



Editor's Desk

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I am writing this with the comfort and convenience that work-at-home provides. IISc has been locked down for two weeks because of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) threat. Classes have been cancelled and laboratories have been closed. Faculty members have been instructed to work from home. The Institute is still functioning, albeit in a low-key mode: essential services continue and administrative staff are coming in to work.

Students, who hail from different parts of the country, had a trickier time as they not only had to leave for home but had to do so at short notice. They all had to make travel bookings within a short time. Fortunately, their smartphones came to their rescue. In a situation like this, the real benefit of mobile communication technology is more visible than ever before. A few thousand students and project assistants could leave the campus at the drop of a hat. This is, by the way, the situation elsewhere in the country and in most parts of the world that are hit by fast-spreading SARS-CoV-2.

With students back home, some universities are better prepared for online instruction and are adapting to the situation that requires *social distancing* (new phrases come about more frequently than novel viruses). I hear that some private engineering colleges in India too are using online instruction. I am not so surprised because of something I had heard from students at a college: “most instructors dump their power-point presentations on us without real teaching”. Colleges that are used to doing it have an advantage in such a crisis.

This, however, does not mean that online instruction cannot be effective. Online classes have their own place if they are done well. Instructors and students could be anywhere and still interact in real time as if they are in the same

room. It is all possible today, thanks to fast communication. With this technology in place, I wonder if real travel for business meetings, academic reviews, etc. could be reduced to the bare minimum after the virus calms down. If unnecessary travel, international travel in particular, were reduced to the bare minimum, this virus would not have spread so fast across continents creating a global crisis affecting the world economy.

The already-impressive communication technology we have in place is only going to get more sophisticated with the advent of 5G, the next generation of wireless broadband technology, which is also the focus of our current issue. Review papers on 5G in this special issue, guest-edited by Chandra R. Murthy and Rajesh Sundaresan, give us a comprehensive overview of the technology and a perspective for the future. Let us hope that 5G will reduce the need for people to frequently move about the planet (and meet online instead, using 5G) in addition to fulfilling many promises it makes.

I want to end by remembering Sir Isaac Newton. During the Great Plague in 1665, Newton—an undergraduate then at Cambridge University—was sent home along with all others. When he was home, he used the privilege of “work-at-home” and “social distancing” to discover his theories on laws of motion, optics, and more. It would be interesting to see what the current mass exodus of students to their homes due to SARS-CoV-2, has in store for us.

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Published online: 4 April 2020