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[Vol. 184 June 2022: Associate Professor Dr. Norhayati designs simulator for COVID-19 pandemic stochastic modelling](#)





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## [Research](#)

### [Associate Professor Dr. Norhayati designs simulator for COVID-19 pandemic s](#)

8 June 2022

PEKAN, 8 June 2022 – The COVID-19 pandemic recorded a sharp increase in the use of medical equipment in hospitals around the world and particularly in the Ministry of Health Malaysia.

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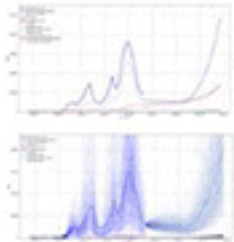
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Newsletter Image

## Features

User can choose figure to be displayed

User can choose the model – no noise DSIRD or under uncontrolled factors SSIRD



From the data, information on the effectiveness of NPI for the country is displayed in form of Reproductive number under different mitigation strategies.

The average duration is displayed to help user plan the future implementation of NPI schedule.

Pandemic data and the fitted model

Prediction for future outbreak based on user input

Display

- Total Infected
- Quarantined
- ICU
- Deceased
- Death

Model

- Pandemic DSIRD
- Stochastic DSIRD
- Reproduction Number,  $R_{eff}$
- Average NPI
- Low NPI
- High NPI
- Average Duration
- Low NPI
- High NPI
- Average Duration
- Low NPI
- High NPI

Real-time Reproductive Number Plot

Ranges of possible situation when noise are perturbed into the system

Real-time Reproduction number is calculated based on the fitted model and the user mitigation plan input