



# AIP

## Conference Proceedings

HOME

BROWSE

MORE ▼

[Home](#) > [AIP Conference Proceedings](#) > [Volume 1905, Issue 1](#) > [10.1063/1.5012252](#)

< PREV

NEXT >



No Access

Published Online: 22 November 2017

# A structural equation modeling analysis of students' understanding in basic mathematics

AIP Conference Proceedings 1905, 050033 (2017); <https://doi.org/10.1063/1.5012252>

Rini Oktavia<sup>1,a)</sup>, Salmawaty Arif<sup>1,b)</sup>, Ridha Ferdhiana<sup>1,c)</sup>, Syarifah Meurah Yuni<sup>1,d)</sup>, and Mahyus Ihsan<sup>1,e)</sup>

[View Affiliations](#)



Topics ▼



PDF

This research, in general, aims to identify incoming students' understanding and misconceptions of several basic concepts in mathematics. The participants of this study are the 2015 incoming students of Faculty of Mathematics and Natural Science of Syiah Kuala University, Indonesia. Using an instrument that were developed based on some anecdotal and empirical evidences on students' misconceptions, a survey involving 325 participants was administered and several quantitative and qualitative analysis of the survey data were conducted. In this article, we discuss the confirmatory factor analysis using Structural Equation Modeling (SEM) on factors that determine the new students' overall understanding of basic mathematics. The results showed that students' understanding on algebra, arithmetic, and geometry were significant predictors for their overall understanding of basic mathematics. This result supported that arithmetic and algebra are not the only predictors of students' understanding of basic mathematics.

## REFERENCES

1. The World Bank, *Investing in Indonesia's education: Allocation, equity, and public expenditure* (The World Bank, Washington DC, 2007), pp. 7–8. [Google Scholar](#)
2. OECD, *PISA 2012 Results in Focus: What 15-year-olds know and what they can do with what they know*. (OECD, Paris, 2014), pp. 5–11. [Google Scholar](#)



3. I. V. Mullis, M. O. Martin, P. Foy, and A. Arora, *TIMSS 2011 International Results in Mathematics* (TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College & International Association for the Evaluation of Educational Achievement (IEA), Chesnut Hill, MA, USA & Amsterdam, The Netherlands, 2012), pp 36–66. [Google Scholar](#)

---
4. OECD, *Country Note – Results from PISA 2015, Indonesia*. (OECD, 2016), pp. 1–6. [Google Scholar](#)

---
5. I. V. Mullis, M. O. Martin, P. Foy, and M. Hooper, *TIMSS 2015 International Results in Mathematics* (TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College & International Association for the Evaluation of Educational Achievement (IEA), Chesnut Hill, MA, USA & Amsterdam, The Netherlands, 2016), pp. 75–95. [Google Scholar](#)

---
6. Kementrian Pendidikan dan Kebudayaan. *Nilai Rata-rata Sekolah UN* (Kementrian Pendidikan dan Kebudayaan, Jakarta, 2017), p. 1. [Google Scholar](#)

---
7. R. Oktavia, R. Ferdhiana, R. Ayunanda, Nurmaulidar, I. Syahrini, Hafnani, T. Usman, & T. Iskandar, *The Development of Instrument to Identify Basic Mathematics Understanding of New Students of FMIPA Syiah Kuala University*. Proceedings of 2nd International Conference on Statistics, Mathematics, Teaching, and Research 2017 (ICSMTR), (Universitas Negeri Makassar (UNM), Makassar, 2017). (submitted).

Published by AIP Publishing.

---



## Resources

[AUTHOR](#)

[LIBRARIAN](#)

[ADVERTISER](#)

---

## General Information

[ABOUT](#)

[CONTACT](#)

[HELP](#)

[PRIVACY POLICY](#)

[TERMS OF USE](#)

[FOLLOW AIP PUBLISHING:](#)

 [PDF](#)



Website © 2020 AIP Publishing LLC.  
Article copyright remains as  
specified within the article.

**Scitation**

Chemical  
Physics Reviews

First Articles Now Online!

READ NOW &gt;&gt;&gt;

AIP

Conference Proceedings

HOME

BROWSE

MORE ▼

## Table of Contents

### PROCEEDINGS OF THE 13TH IMT-GT INTERNATIONAL CONFERENCE ON MATHEMATICS, STATISTICS AND THEIR APPLICATIONS (ICMSA2017)

[< PREV](#) [NEXT >](#)

Conference date: 4-7 December 2017

Location: Kedah, Malaysia

ISBN: 978-0-7354-1595-9

Editors: Haslinda Ibrahim, Nazrina Aziz, Jafri Zulkepli, Azizah Mohd Rohni and Mohd Kamal Mohd Nawawi

Volume number: 1905

Published: Nov 22, 2017

DISPLAY : 20 50 100 all

## PRELIMINARY

BROWSE VOLUMES

## Preface: The 13th IMT-GT International Conference on Mathematics, Statistics and their Applications (ICMSA2017)

AIP Conference Proceedings **1905**, 010001 (2017); <https://doi.org/10.1063/1.5012140>

---



## KEYNOTE AND INVITED SPEAKER



No Access . November 2017

### Operation on semi generalized open sets with its separation axioms

Baravan A. Asaad and Nazihah Ahmad

AIP Conference Proceedings **1905**, 020001 (2017); <https://doi.org/10.1063/1.5012141>

---

SHOW ABSTRACT



No Access . November 2017

### Deterministic SLIR model for tuberculosis disease mapping

Nazrina Aziz, Ijlal Mohd Diah, Nazihah Ahmad and Maznah Mat Kasim

AIP Conference Proceedings **1905**, 020002 (2017); <https://doi.org/10.1063/1.5012142>

---

SHOW ABSTRACT



No Access . November 2017

### Diminishing *musyarakah* investment model based on equity

Maheran Mohd Jaffar, Shaharir Mohamad Zain and Abdul Aziz Jemain

AIP Conference Proceedings **1905**, 020003 (2017); <https://doi.org/10.1063/1.5012143>

BROWSE VOLUMES

---

[SHOW ABSTRACT](#)

