Title of the Project: Mathematical and Statistical Modeling of COVID-19 Outbreak in India
Funding Agency: Science and Engineering Research Board

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Theme: Novel approach to capture the dynamics of COVID-19 outbreak in India, using mathematical and statistical approaches.

Highlights:
(A) Formulated a novel approach to model the dynamics of COVID-19, making use of social distancing considerations.
(B) The model showed an excellent fit to the data for the period considered.
(C) A conservative estimate of undiagnosed cases was 75%.
(D) Significant reduction in rate of effective reproduction rate during the period of nationwide lockdown.
(E) Huge growth rate reduction from pre-lockdown to end of lockdown.
(F) Concurrent reduction of death-to-recovery ratio during this period.
(G) Favorable impact of lockdown under all the four metrics considered.