

## Theory of quantum technologies

**Abstract:** The theory of quantum technologies, a field that is billed as having the potential to revolutionize human abilities of communication, computation, and sensing, is of course quantum mechanics. But there are important inputs, crosscurrents, and restrictions from other areas including information and communication theory, mathematics, engineering, and computer science, in no particular order. We will try to briefly discuss the main contours of the fledgling subject with the focus on efforts within the Department of Atomic Energy.

**Biography:** Ujjwal Sen is a researcher in the theory of quantum technologies at the Harish-Chandra Research Institute in Prayagraj/Allahabad. He did his PhD with Ryszard Horodecki and his postdoctoral fellowship with Maciej Lewenstein. He was a Humboldt fellow and a Ramon-y-Cajal fellow.