No Access . November 2017

## The consistency of positive fully fuzzy linear system

Ghassan O. Malkawi and Hassan Y. Alfifi

AIP Conference Proceedings **1905**, 020004 (2017); <https://doi.org/10.1063/1.5012144>

---

[SHOW ABSTRACT](#)

No Access . November 2017

## Low-cost autonomous perceptron neural network inspired by quantum computation

Mohammed Zidan, Abdel-Haleem Abdel-Aty, Alaa El-Sadek, E. A. Zanaty and Mahmoud Abdel-Aty

AIP Conference Proceedings **1905**, 020005 (2017); <https://doi.org/10.1063/1.5012145>

---

[SHOW ABSTRACT](#)

No Access . November 2017

## Developing a discrete event simulation model for university student shuttle buses

Jafri Zulkepli, Ruzelan Khalid, Mohd Kamal Mohd Nawawi and Muhammad Hafizan Hamid

AIP Conference Proceedings **1905**, 020006 (2017); <https://doi.org/10.1063/1.5012146>

---

[SHOW ABSTRACT](#)[BROWSE VOLUMES](#)



**CONTRIBUTED ORAL PAPERS Theme: Mathematics**

No Access . November 2017

**RSA cryptosystem with fuzzy set theory for encryption and decryption**

Kamilah Abdullah, Sumarni Abu Bakar, Nor Hanimah Kamis and Hardi Aliamis

AIP Conference Proceedings **1905**, 030001 (2017); <https://doi.org/10.1063/1.5012147>

SHOW ABSTRACT



No Access . November 2017

**The onset of convection in a binary fluid mixture with temperature dependent viscosity and Coriolis force with Soret presence**

Nurul Hafizah Zainal Abidin, Nor Fadzillah Mohd Mokhtar, Zanariah Abdul Majid and Siti Salwa Abd Ghani

AIP Conference Proceedings **1905**, 030002 (2017); <https://doi.org/10.1063/1.5012148>

SHOW ABSTRACT



No Access . November 2017

**Classification of two-dimensional Jordan algebras**

Houida Ahmed, Ural Bekbaev and Isamiddin Rakhimov

AIP Conference Proceedings **1905**, 030003 (2017); <https://doi.org/10.1063/1.5012149>

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## Estimate for Picard iterations of a Hermitian matrix operator

H. Akhadkulov, A. B. Saaban, F. M. Alipiah and A. F. Jameel

AIP Conference Proceedings **1905**, 030004 (2017); <https://doi.org/10.1063/1.5012150>

SHOW ABSTRACT



No Access . November 2017

## On cyclic near-Hamiltonian cycle system of the complete multigraph

Raja'i Aldiabat and Haslinda Ibrahim

AIP Conference Proceedings **1905**, 030005 (2017); <https://doi.org/10.1063/1.5012151>

SHOW ABSTRACT



No Access . November 2017

## Oscillatory thermocapillary instability in liquid layer with insoluble surfactant

Razihan Allias, Mohd. Agos Salim Nasir and Seripah Awang Kechil

AIP Conference Proceedings **1905**, 030006 (2017); <https://doi.org/10.1063/1.5012152>

SHOW ABSTRACT



No Access . November 2017

## Discretization and control of an SEIR epidemic model under equilibrium Wiener noise disturbances

BROWSE VOLUMES

AIP Conference Proceedings **1905**, 030007 (2017); <https://doi.org/10.1063/1.5012153>

---

SHOW ABSTRACT



No Access . November 2017

## On the cyclic decomposition of complete multigraph into near Hamiltonian cycles

Mowafaq Alqadri and Haslinda Ibrahim

AIP Conference Proceedings **1905**, 030008 (2017); <https://doi.org/10.1063/1.5012154>

---

SHOW ABSTRACT



No Access . November 2017

## Series solution of fuzzy linear Cauchy reaction-diffusion equation by using homotopy perturbation method

Sarmad A. Altaie, Azizan Saaban and Ali F. Jameel

AIP Conference Proceedings **1905**, 030009 (2017); <https://doi.org/10.1063/1.5012155>

---

SHOW ABSTRACT



No Access . November 2017

## On $r$ -circulant matrices with Fibonacci and Lucas numbers having arithmetic indices

Aldous Cesar F. Bueno

AIP Conference Proceedings **1905**, 030010 (2017); <https://doi.org/10.1063/1.5012156>

---

BROWSE VOLUMES

[SHOW ABSTRACT](#)

No Access . November 2017

## On the zeros of the OEIS A191257 zeta function

Recto Rex M. Calingasan and Alexander Vincent B. Policarpio

AIP Conference Proceedings **1905**, 030011 (2017); <https://doi.org/10.1063/1.5012157>[SHOW ABSTRACT](#)

No Access . November 2017

## An algorithm for solving an arbitrary triangular fully fuzzy Sylvester matrix equations

Wan Suhana Wan Daud, Nazihah Ahmad and Ghassan Malkawi

AIP Conference Proceedings **1905**, 030012 (2017); <https://doi.org/10.1063/1.5012158>[SHOW ABSTRACT](#)

No Access . November 2017

## Guaranteed cost control of nonlinear systems with interval time-varying delays

Chanikan Emharuethai

AIP Conference Proceedings **1905**, 030013 (2017); <https://doi.org/10.1063/1.5012159>[SHOW ABSTRACT](#)[BROWSE VOLUMES](#)

## Some insights on hard quadratic assignment problem instances

Mohamed Saifullah Hussin

AIP Conference Proceedings **1905**, 030014 (2017); <https://doi.org/10.1063/1.5012160>

---

SHOW ABSTRACT



No Access . November 2017

## Local stability condition of the equilibrium of an oligopoly market with bounded rationality adjustment

Adyda Ibrahim, Azizan Saaban and Nerda Zura Zaibidi

AIP Conference Proceedings **1905**, 030015 (2017); <https://doi.org/10.1063/1.5012161>

---

SHOW ABSTRACT



No Access . November 2017

## The structure of a market containing boundedly rational firms

Adyda Ibrahim, Nerda Zura and Azizan Saaban

AIP Conference Proceedings **1905**, 030016 (2017); <https://doi.org/10.1063/1.5012162>

