CURRICULUM VITAE

PERSONAL DETAILS

Name	:	ARIFAH BAHAR
Gender	:	Female
Date of Birth/Age	:	23/10/1973
Nationality	:	Malaysian
Marital Status	:	Single
	:	
Correspondent Address	:	**Department of Mathematical Sciences** Faculty of Science Universiti Teknologi Malaysia 81300 UTM Skudai, Johor
Tel	:	(Mobile): 019-7712709
E-mail	:	arifah@utm.my
Website	:	science.utm.my/arifahbahar
Expertise	:	Stochastic Dynamics, Applied Probability, and Stochastic Process, Statistical Modelling
H-Index (WOS)	:	8
H-Index (SCOPUS)	:	10
H-Index (G. Scholar)	:	13
H-Index (Researchgate)	:	

ACADEMIC QUALIFICATIONS

NO	LEVEL OF EDUCATION	COURSE	UNIVERSITY	STARTING DATE	ENDING DATE
1	Bachelor of Science	Mathematics, Statistics & Operational Research	UMIST (The University of Manchester), UK	Oct 1994	July 1996
2	Master of Science	Statistics	Universiti Kebangsaan Malaysia, Bangi	July 1998	April 1999
3	Ph.D.	Stochastic Dynamics	University of Strathclyde, UK	Oct 2001	July 2005

AWARD AND HONORS RECEIVED

NO	AWARD	LEVEL (FACULTY /UTM /NATIONAL /INTERNATIONAL)	YEAR
1	Excellence Service Award 2023	Faculty - ISISIR	2024
2	Blended Learning Award 2023, 2022,2021	University	2021, 2022, 2023
3	Excelllence Service Award 2016	Faculty	2016
4	Excellence Service Award 2015	UTM	2016
6	ISM (Malaysia Institute of Statistics) Special Award 2012	National	2012
7	Excellence Service Award 2011	Faculty	2012
8	PERSAMA (Malaysian Mathematical Sciences Society) Academic Article Award (Appreciation) 2011, “The Performance of Euler Maruyama, 2-stage SRK and 4-stage SRK in Approximating the Strong Solution of Stochastic Model”	National	2011
9	Excellence Service Award 2010	UTM	2011
10	Best Poster Presentation (2009), “The performance of Euler Maruyama and 2-stage SRK in Approximating the Strong Solution of Stochastic Model”, ICORAFSS 2009	International	2009
11	Excellence Service Award 2006	Faculty	2006
12	Excellence Service Award 2006	UTM	2007

WORK EXPERIENCE

NO	POSITION	STARTING DATE	ENDING DATE	DEPARTMENT/ORGANISATION
1.	Total Quality Control Coordinator	September 1996	December 1996	Production Department, Applied Magnetics (M) Sdn Bhd
2.	SAP Officer	Mac 1997	July 1997	Production Control Department, Sharp Manufacturing (M) Sdn Bhd
3.	Tutor	July 1997	May 1998	Mathematics Department Faculty of Science, UTM
4.	Lecturer	May 1999	May 2007	Mathematics Department Faculty of Science, UTM
5.	Senior Lecturer	May 2007	August 2019	Department of Mathematical Sciences, Faculty of Science, UTM
6.	Associate Professor	August 2019	present	Department of Mathematical Sciences, Faculty of Science, UTM
7.	Research Fellow	March 2013	January 2016	UTM-Centre for Industrial & Applied Mathematics (UTM-CIAM)
8.	Research Fellow	August 2018	present	UTM-Centre for Industrial & Applied Mathematics (UTM-CIAM)

9.	Associate Research Fellow	Feb 2016	August 2018	UTM-Centre for Industrial & Applied Mathematics (UTM-CIAM)

PROFESSIONAL MEMBERSHIP / QUALIFICATIONS / RECOGNITION

NO	NAME OF PROFESSIONAL MEMBERSHIP	LEVEL (FACULTY / UTM / NATIONAL / INTERNATIONAL)	ROLE	YEAR
1	Association of Mathematical Sciences Malaysia (PERSAMA)	National	Life member	
2	Malaysia Institute of Statistics (ISMy) (874)	National	Life member	
3	Society of Industrial & Applied Mathematics (SIAM) (020860353) with Special Interest Group – Uncertainty Quantification	International	Member	2025
4	Asia Pacific Consortium of Mathematics for Industry (APCMfl)	International	Council Member	April 2024 – April 2026
5	Malaysia Institute of Statistics (ISMy)	National	Council Member	March 2024 – March 2026
6	Akademi Ilmuan Sains Matematik Malaysia - Malaysian Mathematical Scientists Academy (AISMM)	National	Council Member	2023 - 2025

