MATRIX

Paper Presentation:

Title of the Research Paper to be presented *	Advancing Modeling Techniques for Count Time Series and Lifetime Data
Title of the Research Project *	Development of an Ingarchx Model for Dengue Cases
Internally funded , Externally funded or Patriotic Research	Internally funded
Keywords	ARIMA, count time series, COVID-19, NB-INGARCH, overdispersed, serially correlated
Type of Research * **(Pls. specify if it is study/project/article)**	Project (internally granted project – SO No. 00133-2022)
Name of Researcher(s)/ Author *	Daisy Lou L. Polestico, Michael L. Ayala
Presenter * **(Pls. specify if (Faculty, Graduate or Undergraduate)**	Daisy Lou L. Polestico (faculty)
Objective(s) *	1. Conduct a simulation study in order to illustrate the performance of the MCMC methods, in terms of parameter estimation and model selection; 2. Provide summary statistics for the weekly dengue cases and meteorological covariates: cumulative rainfall and average maximum temperature; 3. Obtain time series plots of dengue cases and the covariates; 4. Fit and compare linear, Markov switching and threshold INGARCHX models for the dengue cases; 5. Provide one-step-ahead forecasting based on the prediction interval that could offer a useful early warning signal of outbreak detection.
Beneficiaries *	Local DOH, LGU, community, academe
Duration * **(in terms of months)**	6 mos.
Date Started (Mo. & Year) *	January 1, 2022
Date Completed (Mo. & Year) *	June 30, 2022
Approved Cost *	PhP 60, 800.00
Funding Source *	OPF-Research/DR
Type of Presentation * **(Oral/Poster)**	Oral
Type of Conference * **(International/National/Local)**	International

Title of Conference * /Symposium	The 5th International Congress on Natural Sciences with Sisterhood Universities
Venue *	Niigata University, Japan
Date *	September 26-28, 2024
Organizer *	ICNS International Organizing Committee (ICNS iOC) headed by Prof. Norikazu Ohtori, Niigata University, Japan (Congress & IOC Chairman)

IF THE PAPER IS ALREADY PUBLISHED , KINDLY INDICATE THE REQUIRED FIELDS BELOW
Note: A part of the results to be presented is published in the following paper. However, the greater substance will be submitted for publication

Title of the Article Published*	Modeling COVID-19 cases using NB-INGARCH and ARIMA models: A case study in Iligan City, Philippines
Date of Publication *	April 29, 2024
Title of the Journal *	PROCEDIA COMPUTER SCIENCE
Editor/s *	Farahwahida Mohd, Xiaojun Zeng
Publisher *	Elsevier Publications
Vol. No. & Issue No. *	234
Page number(s) and No. of Pages*	pp. 262-269
Type of Publication * (International/National/Local) ISSN/ISBN No. *	International
Indicate indexing of the Journal * Thomson Reuters –Indexed, Scopus-Indexed , CHED Accredited Journals, Others if (pls specify)	Scopus