---

SHOW ABSTRACT



No Access . November 2017

## Approximate analytical modeling of leptospirosis infection

Nur Atikah Ismail, Amirah Azmi, Fauzi Mohamed Yusof and Ahmad Izani Ismail

AIP Conference Proceedings **1905**, 030017 (2017); <https://doi.org/10.1063/1.5012163>

BROWSE VOLUMES

SHOW ABSTRACT



No Access . November 2017

## The susceptible-infected-recovered (SIR) model for viral marketing

Siti Suhaila Ismail, Ku Azlina Ku Akil, Majdah Chulan and Noorzila Sharif

AIP Conference Proceedings **1905**, 030018 (2017); <https://doi.org/10.1063/1.5012164>

SHOW ABSTRACT



No Access . November 2017

## Determining distinct circuit in complete graphs using permutation

Sharmila Karim, Haslinda Ibrahim and Maizon Mohd Darus

AIP Conference Proceedings **1905**, 030019 (2017); <https://doi.org/10.1063/1.5012165>

SHOW ABSTRACT



No Access . November 2017

## The effect of magnetic field on Marangoni convection in a nanofluid layer with internal heat source

Izzati Khalidah Khalid, Nor Fadzillah Mohd Mokhtar, Zailan Siri, Zarina Bibi Ibrahim and Siti Salwa Abd Gani

AIP Conference Proceedings **1905**, 030020 (2017); <https://doi.org/10.1063/1.5012166>

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## On oscillatory magnetoconvection in a nanofluid layer in the presence of internal heat source and Soret effect

Izzati Khalidah Khalid, Nor Fadzillah Mohd Mokhtar, Nur Amirah Bakri, Zailan Siri, Zarina Bibi Ibrahim and Siti Salwa Abd Gani

AIP Conference Proceedings **1905**, 030021 (2017); <https://doi.org/10.1063/1.5012167>

---

SHOW ABSTRACT



No Access . November 2017

## Fuzzy support vector machine for microarray imbalanced data classification

Faroh Ladayya, Santi Wulan Purnami and Irhamah

AIP Conference Proceedings **1905**, 030022 (2017); <https://doi.org/10.1063/1.5012168>

---

SHOW ABSTRACT



No Access . November 2017

## Bifurcation analysis of dengue transmission model in Baguio City, Philippines

Criselda P. Libatique, Aprimelle Kris J. Pajimola and Joel M. Addawe

AIP Conference Proceedings **1905**, 030023 (2017); <https://doi.org/10.1063/1.5012169>

---

SHOW ABSTRACT



No Access . November 2017

BROWSE VOLUMES

## A Schrödinger equation for solving the Bender-Brody-Müller conjecture

Frederick Ira Moxley III

AIP Conference Proceedings **1905**, 030024 (2017); <https://doi.org/10.1063/1.5012170>

---

SHOW ABSTRACT



No Access . November 2017

## Elliptic net and its cryptographic application

Norliana Muslim and Mohamad Rushdan Md Said

AIP Conference Proceedings **1905**, 030025 (2017); <https://doi.org/10.1063/1.5012171>

---

SHOW ABSTRACT



No Access . November 2017

## Mathematical modeling for control zika transmission

Edwin Setiawan Nugraha, Janson Naiborhu, Nuning Nuraini and Ahmadin

AIP Conference Proceedings **1905**, 030026 (2017); <https://doi.org/10.1063/1.5012172>

---

SHOW ABSTRACT



No Access . November 2017

## Arithmetic functions and their linear dependence

Kanet Ponpetch, Vichian Laohakosol and Sukrawan Mavecha

AIP Conference Proceedings **1905**, 030027 (2017); <https://doi.org/10.1063/1.5012173>

---

BROWSE VOLUMES





No Access . November 2017

## Block variable order step size method for solving higher order orbital problems

Ahmad Fadly Nurullah Rasedee, Hazizah Mohd Ijam, Mohammad Hasan Abdul Sathar, Norizarina Ishak, Muhamad Azrin Nazri, Nur Shuhada Kamarudin and Nur Ainna Ramli

AIP Conference Proceedings **1905**, 030028 (2017); <https://doi.org/10.1063/1.5012174>

---

SHOW ABSTRACT



No Access . November 2017

## Triple solutions of Casson fluid flow between slowly expanding and contracting walls

Jawad Raza, Azizah Mohd Rohni and Zurni Omar

AIP Conference Proceedings **1905**, 030029 (2017); <https://doi.org/10.1063/1.5012175>

---

SHOW ABSTRACT



No Access . November 2017

## A stochastic hybrid model for pricing forward-start variance swaps

Teh Raihana Nazirah Roslan

AIP Conference Proceedings **1905**, 030030 (2017); <https://doi.org/10.1063/1.5012176>

---

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## Analytical pricing formulas for hybrid variance swaps with regime-switching

Teh Raihana Nazirah Roslan, Jiling Cao and Wenjun Zhang

AIP Conference Proceedings **1905**, 030031 (2017); <https://doi.org/10.1063/1.5012177>

---

SHOW ABSTRACT

No Access . November 2017

## Polynomial mixture method of solving ordinary differential equations

Mohammad Shazri Shahrir, Kumaresan Nallasamy, Kuru Ratnavelu and M. Z. M. Kamali

AIP Conference Proceedings **1905**, 030032 (2017); <https://doi.org/10.1063/1.5012178>

---

SHOW ABSTRACT

No Access . November 2017

## On properties of $(0, 1, p, q)$ -Horadam sequence

Jye-Ying Sia, C. K. Ho, Haslinda Ibrahim and Nazihah Ahmad

AIP Conference Proceedings **1905**, 030033 (2017); <https://doi.org/10.1063/1.5012179>

---

SHOW ABSTRACT

No Access . November 2017

## Polynomials with generalized Fibonacci number coefficients


Airada Sitthaset, Vichian Laohakosol and Sukrawan Mavecha

[BROWSE VOLUMES](#)