ADMINISTRATIVE EXPERIENCE

NO	POSITION	STARTING DATE	ENDING DATE	DEPARTMENT/ FACULTY/ DIVISION
1.	Director	August 2018	present	UTM-Centre for Industrial & Applied Mathematics (UTM-CIAM) Ibnu Sina Institute for Industrial & Scientific Research

CONSULTATION WORKS

No.	Year	Title	Role	Vot
1.	2023	CONFIGURATION ANALYSIS OF SUBSEA CABLE INSTALLATION WITH AD-HOC I-TUBE SOLUTION WITHIN THE JACKET STRUCTURE OF OFFSHORE OIL AND GAS PLATFORM MYHIMS SOLUTIONS PLT	Member	CN/2023/00498
2.	2023	ACTUARIAL PROVISION FOR CASH AWARD IN LIEU OF ACCUMULATED LEAVE FOR 2023	Leader	CN/2023/00268
3.	2024	ACTUARIAL PROVISION FOR CASH AWARD IN LIEU OF ACCUMULATED LEAVE FOR 2022	Leader	CN/2024/00558

RESEARCH ACTIVITIES

As a principal investigator (PI)

BIL	NAME OF GRANT (Project Title)	CATEGORY OF GRANT (UTM / OTHERS)	TYPE OF GRANT	STARTING DATE	ENDING DATE
1	Improvement of Attendance System By Incorporating Mathematical Logic	UTM	GUP	1 July 2017	30 June 2019
2	Statistical Literacy for SME in Malaysia	UTM	Flagship	1 May 2016	30 April 2017
3	Detection Of Volatile Organic Compound From Ganoderma Boninense	MoHE	PPRN	15 February 2015	14 January 2016
4	Estimation of Stochastic Volatility with Long Memory	UTM	GUP	1 December 2012	30 November 2013
5	Stochastic Model for Groundwater Flow in Peninsular Malaysia	UTM	Flagship	1 April 2013	31 Mac 2015
6	Stochastic Logistic Model with Time Delay of Solvent Production by *C.Acetobutylicum*	UTM	Matching Grant	1 April 2013	31 Mac 2015
7	Modelling of C.acetobutylicum and Solvent Production in Fermentation using Stochastic Power Law Logistic Model	MOHE	FRGS	1 September 2007	30 November 2009
8	Numerical Solution of Stochastic Delay Differential Equations	MOHE	FRGS	1 April 2010	30 September 2012
9	Long Memory Stochastic Volatility Estimation Method for Fractional Ornstein-Uhlenbeck Process	MOHE	FRGS	1 July 2014	30 June 2016
10	Stochastic Model based Time Series for Water Demand Forecasting	UTM	UTM-ER	1 Oct 2023	30 Sep 2025
11	New Stochastic Hydraulic Conductivity Estimation for Groundwater Flow with Periodic Noise	UTM	FRGS	1 August 2024	31 July 2027

TEACHING ACTIVITIES

Summary	
Total Credit Hours	175

UNDERGRADUATES

Design of Experiments, Stochastic Processes, Computer Literacy, Statistics, Engineering Statistics

POSTGRADUATES

Stochastic processes, Research Methodology

PhD Student

No.	Name	Status (Graduated/ On-Going)	Date of Graduation (Date is based on Senate Letter)	Title	Roles of Supervision
1	Haliza Abd Rahman	Graduated	July 2015	An Improved Two-Step Method in SDE's Structural Parameter Estimation	Main supervisor
2	Norhayati Rosli	Graduated	April 2012	Numerical Solution to Stochastic Differential Equation and Stochastic Delay Differential Equation	Main supervisor
3	Granita	Graduated	2017	Parameter Estimation for Stochastic Differential Equation	Main Supervisor
4	Ting Chee Ming	Graduated	July 2012	Sequential Monte Carlo Method with Application to Biomedical Time Series	Co-supervision with Dr Zaitul Marlizawati
5	Leyla Ranjbari	Graduated	2014	Natural Gas Storage Valuation Based on Observable Gas Prices	Co-Supervision with Prof Zainal
6	Khoo Chia Chen	Graduated	2017	Estimation for Stochastic Volatility Model	Main Supervisor
7	Shayma Mustafa	Graduated	2017	Mathematical Modelling of Contaminant Transport in Riverbank Filtration System	Co-Supervision with Prof Zainal
8	Norshela Mohd Noh	Graduated	2022	Stochastic Optimisation Model of Oil Refinery Industry and Uncertainty Quantification In Scenario Tree of Pricing and Demand	Main Supervisor
9	Siti Rohani Mohd Nor	Graduated	2018	Multi-population Mortality Model in a State-Space ramework	Co-supervision with Assoc Prof Dr Fadhilah
10	Aslina Mohd Omar	On going		Stochastic Hydraulic Conductivity Estimation	Main Supervisor
11	Noraini Hassan	On going		Stochastic ERT for Classification of Groundwater Imaging	Main Supervisor
12	Nor Shafiqah Najwa Fairuz	On going		Stochastic Hydraulic Conductivity Estimation with periodic Noise	Main Supervisor

