudo T-adic Non Adjacent Form for Scalar Multiplication on Koblitz Curve. Prior to that, she received her MSc in Science (Number Theory) with the thesis entitled Some Application of Number Theory in Cryptography from same universiti in year 2001. She is currently supervising three MSc students and co-supervising three Ph.D students.

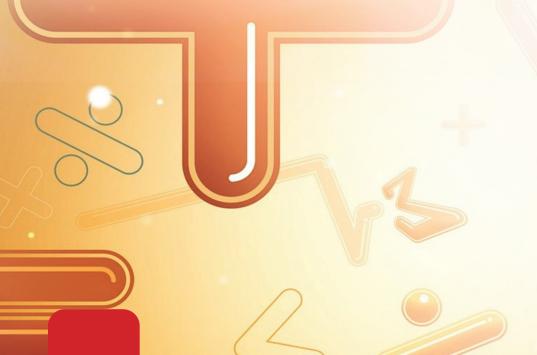
Current Research Interest

- Find the special properties for T-adic Non Adjacent Form (TNAF) in order to improve the performence ofscala multiplication on Anomalous Binary Curves.
- Reducing the Cost of Pseudo T-adic Non-Adjacent Expansion (pseudoTNAF) for Scalar Multiplication on Koblitz Curves.
- Using Self-Invertible Matrices to attack Cipher Polygraphic Polyfunction.

LINK TO POSTGRADUATE FIELD OF STUDY:

Number Theory, Mathematical Cryptography

- http://profile.upm.edu.my/faridahy/profail.html
- https://www.researchgate.net/profile/Faridah_Yunos2
- https://scholar.google.com.my/citations?user=WxhHjjAAAAAJ&hl=en







HALIZA ROSALI Ph.D. (Universiti Kebangsaan Malaysia)

Lecturer (Dr.) Department of Mathematics Faculty of Science Tel-Office: 03 89466823 Fax: 03 89437958 liza_r@upm.edu.my

EXPERTISE



Dr. Haliza Rosali is currently a lecturer at the Department of Mathematics, UPM. She received her Ph.D from Universiti Kebangsaan Malaysia in 2016 with the thesis entitled "Mathematical modelling of Boundary Layer Flow and Heat Transfer in Porous Medium. Prior to that, she received her MSc in Mathematics (Applied Maths) from same universiti in year 2001. She is currently co-supervising one Ph.D student.

Current Research Interest

- Stagnation point flow and heat transfer in porous Medium.
- Mixed convection flow and heat transfer in porous medium.

LINK TO POSTGRADUATE FIELD OF STUDY:

Fluid Dynamics, Porous Medium





HANI SYAHIDA ZULKAFLI Ph.D. (Heriot-Watt University)

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Dr. Hani Syahida Zulkafli is a Statistics lecturer at Department of Mathematics, Faculty of Science, UPM. She received her Master in Applied Statistics and BSc (Hons.) in Statistics from Universiti Putra Malaysia in year 2011 and 2009, respectively. Her research interests include applications of Bayesian modeling and inference in chronic disease, such as diabetes.

Current Research Interest

Bayesian modelling, Medical Statistics

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistics

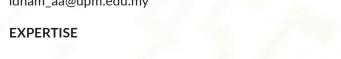




IDHAM ARIF HAJI ALIAS Ph.D. (Australian National University)

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Dr. Idham's specialization is in Pure. Mathematics, specifically in Group Theory.

Current Research Interest

Group Theory, Educational Mathematics, Financial Mathematics, Etno-Mathematics

LINK TO POSTGRADUATE FIELD OF STUDY:

Pure Mathematics





LIM FONG PENG Ph.D. (Universiti Malaya)

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EXPERTISE
Applied Statistics



Dr. Lim Fong Peng is a senior lecturer at Department of Mathematics, Faculty of Science, UPM. She received her PhD from University of Malaya, Malaysia. Prior to that, she received her MSc in Mathematics Statistics and BSc with Education (Hons.) in Statistics from Universiti Putra Malaysia in 2010 and 2007, respectively. Her research interests include applications of statistical modeling and survival analysis in some medical problems, such as breast cancer and kinesiology study. She also expands her research interest in problems of outlier with the development of robust techniques for designed experiments. Currently, she is a life-member of Institute Statistics Malaysia (ISM).