---

SHOW ABSTRACT



 No Access . November 2017

## Some matrices with Padovan $Q$ -matrix property


Supunnee Sompong, Natthaphat Wora-Ngon, Areeya Piranan and Natnapa Wongkaentow

AIP Conference Proceedings **1905**, 030035 (2017); <https://doi.org/10.1063/1.5012181>

---

SHOW ABSTRACT



 No Access . November 2017

## Numerical simulation of heat transfer in power law fluid flow through a stenosed artery

Amira Husni Talib and Ilyani Abdullah

AIP Conference Proceedings **1905**, 030036 (2017); <https://doi.org/10.1063/1.5012182>

---

SHOW ABSTRACT



 No Access . November 2017

## The type $k$ universal portfolio generated by the $f$ -divergence

Choon Peng Tan and Kuang Kee Seng

AIP Conference Proceedings **1905**, 030037 (2017); <https://doi.org/10.1063/1.5012183>

---

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## **I-tromino tilings of holey squares**

Yean-Nee Tan and Chee Kit Ho

AIP Conference Proceedings **1905**, 030038 (2017); <https://doi.org/10.1063/1.5012184>

---

SHOW ABSTRACT

No Access . November 2017

## **Integrating bathymetric and topographic data**

Su Yean Teh, Hock Lye Koh, Yong Hui Lim and Wai Kiat Tan

AIP Conference Proceedings **1905**, 030039 (2017); <https://doi.org/10.1063/1.5012185>

---

SHOW ABSTRACT

No Access . November 2017

## **Radius of convexity of a certain class of close-to-convex functions**

Abdullah Yahya and Shaharuddin Cik Soh

AIP Conference Proceedings **1905**, 030040 (2017); <https://doi.org/10.1063/1.5012186>

---

SHOW ABSTRACT

No Access . November 2017

## **Applying Laplace Adomian decomposition method for delay differential equations with boundary value problems**

Hamood Mohammed Yousef and Ahmad Izani Ismail

[BROWSE VOLUMES](#)

---

SHOW ABSTRACT



No Access . November 2017

## The Fekete-Szegő problem for a class of analytic functions

Nik Nadiyah Nik Mohd Yusoff and Maslina Darus

AIP Conference Proceedings **1905**, 030042 (2017); <https://doi.org/10.1063/1.5012188>

---

SHOW ABSTRACT



## CONTRIBUTED ORAL PAPERS Theme: Operational Research



No Access . November 2017

## A system dynamics optimization framework to achieve population desired of average weight target

Norhaslinda Zainal Abidin, Jafri Haji Zulkepli and Nerda Zura Zaibidi

AIP Conference Proceedings **1905**, 040001 (2017); <https://doi.org/10.1063/1.5012189>

---

SHOW ABSTRACT



No Access . November 2017

## A modelling framework for mitigating customers' waiting time at a vehicle inspection centre

Norazura Ahmad, Norhaslinda Zainal Abidin, Khibtiyah Ilyas and Waleed Khalid Abduljabbar

AIP Conference Proceedings **1905**, 040002 (2017); <https://doi.org/10.1063/1.5012190>

BROWSE VOLUMES

SHOW ABSTRACT



No Access . November 2017

## Understanding the dynamic effects of returning patients toward emergency department density

Norazura Ahmad, Jafri Zulkepli, Razamin Ramli, Noraida Abdul Ghani and Aik Howe Teo

AIP Conference Proceedings **1905**, 040003 (2017); <https://doi.org/10.1063/1.5012191>

SHOW ABSTRACT



No Access . November 2017

## A defuzzification approach to solve a multi-objective programming problem with fuzzy parameters

Jehan S. Ahmed, Maznah Mat Kasim and Ibrahim Z. Chalooob

AIP Conference Proceedings **1905**, 040004 (2017); <https://doi.org/10.1063/1.5012192>

SHOW ABSTRACT



No Access . November 2017

## Parameter optimization of differential evolution algorithm for automatic playlist generation problem

Kaye Melina Natividad B. Alamag and Joel M. Addawe

AIP Conference Proceedings **1905**, 040005 (2017); <https://doi.org/10.1063/1.5012193>

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## Evaluation and development the routing protocol of a fully functional simulation environment for VANETs

Azhar Tareq Ali, Mohd Nazri Mohd Warip, Naimah Yaakob, Waleed Khalid Abduljabbar and Abdu Mohammed Ali Atta

AIP Conference Proceedings **1905**, 040006 (2017); <https://doi.org/10.1063/1.5012194>

---

SHOW ABSTRACT



No Access . November 2017

## Comparative study on DuPont analysis and DEA models for measuring stock performance using financial ratio

Roslah Arsad, Siti Nabilah Mohd Shaari and Zaidi Isa

AIP Conference Proceedings **1905**, 040007 (2017); <https://doi.org/10.1063/1.5012195>

---

SHOW ABSTRACT



No Access . November 2017

## A review on the modelling of collection and distribution of blood donation based on vehicle routing problem

Nur Arif Azezan, Mohammad Fadzli Ramli and Hafiz Masran

AIP Conference Proceedings **1905**, 040008 (2017); <https://doi.org/10.1063/1.5012196>

---

SHOW ABSTRACT



No Access . November 2017

BROWSE VOLUMES

## Analyzing the factors that influencing the success of post graduates in achieving graduate on time (GOT) using analytic hierarchy process (AHP)

Wan Yung Chin, Chee Keong Ch'ng, Jastini Mohd. Jamil and Izwan Nizal Mohd. Shahrane

AIP Conference Proceedings **1905**, 040009 (2017); <https://doi.org/10.1063/1.5012197>

SHOW ABSTRACT



No Access . November 2017

## A study of metaheuristic algorithms for high dimensional feature selection on microarray data

Muhammad Nasiru Dankolo, Nor Haizan Mohamed Radzi, Roselina Sallehuddin and Noorfa Haszlinna Mustaffa

AIP Conference Proceedings **1905**, 040010 (2017); <https://doi.org/10.1063/1.5012198>

