

When we think about innovation, startups and entrepreneurs immediately come to mind. But actually, behind all the innovations around the world is the tireless work of PhD students, working with research faculty. Be it deep learning, the smartphone, MRI machines, driverless car, Google's search engine, gene editing – one force behind all of this is cutting-edge scientific research done by PhD students.

Where are these PhD students in India? Some nameless, faceless people, sitting in closed labs, in no way connected to the society, the industry and the students – their work is unrecognised, unused to solve our many problems and forward the country's innovation agenda.

The Aspiring Minds Foundation is inviting PhD students to present their work at the India Science Fest, to be held in Indian Institutes of Science Education and Research (IISER), Pune on January 11 and 12, 2020. Present how? Through a TED-like talk, a demo, an act or even dance. They need to communicate their thesis work to the thousands of attendees in a simple and engaging way. Not a complex talk like the kinds given in conferences to a bunch of scientists.

The students will rub their shoulders with over 40 scientists who will give public science talks in areas of artificial intelligence (AI), neuroscience, biotechnology, quantum physics, astronomy and others. These are some of the best minds of the world from institutions such as MIT, Harvard, Yale, Tsinghua University, the IITs, National Center For Biological Sciences (NCBS) and International Centre for Theoretical Sciences (ICTS). To add, there will be fascinating science demos such as a brain-controlled helicopter, AI generated art, a driverless vehicle and many more.

Relevance and impact

The submissions of the PhD students will be judged and mentored by the scientists speaking at the event and will win prize money. The presentation should be based on rigorous and impactful scientific work. Equally important, the talk needs to bring out why the work is relevant to us – why anyone should spend time hearing it? How does it impact society? How the work helps the larger scientific field grow? Or, the speaker may provide an analogy to something we experience in our day-to-day life.

Take an example of PhD work around fairness in AI – it is relevant to all of us. We do not want a wrong medical result, because the diagnostic algorithm was built on data of a different ethnic community. Similarly, how our brain builds, keeps and forgets memories is very interesting. And so is the mechanism behind the latest gene modification techniques, what they can and cannot do. These stories need to be told. Science without proper communication renders powerless. The presentation and dissemination is as important as the work itself.

Visit www.indiasciencefest.org/participate to be a speaker at India Science Fest 2020.

The writer is the co-founder of Aspiring Minds and the author of the book, "Leading Science and Technology: India Next?"

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