Simulation analysis of pandemic phenomena

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Research content:

Social and economic impact is increasing globally, and Japan is now at critical bifurcation point. And challenges to make its visualization and "big data" mining have started. In this project, making the most of the "Fugaku" and other supercomputers, estimations of possible future of our social and economic activities, and policy options to control and resolve the situation.
For the purpose, simulations of disease propagation and economic activities, and SNS text mining are applied together with the National Institute of Advanced Industrial Science and Technology,Kyoto University, Tokyo Institute of Technology, the Univesity of Hyogo, the University of Ryukyus and the University of Tsukuba.

Expected results:

✓ Candidates of policy options to control and resolve the disease propagation and its social and economic effects are visible.

✓ Dynamic control of the situation together with localized policy will be clear.

✓ Not only in case of disease propagation, policy options in cases of large scale disasters and accidents will also be guided.

Preliminary simulation result of economic damage after lockdown of Tokyo area: the left figure shows the first days and the right 14th day by Dr. Inoue of the University of Hyogo. In this project, not only the case of lockdown, but also partia restrictions in various areas are searched using the "Fugaku" supercomputer.