SHOW ABSTRACT



No Access . November 2017

## Prioritizing the causes and correctors of smoking towards the solution of tobacco free future using enhanced analytic hierarchy process

Tisya Farida Abdul Halim, Hasimah Sapiri and Norhaslinda Zainal Abidin

AIP Conference Proceedings **1905**, 040011 (2017); <https://doi.org/10.1063/1.5012199>

SHOW ABSTRACT





## Developing a system dynamics model to analyse environmental problem in construction site

Fatin Fasehah Haron and Nurul Nazihah Hawari

AIP Conference Proceedings **1905**, 040012 (2017); <https://doi.org/10.1063/1.5012200>

---

SHOW ABSTRACT



No Access . November 2017

## Student profiling on university co-curriculum activities using data visualization tools

Jastini Mohd. Jamil and Izwan Nizal Mohd Shahraneer

AIP Conference Proceedings **1905**, 040013 (2017); <https://doi.org/10.1063/1.5012201>

---

SHOW ABSTRACT



No Access . November 2017

## Measuring effectiveness of a university by a parallel network DEA model

Rosmaini Kashim, Maznah Mat Kasim and Rosshairy Abd Rahman

AIP Conference Proceedings **1905**, 040014 (2017); <https://doi.org/10.1063/1.5012202>

---

SHOW ABSTRACT



No Access . November 2017

## Rice growing farmers efficiency measurement using a slack based interval DEA model with undesirable outputs

Sahubak Ali Mohd. Nadhar Khan, Bazamin Bamli and M. D. Azizul Baten

[BROWSE VOLUMES](#)

AIP Conference Proceedings **1905**, 040015 (2017); <https://doi.org/10.1063/1.5012203>

---

SHOW ABSTRACT



No Access . November 2017

## **Pattern analysis of community health center location in Surabaya using spatial Poisson point process**

Chorah Margareta Kusumaningrum, Nur Iriawan and Wiwiek Setya Winahju

AIP Conference Proceedings **1905**, 040016 (2017); <https://doi.org/10.1063/1.5012204>

---

SHOW ABSTRACT



No Access . November 2017

## **Heave motion prediction of a large barge in random seas by using artificial neural network**

Hsiu Eik Lee, Mohd Shahir Liew, Noor Amila Wan Abdullah Zawawi and Iraj Toloue

AIP Conference Proceedings **1905**, 040017 (2017); <https://doi.org/10.1063/1.5012205>

---

SHOW ABSTRACT



No Access . November 2017

## **Nearest greedy for solving the waste collection vehicle routing problem: A case study**

Nur Azriati Mat, Aida Mauziah Benjamin, Syariza Abdul-Rahman and Antoni Wibowo

AIP Conference Proceedings **1905**, 040018 (2017); <https://doi.org/10.1063/1.5012206>

---

BROWSE VOLUMES

SHOW ABSTRACT



No Access . November 2017

## Selection of suitable e-learning approach using TOPSIS technique with best ranked criteria weights

Husam Jasim Mohammed, Maznah Mat Kasim and Izwan Nizal Mohd Shahraneer

AIP Conference Proceedings **1905**, 040019 (2017); <https://doi.org/10.1063/1.5012207>

SHOW ABSTRACT



No Access . November 2017

## Pythagorean fuzzy analytic hierarchy process to multi-criteria decision making

Wan Rosanisah Wan Mohd and Lazim Abdullah

AIP Conference Proceedings **1905**, 040020 (2017); <https://doi.org/10.1063/1.5012208>

SHOW ABSTRACT



No Access . November 2017

## Goal programming for cyclical auxiliary police scheduling at UiTM Cawangan Perlis

Wasilatul Effah Mustapar, Diana Sirmayunie Mohd Nasir, Nor Azriani Mohamad Nor and Sharifah Fahriyah Syed Abas

AIP Conference Proceedings **1905**, 040021 (2017); <https://doi.org/10.1063/1.5012209>

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## Recent developments in machine learning applications in landslide susceptibility mapping

Na Kai Lun, Mohd Shahir Liew, Abdul Nasir Matori and Noor Amila Wan Abdullah Zawawi

AIP Conference Proceedings **1905**, 040022 (2017); <https://doi.org/10.1063/1.5012210>

---

SHOW ABSTRACT

No Access . November 2017

## Selecting university undergraduate student activities via compromised-analytical hierarchy process and 0-1 integer programming to maximize SETARA points

Engku Muhammad Nazri, Nur Ai'Syah Yusof, Norazura Ahmad, Mohd Dino Khairri Shariffuddin and Shazida Jan Mohd Khan

AIP Conference Proceedings **1905**, 040023 (2017); <https://doi.org/10.1063/1.5012211>

---

SHOW ABSTRACT

No Access . November 2017

## Ontology for customer centric digital services and analytics

Ng Wai Keat and Mohammad Shazri Shahrir

AIP Conference Proceedings **1905**, 040024 (2017); <https://doi.org/10.1063/1.5012212>

---

SHOW ABSTRACT

No Access . November 2017

BROWSE VOLUMES

## Analyzing the impact of price subsidy on rice self-sufficiency level in Malaysia: A preliminary finding

Farah Hanim Abdul Rahim, Norhaslinda Zainal Abidin and Nurul Nazihah Hawari

AIP Conference Proceedings **1905**, 040025 (2017); <https://doi.org/10.1063/1.5012213>

---

SHOW ABSTRACT



No Access . November 2017

## Game theoretical framework in determining house prices

Nor Syuhadah Saiddin, Nerda Zura Zaibidi, Nor Intan Saniah Sulaiman and Norhaslinda Zainal Abidin

AIP Conference Proceedings **1905**, 040026 (2017); <https://doi.org/10.1063/1.5012214>

---

SHOW ABSTRACT



No Access . November 2017

## Acute asthma severity identification of expert system flow in emergency department

Nurul Atikah Mohd Sharif, Norazura Ahmad, Nazihah Ahmad and Wan Laailatul Hanim Mat Desa

AIP Conference Proceedings **1905**, 040027 (2017); <https://doi.org/10.1063/1.5012215>