MSc. Student

No.	Name	Status (Graduated / On-Going)	Date of Graduation (Date is based on Senate Letter)	Title	Mode (Research / Taught-course/ Mixed Mode)	Roles of Supervision
1	Tey Seah Ying	Graduated	Feb 2013	Stochastic Volatility Model	Mixed mode	Main supervisor
2	Nurul Nabihah Rahman	Graduated	Feb 2013	Quantificational Analysis on the Progress of River Water Quality in Johor	Mixed mode	Co-Supervision with Assoc Prof Dr Fadhilah Yusof
3	Mohd Fariduddin Mukhtar	Graduated	Feb 2013	Parameter Estimation for Stochastic Modelling	Mixed mode	Main supervisor
4	Norliana Mohd Lip	Graduated	Feb 2013	*Stochastic Modelling of the Growth of C. Acetobutylicum with Missing Data*	Mixed mode	Main supervisor
5	Mohd. Khairul Bazli Bin Mohd. Aziz	Graduated	Feb 2010	*Stochastic Modelling of C.acetobutylicum and solvent production in fermentation*	Research	Main supervisor
6	Nor Hasliza Binti Mat Desa	Graduated	Feb 2013	*Stochastic Modeling of The Fermentation of Sago Starch by A Microb (Clostridium Acetobutylicum P262*)	Mixed mode	Main supervisor
7	Wong Chai Yun	Graduated	2014	Stochastic groundwater transport flow model in Pontian Johor	Mixed mode	Main Supervisor
8	Nur Amirah Jumaat	Graduated	2014	Stochastic groundwater flow a case study in Pontian	Mixed mode	Main Supervisor
9	Siti Fatimah Anas	Graduated	2015	Modelling of Oil Price Fluctuation with Brownian Motion	Mixed mode	Main Supervisor

10	Nur Hashida Md Lazim	Graduated	2016		Research	Co-Supervision with Dr Haliza Abdul Rahman
11	Siti Aryati Minhat	Graduated	2016	Temporal Analysis of Ganoderma Boninense Infection in Oil Palm Seedling Using Logistic Growth Model	Mixed mode	Main Supervisor
12	Aniza Akaram	Ongoing				

PUBLICATIONS

NO	ARTICLE TITLE	JOURNAL TITLE	Vol.	Issue	Page	Publication year	Category of Publication	Quartile Ranking
1.	Modeling contaminant transport in riverbank filtration systems: A three-dimensional analysis with Green's function approach	Ain Shams Engineering Journal	7	15	102858	2024	ISI	
2.	Stabilisation in distribution of hybrid ordinary differential equations by periodic noise	IET Control Theory & Applications	17	4	463-476	2023	ISI	Q2
3.	Analytical solutions of contaminant transport in homogeneous and isotropic aquifer in three-dimensional groundwater flow	Environmental Science and Pollution Research	29	58	87114-87131	2022	ISI	
4.	Exponential Growth Model and Stochastic Population Models: A Comparison via Population Data	Malaysian Journal of Fundamental and Applied Sciences	18	1	60-69	2022	SCOPUS	
5.	Effects of Shear Stress on Magnetohydrodynamic (MHD) Powell Eyring Fluid over A Porous Plate: A Lift and Drainage Problem	IAENG International Journal of Applied Mathematics	51	4	1-10	2021	SCOPUS	
6.	Three-dimensional model for solute transport induced by groundwater abstraction in river-aquifer systems	Alexandria Engineering Journal	60	2	2573-2582	2021	ISI	Q2
7.	Unsteady EMHD dual stratified flow of nanofluid with slips impacts	Alexandria Engineering Journal	59	1	177-189	2020	ISI	Q2
8.	Solute transport modelling to manage groundwater pollution from surface water resources	Journal of Contaminant Hydrology	233			2020	ISI	Q2
9.	Early Detection of Depression using Screening Tools and Electroencephalogram (EEG) Measurements	International Journal of Integrated Engineering	12	6	216-228	2020	SCOPUS	
10.	Slip Role For Unsteady MHD Mixed Convection of Nanofluid Over Strecthing Sheet With Thermal Radiation And Electric Field	Indian Journal of Physics	94	2	195-207	2020	ISI	Q2
11.	Analytical Modelling of Well Design in Riverbank Filtration Systems	Groundwater	57	5	765-763	2019	ISI	Q2
12.	Stochastic mortality model in a state-space framework	Malaysian Journal of	13	2	251-264	2019	ISI	Q3

