

## CURRICULUM VITAE



### PERSONAL DETAILS

Name : Zaiton Mat Isa  
Date of Birth : 24/09/1977  
Gender : Female  
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Race : Malay  
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### ACADEMIC QUALIFICATION:

2008 – 2014            PhD (Mathematics),  
                              Queensland University of Technology  
2000 – 2001            Masters of Sciences (Mathematics),  
                              Universiti Teknologi Malaysia.  
1995 – 1999            Bachelor of Sciences (Industrial Mathematics),  
                              Universiti Teknologi Malaysia.

### PROFESSIONAL BODIES

1.            Persatuan Sains Matematik Malaysia (PERSAMA) – lifelong membership,  
                 starting 2007.

## WORKING EXPERIENCES

Current Position : Senior Lecturer at Universiti Teknologi Malaysia, Skudai, Johor, Malaysia

Date of joining University Technology Malaysia (UTM): 4 February 2000

Field of Expertise : Applied Mathematics

Experiences on Courses Taught : Foundation Mathematics, Calculus, Differential Equations, Engineering Mathematics, Linear Algebra

Supervisions : 21 undergraduate project (2002 – 2016), 4 Msc dissertation

## RESEARCH ACTIVITIES:

1. Project leader of Research University Grant (RUG) Potential Academic Staff: “Flow field and traverse times for fan forced injection of fumigant into stored grain” (1/7/2015-30/6/2016, RM20,000). Vote number: Q.J130000.2726.01K86.
2. A member of FRGS:”New Analytical Solutions for Convective Heat Transfer of a Non-Newtonian Casson Fluid” (2/11/2015-1/11/2017, RM72,000)R.J130000.7826.4F713
3. A member of Research University Grant (RUG) Program Tier 1: “Multiscale Modelling of unsteady blood flow in microcirculation networks” (1/7/2014-30/6/2015, RM20,000). Vote number: Q.J130000.2526.08H51
4. A member of Grant Research Management Centre (RMC), UTM: “ A Study of Boussinesq Equation as a Wave Propagation in Shallow Water”.  
Vot No.: 75174 ( October 2004 – October 2005)
5. A member of Grant Research management Centre (RMC), UTM: “ Two Soliton Solutions of the Finite Depth Fluid Equations”.  
Vot No.: 75198 ( December 2004 – December 2005)

## TEACHING MODULE:

Normah M., Zaiton M.I, Halijah O., Sharidan S, Khairil A. (2007) .Differential Equations. First edition.

## PUBLICATIONS:

1. Z. M . Isa, G.R. Fulford, N.A. Kelson and T. W. Farrell. Flow field and traverse times for fan forced injection of fumigant via circular or annular inlet into stored grain. Applied Mathematical Modelling, Vol 40 (15-16), page 7156-7163, 2016.
2. Z. M. Isa, T.W. Farrell, G.R. Fulford and N.A. Kelson. Mathematical modelling and numerical simulation of phosphine flow during grain fumigation in leaky cylindrical silos. Journal of Stored Product Research, Vol 67, page 28-40, 2016.
3. Z. M .Isa, G.R. Fulford, and N. A Kelson. Simulation of phosphine flow in vertical

grain storage: a preliminary study. ANZIAM J. (Proceedings of the 15<sup>th</sup> Biennial Computational Techniques and Applications Conference, CTAC), 52:C759-C772, 2011.

4. Mukheta Isa, Fuaada M Siam, Zaiton Mat Isa and Zamzulani Mohamed, "Shallow Water Waves: The Boussinesq Approximation". Proceeding Symposium On Science and Mathematics 2005. 474 – 479.

***Presentation:***

1. "Numerical simulation and analytical validation of a gas flow through stored grain" Symposium Kebangsaan Sains Matematik ke -23 (SKSM 23). Johor Bahru, alaysa, 24-26 December 2015.
2. "Simulation of phosphine flow in vertical grain storage: a preliminary study". The 15<sup>th</sup> Biennial Computational Techniques and Applications Conference, CTAC. Sydney, Australia, 28 Nov – 1 Dec 2010.
3. "Shallow Water Waves: The Boussinesq Approximation". Symposium On Science and Mathematics 2005. Alor Setar, Kedah, Malaysia. 31 Mei – 2 Jun 2005

**RESEARCH INTERES:**

**Gas flow in stored grain:** To develop the mathematical models of flow field, traverse times and fumigant concentration for fan forced injection of fumigant into stored grain for various conditions. Model to be solved analytically or by using numerical simulation (Ansys Fluent).