Current Research Interest

Regression Analysis, Robust Statistics, Survival Analysis, Medical Statistics

LINK TO POSTGRADUATE FIELD OF STUDY:

Diagnostics and Inference, Applied Statistics

ADDITIONAL INFORMATION:

http://profile.upm.edu.my/fongpeng





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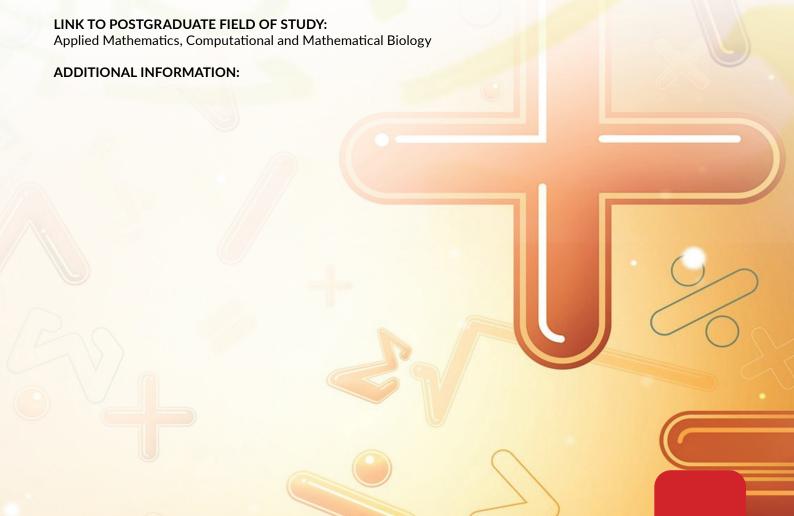


EXPERTISE

Dr. Mai Z. A. M. Jaffar is a senior lecturer of Department of Mathematics, Universiti Putra Malaysia. Her research interests are concerned with the study of differential equations and related analyses arising from mathematical models of growth and form of filamentary microorganisms. The vast majority of her current work has been aimed at building up a better comprehension of the exquisite case of polarized morphogenesis exhibited by filamentary microorganisms. Her research grant is sponsored by Putra Young Initiative Grant (GP-IPM). She is also a research associate at the Institute for Mathematical Research, UPM. She obtained her Ph.D from the University of Dundee, Scotland collaborated with University of Oxford, England resulted in Elsevier publication. She derived a generalized formulae covering tip profiles for numerous classes of filamentary microorganisms.

Current Research Interest

Study of differential equations and related analyses arising from mathematical models of growth and form of filamentary microorganisms





MOHAMAT AIDIL MOHAMAT JOHARI Ph.D. (Universiti Putra Malaysia)

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EXPERTISE



Dr. Mohamat Aidil bin Mohamat Johari is a senior lecturer of Department of Mathematics, Universiti Putra Malaysia. He is also an associate researcher at the Institute for Mathematical Research, UPM. His B.Sc (Hons), M.Sc (Research), and Ph.D are all majoring Mathematics. His research areas is a Number Theory.

Current Research Interest

Number of representations

This research will concentrate on the problem of determining a relation between the number of representations of a non negative integer n as a sum of figurate numbers of different types.

Diophantine Equations

This research will concentrate on the problem of finding an integral solution to vary types of Diophantine equation.

LINK TO POSTGRADUATE FIELD OF STUDY:

Pure Mathematics, Analytical and Structural Mathematics





MOHD SHAFIE MUSTAFA Ph.D. (Universiti Putra Malaysia)

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EXPERTISE



Mohd Shafie Mustafa is a senior lecturer at Department of Mathematics and an associate researcher at the Institute for Mathematical research. He received his Ph.D from Universiti Putra Malaysia. His research interests include applications of statistical modeling, robust designs and experimental designs in some industrial problems, such as food science and chemical engineering study. He also expands her research interest in problems of response surface methodology with the development of robust techniques for designed experiments.

Current Research Interest

Regression Analysis, Robust Statistics, Response Surface Methodology, Experimental Designs

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistics





NADIHAH WAHI Ph.D. (Universiti Sains Malaysia)

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Computational Fluid Dynamics, Simulations and Modelling



Nadihah Wahi studied in Aerospace Engineering in University of Arizona, Tucson for her first degree and then took MSc. in Applied Mathematics in University of Massachusetts, Amherst. She received her philosophical degree in Aerospace Engineering in Universiti Sains Malaysia Engr. Campus with a thesis titled 'Analytical and Numerical Analysis on the Carbuncle Phenomenon'. Her main interest is related to the aerodynamic fields in conjunction with mathematical foundation. These include computational fluid dynamics (CFD), simulation and modelling, numerical analysis.

Current Research Interest

- Currently working on the instability in compressible fluid flow on blunt body model.
- Navier-Stokes Equations.

