

## **RRI scientists explain the relevance of the mathematical model**

Scientists of the Raman Research Institute (RRI), an autonomous institute of the Department of Science and Technology, have analysed the importance of mathematical models that are being used by scientists for prediction of COVID-19 pandemic for planning future actions and the relevance of these models for the common public.

RRI scientists Joseph Samuel (RRI, ICTS) and Supurna Sinha (RRI) have reached out to the common people and explained the relevance of mathematical models in decision making for citizens and policymakers who may not be from scientific backgrounds.

They have addressed key questions like what one can learn from these models, how seriously they should be taken, why the predictions from different models may differ, and how these models are constructed.

The article seeks to remove the confusion that may be prevailing about models due to the varied predictions that they make. It also elucidates how models have been used by many countries in taking decisions. The scientists have explained that simple models can capture qualitative features well and make predictions based on the value of a few parameters (for instance, the doubling time), which can be gleaned from the past data. As the models get more complicated and realistic, the number of parameters also increases. This results in a new kind of uncertainty stemming from our ignorance of a large number of parameters. Small changes in the parameters can lead to large changes in the outcomes over a period of time.

*For more details please contact Prof. Joseph Samuel, [sam@rri.res.in](mailto:sam@rri.res.in), Mob: 9900130049*

*The article by the scientists is attached here.*

<https://drive.google.com/file/d/1XNryn8PiHH89lwLTsYWg9oXLmXZeixj/view?usp=sharing>