

CS Seminar

HKU CS QICI (Quantum Information and Computation Initiative) online seminar

Ultimate limit on time signal generation

Date:

**May 15, 2020
Friday
4:00 pm (HK Time)
[GMT +8]**

Date: May 15, 2020 (Friday)
Time: 4:00 pm (HK Time) [GMT +8]

Zoom:
Conference Link: <https://hku.zoom.us/j/98907385374>
Meeting ID: 989 0738 5374

Title: Ultimate limit on time signal generation

Speakers: Yuxiang Yang (ETH Zürich)

Abstract:

The generation of time signals is a fundamental task in science. Here I will talk about the relation between the quality of a time signal and the physics of the system that generates it. According to quantum theory, any time signal can be decomposed into individual quanta that lead to single detection events. Our main result is a bound on how sharply peaked in time these events can be, which depends on the dimension of the signal generator. I will also discuss how the result may lead to a more accurate clock in the future. The talk will be based on <https://arxiv.org/abs/2004.07857>.

About the speaker:

Yuxiang Yang is a postdoctoral fellow at the Institute for Theoretical Physics, ETH Zurich. He holds a PhD in Computer Science from The University of Hong Kong and a BS in Physics from Tsinghua University. In 2017 he was awarded a Microsoft Research Asia Fellowship for his work in quantum information theory. His research aims to identify quantum advantages in communication and computation, and to design optimal protocols for the next generation of quantum computing devices.

All are welcome!
For enquiries, please call 2859 2180 or email
enquiry@cs.hku.hk
Department of Computer Science
The University of Hong Kong