		Mathematical Sciences						
13.	Stratified electromagnethydrodynamic flow of nanofluid supporting convective role	Korean Journal of Chemical Engineering	36	7	1021-1032	2019	ISI	Q3
14.	Steady Flow of Johnson-Segalman fluid through porous medium over an inclined plate	Journal of Porous Media	22	5	583-598	2019	ISI	Q3
15	On discounted LQR control problem for disturbanced singular system	Archives of Control Sciences	29	1	147-156	2019	SCOPUS	
16	A Mechanistic model of high dose irradiation damage	Mathematics and Computers in Simulation	151		156-168	2018	ISI	Q2
17	Comparison of Stochastic Mortality Model for Wider Age Range	Matematika	34	2	227-233	2018	WOS	
18	Multi-population mortality model: A practical approach	Sains Malaysiana	47	6	1337-1347	2018	ISI	Q3
19	Derivation of stochastic Taylor methods for stochastic differential equations	Malaysian Journal of Fundamental and Applied Sciences	13	3	159-164	2017	SCOPUS	
20	Forecasting model for crude oil price with structural break	Malaysian Journal of Fundamental and Applied Sciences	13	4-1	421-24	2017	SCOPUS	
21	A Systematic Derivation of Stochastic Taylor Methods for Stochastic Delay Differential Equations	Bulletin Of The Malaysian Mathematical Sciences Society	2	36	555-576	2013	ISI	Q2
22	Review of the role of analytical modelling methods in riverbank filtration system	Jurnal Teknologi	71	1	59-69	2014	Scopus	
23	Parameter Estimation of Lotka-Volterra Model : A Two-Step Model	Jurnal Teknologi	63	2		2013	Scopus	
24	Characterization of Bacillus Licheniformis Strain Ta62bi as Potential Selective Plugging Agent for Enchanced Oil Recovery	Jurnal Teknologi	62	2		2013	Scopus	
25	Modelling contaminant transport for pumping wells in riverbank filtration systems	Journal of environmental management	165		159-166	2016	ISI	Q1
26	Enhanced compact artificial bee colony	Information Sciences	298		491-511	2015	ISI	Q1
27	Modelling the cervical cancer growth process by stochastic delay differential equations	Sains Malaysiana	44	4	1153-1157	2015	ISI	Q3
28	Modeling and estimation of single-trial event-related potentials using partially observed diffusion processes	Digital Signal Processing 36	36		128-143	2015	ISI	Q2
29	Artifact Removal from Single – Trial ERPs using Non – Gaussian Stochastic Volatility Models and Particle Filter	IEEE Signal Processing Letters	21	8	923-927	2014	ISI	Q2
30	A Systematic Derivation of Stochastic Taylor Methods for Stochastic Delay Differential Equations	Bulletin Of The Malaysian Mathematical Sciences Society	36	3	555-576	2013	ISI	Q1
31	Stochastic Differential Equations: A Two Step Method of Parameter Estimation	Sains Malaysiana	141	12	1635-1642	2012	ISI	Q3

32	Spectral Estimation of Nonstationary EEG Using Particle Filtering With Application to Event-Related Desynchronization (ERD)	IEEE Transactions On Biomedical Engineering	58	2	321-331	2011	ISI	Q2
33	The Performance of Euler-Maruyama, 2-Stage SRK and 4 Stage SRK in Approximating the Strong Solution of Stochastic Model	Jurnal Sains Malaysiana	39	5	851–857	2010	ISI	Q4
	Stochastic Delay Lotka Volterra Model	Journal of Mathematical Analysis and Applications	292		364-380	2004	ISI	Q2

PROFESSIONAL SERVICES

Commercialisation

NO	ROLE	NAME OF PRODUCT COMMERCIALISATION	DATE	TOTAL INCOME GENERATED (RM)
1	Co-inventor	STATISTICAL TABLE FOR ENGINEERING AND SCIENCE STUDENTS	2018	IP/CR/2018/0125

Copyright (Co-Inventor)

NO	NAME OF COPYRIGHT	STATUS OF COPYRIGHT	
1	Critical Thinking and Problem Solving Assessment Tool Critical Thinking and Problem Solving Assessment Tool	Approved	IP/CR/01108
2	Statistical Table For Engineering And Science Students	Approved	IP/CR/2018/0125
3	Poultry Product Optimizer Chicken Product Optimizer	Approved	IP/CR/2019/0764