---

SHOW ABSTRACT



No Access . November 2017

## Faecal coliform simulation on sewage discharge for an environmentally sustainable township in Medini Iskandar

BROWSE VOLUMES

Su Yean Teh, Hock Lye Koh, Elizabeth Lee, Wing Thye Woo and Wai Kiat Tan

AIP Conference Proceedings **1905**, 040028 (2017); <https://doi.org/10.1063/1.5012216>

---

SHOW ABSTRACT



No Access . November 2017

## Periodic inventory system in cafeteria using linear programming

Mohd Fais Usop, Ruzana Ishak and Ahmad Ridhuan Hamdan

AIP Conference Proceedings **1905**, 040029 (2017); <https://doi.org/10.1063/1.5012217>

---

SHOW ABSTRACT



No Access . November 2017

## Developing a java android application of KMV-Merton default rate model

Norliza Muhamad Yusof, Aini Hayati Anuar, Norsyaheeda Natasha Isa, Sharifah Nursyuhada Syed Zulkafli and Muhamad Luqman Sapini

AIP Conference Proceedings **1905**, 040030 (2017); <https://doi.org/10.1063/1.5012218>

---

SHOW ABSTRACT



No Access . November 2017

## Multi-dimensional flood vulnerability assessment using data envelopment analysis

Zalina Zahid, Nurul Syuhada Saharizan, Paezah Hamzah, Siti Aida Sheikh Hussin and Siti Shaliza Mohd Khairi

BROWSE VOLUMES

---

[SHOW ABSTRACT](#)

## CONTRIBUTED ORAL PAPERS Theme: Statistics



No Access . November 2017

### Monitoring Poisson observations using combined applications of Shewhart and EWMA charts

Mu'azu Ramat Abujiya

AIP Conference Proceedings **1905**, 050001 (2017); <https://doi.org/10.1063/1.5012220>

---

[SHOW ABSTRACT](#)

No Access . November 2017

### Median based robust correlation coefficient

Nor Aishah Ahad, Suhaida Abdullah, Nur Amira Zakaria, Sharipah Soaad Syed Yahaya and Norhayati Yusof

AIP Conference Proceedings **1905**, 050002 (2017); <https://doi.org/10.1063/1.5012221>

---

[SHOW ABSTRACT](#)

No Access . November 2017

### Double moving average control chart for exponential distributed life using EWMA

Liaquat Ahmad, Muhammad Aslam, Nasrullah Khan and Chi-Hyuck Jun

AIP Conference Proceedings **1905**, 050003 (2017); <https://doi.org/10.1063/1.5012222>

[BROWSE VOLUMES](#)

SHOW ABSTRACT



No Access . November 2017

## Implications of drying temperature and humidity on the drying kinetics of seaweed

Majid Khan Majahar Ali, Ahmad Fudholi, M. S. Muthuvalu, Jumat Sulaiman and Suhaimi Md Yasir

AIP Conference Proceedings **1905**, 050004 (2017); <https://doi.org/10.1063/1.5012223>

---

SHOW ABSTRACT



No Access . November 2017

## Parameter estimation and statistical test of geographically weighted bivariate Poisson inverse Gaussian regression models

Junita Amalia, Purhadi and Bambang Widjanarko Otok

AIP Conference Proceedings **1905**, 050005 (2017); <https://doi.org/10.1063/1.5012224>

---

SHOW ABSTRACT



No Access . November 2017

## A hybrid ARIMA and neural network model applied to forecast catch volumes of *Selar crumenophthalmus*

Ronald L. Aquino, Nialle Loui Mar T. Alcantara and Rizavel C. Addawe

AIP Conference Proceedings **1905**, 050006 (2017); <https://doi.org/10.1063/1.5012225>

---

SHOW ABSTRACT



BROWSE VOLUMES





No Access . November 2017

## Virtual reality rehabilitation for stroke patients: Recent review and research issues

Eza Surya Mohd Arip, Waidah Ismail, Md Jan Nordin and Abduljalil Radman

AIP Conference Proceedings **1905**, 050007 (2017); <https://doi.org/10.1063/1.5012226>

---

SHOW ABSTRACT

No Access . November 2017

## New $S$ control chart using skewness correction method for monitoring process dispersion of skewed distributions

Abdu Atta, Sharipah Yahaya, Zakiyah Zain and Zalikha Ahmed

AIP Conference Proceedings **1905**, 050008 (2017); <https://doi.org/10.1063/1.5012227>

---

SHOW ABSTRACT

No Access . November 2017

## Heterogenous customer satisfaction index for evaluating university food service

Nazrina Aziz, Zakiyah Zain, Nadia Asyikin Mohammad Syarifi, Julia Klivon, Nurasih Che Ap and Mahirah Zaki

AIP Conference Proceedings **1905**, 050009 (2017); <https://doi.org/10.1063/1.5012228>

---

SHOW ABSTRACT

BROWSE VOLUMES

## Robust weights of generalized M-estimator for panel data

Nor Mazlina Abu Bakar and Habshah Midi

AIP Conference Proceedings **1905**, 050010 (2017); <https://doi.org/10.1063/1.5012229>

---

SHOW ABSTRACT



No Access . November 2017

## Zero-truncated negative binomial - Erlang distribution

Winai Bodhisuwan, Chookait Pudprommarat, Rujira Bodhisuwan and Luckhana Saothayanun

AIP Conference Proceedings **1905**, 050011 (2017); <https://doi.org/10.1063/1.5012230>

---

SHOW ABSTRACT



No Access . November 2017

## Forecasting typhoid fever incidence in the Cordillera administrative region in the Philippines using seasonal ARIMA models

Olive R. Cawiding, Gina May R. Natividad, Crisostomo V. Bato and Rizavel C. Addawe

AIP Conference Proceedings **1905**, 050012 (2017); <https://doi.org/10.1063/1.5012231>

---

SHOW ABSTRACT



No Access . November 2017

## Performance of generalized estimating equations using bias-corrected sandwich variance estimators with count outcomes

Taweesak Channgam

BROWSE VOLUMES

AIP Conference Proceedings **1905**, 050013 (2017); <https://doi.org/10.1063/1.5012232>