LINK TO POSTGRADUATE FIELD OF STUDY:

Fluid Dynamics, Applied Mathematics





NORHASLINDA ALI Ph.D. (Universiti Putra Malaysia)

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EXPERTISE

Dr. Norhaslinda Ali is a senior lecturer at the Department of Mathematics, Universiti Putra Malaysia. She is also an associate researcher in the Laboratory of Computational Statistics and Operational Research at the Institute for Mathematical Research (INSPEM), UPM. She received her Ph.D in Statistics from Universiti Putra Malaysia in year 2014. Prior to that, she received her MSc in Statistics and BSc (Hons.) in Statistics from Universiti Kebangsaan Malaysia in year 2006 and 2003, respectively. Her current research is sponsored by Putra Grant - Putra Young Initiative (GP – IPM).

Current Research Interest

Extreme Value Modelling, Environmental Statistics.

LINK TO POSTGRADUATE FIELD OF STUDY:

Statistical Modelling and Forecasting, Extreme Value Theory, Environmetrics.



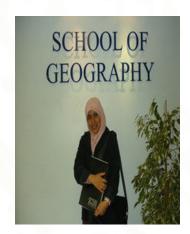


NOR ALIZA ABD RAHMIN Ph.D. (University of Southampton)

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EXPERTISE

Operation Research



Master of Science in Applied Mathematics, UPM Bachelor of Science (Hons.) in Mathematics, UPM

Current Research Interest

- Operation Research, particularly on Scheduling in Health Care
- Optimization, particularly on interval analysis

LINK TO POSTGRADUATE FIELD OF STUDY:

Applied Mathematics





SITI MAHANI MARJUGI Ph.D. (Universiti Putra Malaysia)

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EXPERTISE



Dr. Siti Mahani Marjugi a senior lecturer at Department of Mathematics, Faculty of Science, UPM. Her research interests include numerical methods for unconstrained and large-scale optimization, and Newton like methods for nonlinear systems.

Current Research Interest

- **Unconstrained Optimization**
- Large-scale Optimization
- **Nonlinear Systems**

LINK TO POSTGRADUATE FIELD OF STUDY:





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Financial Mathematics



Dr. Siti Nur Iqmal Ibrahim is a Senior Lecturer at Department of Mathematics, Faculty of Science, UPM. Her research interests are related with problems of Mathematical Finance and Stochastic Processes and, particularly, with the development and extension of financial derivatives pricing models, such as the Black- Scholes model. Currently, she is expanding her research interest in financial derivatives pricing models with jumps and stochastic volatility using numerical techniques, and modeling stock prices using historical prices.

Current Research Interest

- Financial derivatives models
- Stochastic processes

LINK TO POSTGRADUATE FIELD OF STUDY:

ADDITIONAL INFORMATION:

https://scholar.google.com/citations?user=R19B_aoAAAAJ&hl=en





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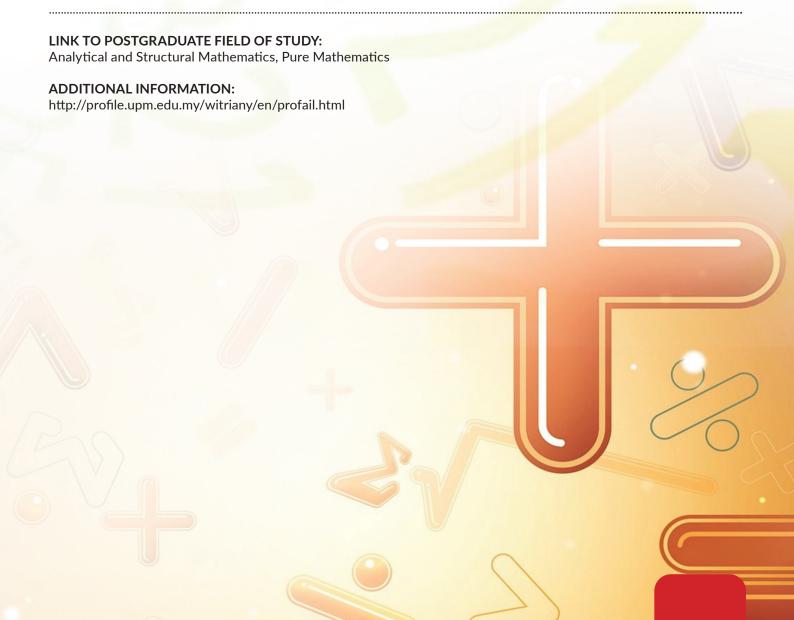
EXPERTISE



Dr. Witriany Basri is a senior lecturer of Department of Mathematics, Universiti Putra Malaysia. She is also associate researcher in the Laboratory of Cryptography, Analysis and Structure at the Institute for Mathematical Research (INSPEM), UPM. Her B. Sc (Hons), M. Sc, and Ph.D are all majoring Mathematics. Her current research is sponsored by Fundamental Research Grant Scheme (FRGS).

Current Research Interest

Classification and derivations of associative and diassociative algebras.





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