

Editorial note

Welcome to Volume 3 of the Electronic Journal of Informatics, which is an annual publication produced by the Faculty of Business and Informatics, Divine Word University. Publication of this journal began in 2019 to promote research culture through intensified research and knowledge exchange from its contributors.

Martin Daniel discusses the manual process of selecting grade twelve school leavers in Papua New Guinea and its challenges, the online selection process and its benefits, and provides some suggestions for further improvement and the optimum use of the online system.

Allan Sumb presents the benefits of mega-events such as Asia Pacific Economic Cooperation, APEC, summit in a host country, contributing to economic development. These benefits include (1) APEC was seen to provide an opportunity for PNG to showcase a positive destination image to the world, (2) the infrastructures built for APEC will remain as legacies of mega-events and continue to benefit PNG and (3) APEC helped the growth of the tourism and hospitality industry.

Peter Anderson presents some issues in solving non-linear polynomial equations. He shows that a simple geometrical problem generates a degree 8 polynomial function after firstly applying Pythagoras' Theorem and then squaring the resulting equation to derive a more elegant polynomial equation. The degree 8 polynomial has 4 real and 4 complex solutions as expected. Squaring introduces extraneous solutions and only one of the final 8 solutions solves the Crossed Ladders problem.

Raunu Gebo Sarsoruo presents differentiability in normed spaces and shows a new approach using common abstractive ideas to develop a better understanding of differentiation. She

shows that foundational concepts from limits that relate to continuity, then to linearity and bilinearity in the form of definitions, theorems and lemmas including some of their proofs provide a better way of understanding differentiability in calculus.

Cyril Sarsoruo presents random variables and convex functions in Stochastic orderings with its applications in mathematics. He shows the basic relationship of probability to random variables followed with convex function and formulations of theorems using the Ohlin lemma in their proofs.

Rik King and **Peter Anderson** present Monte Carlo simulations to estimate Pi. They show that a simple Monte Carlo simulation, using functions from various R packages can be used to calculate π using a variety of polygons to circumscribe a unit circle.

Hope that you find the articles interesting and informative.

Associate Professor Dr Martin Daniel (PhD)
Coordinator and Chief Editor of the Journal