---

SHOW ABSTRACT



No Access . November 2017

## The stopping rules for winsorized tree

Chee Keong Ch'ng and Nor Idayu Mahat

AIP Conference Proceedings **1905**, 050014 (2017); <https://doi.org/10.1063/1.5012233>

---

SHOW ABSTRACT



No Access . November 2017

## Testing for the validity of purchasing power parity theory both in the long-run and the short-run for ASEAN-5

Niri Martha Choji and Siok Kun Sek

AIP Conference Proceedings **1905**, 050015 (2017); <https://doi.org/10.1063/1.5012234>

---

SHOW ABSTRACT



No Access . November 2017

## Numerical and statistical analyses of aerodynamic characteristics of low Reynolds number airfoils using Xfoil and JMP

John Christian Chua, Neil Stephen Lopez and Gerardo Augusto

AIP Conference Proceedings **1905**, 050016 (2017); <https://doi.org/10.1063/1.5012235>

---

BROWSE VOLUMES

SHOW ABSTRACT



No Access . November 2017

## A comparison of parameter estimations of the Poisson-generalised Lindley distribution

Sunthree Denthet

AIP Conference Proceedings **1905**, 050017 (2017); <https://doi.org/10.1063/1.5012236>

SHOW ABSTRACT



No Access . November 2017

## Prediction of South China sea level using seasonal ARIMA models

Flerida Regine Fernandez, Rodolfo Po III, Neil Montero and Rizavel Addawe

AIP Conference Proceedings **1905**, 050018 (2017); <https://doi.org/10.1063/1.5012237>

SHOW ABSTRACT



No Access . November 2017

## A framework of mixed variables classification in the presence of outliers: A robust location model

Hashibah binti Hamid

AIP Conference Proceedings **1905**, 050019 (2017); <https://doi.org/10.1063/1.5012238>

SHOW ABSTRACT



BROWSE VOLUMES



No Access . November 2017

## Basic needs of Universiti Utara Malaysia students

Suzilah Ismail, Yuhaniz Ahmad and Chang Tzu Enn

AIP Conference Proceedings **1905**, 050020 (2017); <https://doi.org/10.1063/1.5012239>

---

SHOW ABSTRACT

No Access . November 2017

## Optimal parameter estimation for zero-inflated gamma distributions with application to rainfall data of Yom River in Northern Thailand

Maneerat Jaithun and Manad Khamkong

AIP Conference Proceedings **1905**, 050021 (2017); <https://doi.org/10.1063/1.5012240>

---

SHOW ABSTRACT

No Access . November 2017

## Development of Malaysian women fertility index: Evidence from Shannon's entropy

Wan Aznie Fatimah Wan Abd Jalil and Shamshuritawati Sharif

AIP Conference Proceedings **1905**, 050022 (2017); <https://doi.org/10.1063/1.5012241>

---

SHOW ABSTRACT

No Access . November 2017

## A time truncated modified group chain sampling plan based

[BROWSE VOLUMES](#)

Aiman Fikri Jamaludin, Zakiyah Zain and Nazrina Aziz

AIP Conference Proceedings **1905**, 050023 (2017); <https://doi.org/10.1063/1.5012242>

---

SHOW ABSTRACT



No Access . November 2017

## **Additive survival least square support vector machines: A simulation study and its application to cervical cancer prediction**

Chusnul Khotimah, Santi Wulan Purnami, Dedy Dwi Prastyo, Virasakdi Chosuivatwong and Hutcha Sriplung

AIP Conference Proceedings **1905**, 050024 (2017); <https://doi.org/10.1063/1.5012243>

---

SHOW ABSTRACT



No Access . November 2017

## **Granger causality between stock prices and currency exchange rates in Thailand**

Chaiwat Kosapattarapim

AIP Conference Proceedings **1905**, 050025 (2017); <https://doi.org/10.1063/1.5012244>

---

SHOW ABSTRACT



No Access . November 2017

## **Extended generalized exponential power series distribution**

Natcha Kunjiratanachot and Winai Bodhisuwan

AIP Conference Proceedings **1905**, 050026 (2017); <https://doi.org/10.1063/1.5012245>

[BROWSE VOLUMES](#)

[SHOW ABSTRACT](#)

No Access . November 2017

## **Robust linear discriminant analysis with distance based estimators**

Yai-Fung Lim, Sharipah Soaad Syed Yahaya and Hazlina Ali

AIP Conference Proceedings **1905**, 050027 (2017); <https://doi.org/10.1063/1.5012246>[SHOW ABSTRACT](#)

No Access . November 2017

## **Treatment on outliers in UBJ-SARIMA models for forecasting dengue cases on age groups not eligible for vaccination in Baguio City, Philippines**

Clarenz B. Magsakay, Nora U. De Vera, Criselda P. Libatique, Rizavel C. Addawe and Joel M. Addawe

AIP Conference Proceedings **1905**, 050028 (2017); <https://doi.org/10.1063/1.5012247>[SHOW ABSTRACT](#)

No Access . November 2017

## **Structure analysis of tax revenue and inflation rate in Banda Aceh using vector error correction model with multiple alpha**

Hizir Sofyan, Eva Maulia and Miftahuddin

AIP Conference Proceedings **1905**, 050029 (2017); <https://doi.org/10.1063/1.5012248>[BROWSE VOLUMES](#)



No Access . November 2017

## The Topp-Leone generalized Rayleigh cure rate model and its application

Pimwarat Nanthaprut, Winai Bodhisuwan and Mena Patummasut

AIP Conference Proceedings **1905**, 050030 (2017); <https://doi.org/10.1063/1.5012249>

SHOW ABSTRACT



No Access . November 2017

## An application of seasonal ARIMA models on group commodities to forecast Philippine merchandise exports performance

Gina May R. Natividad, Olive R. Cawiding and Rizavel C. Addawe

AIP Conference Proceedings **1905**, 050031 (2017); <https://doi.org/10.1063/1.5012250>

