

Responding to a Pandemic

By Seth Hutchinson

As I write this, sitting in my study, where I now pass large blocks of time in the new work-from-home rhythm, the street below is strangely quiet for a warm, mid-April evening in Atlanta. Looking forward in time, it seems impossible to predict how things will be when this column goes to press in early June, a mere two months from now, yet well beyond any reliable prediction horizon. As an engineer, I know that prediction is a difficult game. Good prediction relies on good models, accurate characterizations of uncertainty, and informative observations of state as things evolve, none of which is readily available with respect to the COVID-19 pandemic that now dictates lifestyle for much of the world. And yet, even in the absence of reliable forecasts, decisions must be made—in the case of the IEEE Robotics and Automation Society, these include determinations about conferences (whether to cancel, reschedule, or move to a virtual format), financial matters, new initiatives, and ongoing programs.

Happily, none of these decisions rest with a single individual. Each conference has a team of organizers, chosen based on their expertise and experience. Our Society's administrative and executive committees are populated by wise, rational leaders in our community, supported by an excellent group of full-time IEEE staff. In addition,

the IEEE has a team specifically trained to deal with emergency situations who are already working with us to plan a way forward in these times of uncertainty.

However, even with this outstanding team, optimal outcomes cannot be guaranteed. We, as engineers and scientists, know that under significant uncertainty, optimality in the expected sense is the best one can hope for, and this provides little comfort when dealing with specific outcomes. It is certainly possible that some of the decisions being made now will, in retrospect, seem too conservative or too optimistic, cavalier, or short-sighted. This cannot be avoided. However, I can say with absolute confidence that the people making these decisions are acting in good faith, taking their responsibilities seriously, and considering all of the available data, costs, and benefits as well as the well-being of our Society—in short, that they are stepping up to this challenge, accepting responsibility, and doing their best in service to the research community. When this crisis has passed, we will owe these folks a debt of thanks for their thoughtfulness, their energy, their investment of time, and their commitment.

Some of the more consequential decisions are already known. It was clear some weeks ago that ICRA 2020 could not be held as an in-person meeting in Paris during the first week of June. It has now been decided that the 2020 conference will be a virtual meeting, although, as I write this, it is still not



certain when the meeting will be held. Likewise, the IEEE Haptics Symposium, RoboSoft, and CASE have all decided to move to fully virtual events. Other conference organizers are now in the process

of rescheduling their in-person meetings in the hope that a sufficient delay will give the world time to return to something more normal. These include ISMR, BioRob, COINS, and ICMA.

In all cases, these decisions have been driven by the question of how best

to serve our membership. Safety concerns have been pre-eminent. The quality of the conference experience has been the driving criterion for optimality. Financial consequences to the Society have been, at most, a

secondary concern. It is quite possible that our Society will lose money this year; that is not surprising in a time of crisis, and years of careful budgeting have left us well prepared for such an event.

However, as important as all of this may be for our Society, in the larger scheme of today's reality, how robotists conduct their meetings is not overwhelmingly important. That our community is inconvenienced by travel

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restrictions, might suffer financial losses, could endure research setbacks, or might need to rethink priorities for the coming year or two—none of this

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is likely to garner much sympathy from those whose livelihoods, and even lives, have been jeopardized in the face of this pandemic. As researchers, this is a time to elevate our thoughts and aspirations. In the robotics press, there have recently been a number of articles and editorials outlining the possible role of robotics in fighting this pandemic. I suggest that this is a moment for us, as a research community, to take an even broader view: not only to ask how we can contribute in the face of the current crisis but also to systematically reevaluate our priorities in light of the now-evident fragility of humanity and its supporting ecosystem. This is a moment to do good, improve the human condition, and think beyond ourselves. Let us not miss it.

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