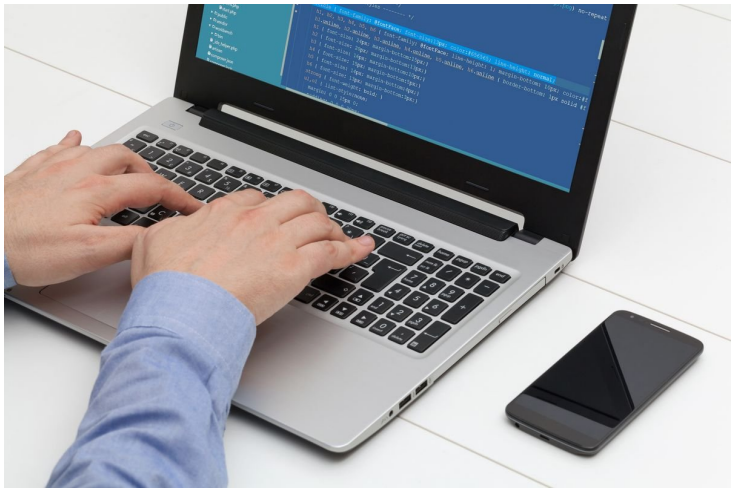
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DST gives nod to mathematical study of COVID-19

05 May 2020 | News

These will be helpful to forecast future pandemic



Science and Engineering Research Board (SERB), a statutory body under the Department of Science and Technology (DST), Government of India, has approved funding for 11 projects under MATRICS scheme for studying Mathematical modelling and computational aspects to tackle the COVID 19 pandemic.

Most of these studies attempt to propose mathematical/ simulation models to account for various factors relevant to COVID 19 by modifying the basic SIR (Susceptible-Infected-Recovered) models. Some of such factors are heterogeneity of population, the role of asymptomatic population, migration and quarantine, effect of social distancing and lockdown, socioeconomic factors and so on.

These studies will be primarily aimed to study Indian conditions and will provide an estimate of Basic Reproduction Number- the qualitative indicator of the degree of contagiousness of the disease.

These will be helpful to forecast future pandemic by using the data available and provide fundamental insights into kinetics and management of infectious diseases.

The proposed studies also aim to identify the maximum likelihood infection tree when infection reports and contact network structure are known to substantially reduce the efforts of the administration by targeting a subset of manageable size.

They will address the spread of pandemic and the impact of preventive issues through a parametric prediction process with an outcome consisting of a packaged solution in the form of usable software which may be made available for ready use by the Government of India and identify possible cure of COVID 19 through the study of DNA structures by creating patterns of DNA of different viruses.