SHOW ABSTRACT



No Access . November 2017

## Estimation of population mean under systematic sampling

Muhammad Noor-ul-amin and Amjad Javaid

AIP Conference Proceedings **1905**, 050032 (2017); <https://doi.org/10.1063/1.5012251>

SHOW ABSTRACT





## A structural equation modeling analysis of students' understanding in basic mathematics

Rini Oktavia, Salmawaty Arif, Ridha Ferdhiana, Syarifah Meurah Yuni and Mahyus Ihsan

AIP Conference Proceedings **1905**, 050033 (2017); <https://doi.org/10.1063/1.5012252>

SHOW ABSTRACT



No Access . November 2017

## Two-sided Topp-Leone Weibull distribution

Krittaya Podeang and Winai Bodhisuwan

AIP Conference Proceedings **1905**, 050034 (2017); <https://doi.org/10.1063/1.5012253>

SHOW ABSTRACT



No Access . November 2017

## Student profiling on university co-curricular activities using cluster analysis

Hemabegai A/P Rajenthiran, Izwan Nizal Mohd Shaharanee and Jastini Mohd. Jamil

AIP Conference Proceedings **1905**, 050035 (2017); <https://doi.org/10.1063/1.5012254>

SHOW ABSTRACT



No Access . November 2017

## Chain sampling plan (ChSP-1) for desired acceptable quality level (AQL) and limiting quality level (LQL)

C. Raju and R. Vidya

AIP Conference Proceedings **1905**, 050036 (2017); <https://doi.org/10.1063/1.5012255>

[BROWSE VOLUMES](#)

---

[SHOW ABSTRACT](#)

No Access . November 2017

## Assessing the stock market volatility for different sectors in Malaysia by using standard deviation and EWMA methods

Shakila Saad, Noryati Ahmad and Maheran Mohd Jaffar

AIP Conference Proceedings **1905**, 050037 (2017); <https://doi.org/10.1063/1.5012256>

---

[SHOW ABSTRACT](#)

No Access . November 2017

## A comparative study on GM (1,1) and FRMGM (1,1) model in forecasting FBM KLCI

Sah Pei Ying, Syerrina Zakaria and Sharifah Sakinah Syed Abd Mutalib

AIP Conference Proceedings **1905**, 050038 (2017); <https://doi.org/10.1063/1.5012257>

---

[SHOW ABSTRACT](#)

No Access . November 2017

## Exploring mathematics anxiety and attitude: Mathematics students' experiences

Nurul Ashikin Sahri, Wan Nur Farahdalila Wan Kamaruzaman, Jastini Mohd. Jamil and Izwan Nizal Mohd. Shaharanee

AIP Conference Proceedings **1905**, 050039 (2017); <https://doi.org/10.1063/1.5012258>

---

[SHOW ABSTRACT](#)[BROWSE VOLUMES](#)



No Access . November 2017

## The presence of chaos in rainfall by using 0-1 test and correlation dimension

Muhamad Luqman Sapini, Nor Syahira Adam, Nursyahirah Ibrahim, Nursyaziella Rosmen and Norliza Muhamad Yusof

AIP Conference Proceedings **1905**, 050040 (2017); <https://doi.org/10.1063/1.5012259>

SHOW ABSTRACT



No Access . November 2017

## Parameter estimation of the zero inflated negative binomial beta exponential distribution

Chutima Sirichantha and Winai Bodhisuwan

AIP Conference Proceedings **1905**, 050041 (2017); <https://doi.org/10.1063/1.5012260>

SHOW ABSTRACT



No Access . November 2017

## Periodicity analysis of tourist arrivals to Banda Aceh using smoothing SARIMA approach

Miftahuddin, Desri Helida and Hizir Sofyan

AIP Conference Proceedings **1905**, 050042 (2017); <https://doi.org/10.1063/1.5012261>

SHOW ABSTRACT



## Effect of water availability in opening containers of breeding site on *Aedes aegypti* life cycle

Najir Tokachil, Nuraini Yusoff, Alif Saaïd, Najwa Appandi and Farhana Harun

AIP Conference Proceedings **1905**, 050043 (2017); <https://doi.org/10.1063/1.5012262>

SHOW ABSTRACT



No Access . November 2017

## Zero inflated negative binomial-Sushila distribution and its application

Darika Yamrubboon, Ampai Thongteeraparp, Winai Bodhisuwan and Katechan Jampachaisri

AIP Conference Proceedings **1905**, 050044 (2017); <https://doi.org/10.1063/1.5012263>

SHOW ABSTRACT



No Access . November 2017

## An economic growth model based on financial credits distribution to the government economy priority sectors of each regency in Indonesia using hierarchical Bayesian method

Septia Devi Prihastuti Yasmirullah, Nur Iriawan and Feronika Rosalinda Sipayung

AIP Conference Proceedings **1905**, 050045 (2017); <https://doi.org/10.1063/1.5012264>

SHOW ABSTRACT



No Access . November 2017

BROWSE VOLUMES

## Spatial analysis for prevalence of type 2 diabetes mellitus – A state investigation

Siti Salsabilah Nabilah Zainal, Maz Jamilah Masnan, Nor Azrita Mohd Amin and Nordin Mohamed

AIP Conference Proceedings **1905**, 050046 (2017); <https://doi.org/10.1063/1.5012265>

SHOW ABSTRACT



No Access . November 2017

## Robust correlation coefficient based on $Q_n$ estimator

Nur Amira Zakaria, Suhaida Abdullah and Nor Aishah Ahad

AIP Conference Proceedings **1905**, 050047 (2017); <https://doi.org/10.1063/1.5012266>

SHOW ABSTRACT



Chemical  
Physics Reviews

First Articles Now Online!

READ NOW >>>

## Resources

AUTHOR

LIBRARIAN

ADVERTISER

## General Information

BROWSE VOLUMES

[ABOUT](#)

[CONTACT](#)

[HELP](#)

[PRIVACY POLICY](#)

[TERMS OF USE](#)

FOLLOW AIP PUBLISHING:



Website © 2020 AIP Publishing LLC.

Article copyright remains as  
specified within the article.

**Scitation**

[BROWSE VOLUMES](#)