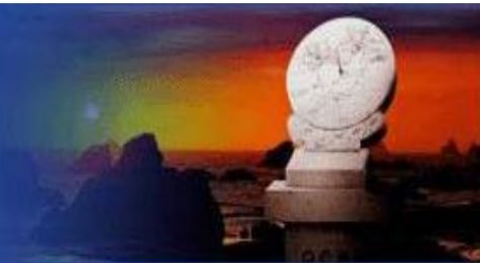




復旦大學

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復旦大學物理系 前沿講座

Ultimate precision limit for quantum metrology

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摘要: Measurement and estimation of parameters are essential for science and engineering, where the main quest is to find out the highest achievable precision with given resources and design schemes to attain it. With recent development of technology, it is now possible to design protocols utilizing quantum mechanical effect to attain far better precision than classical schemes. In this talk I will present a systematic way to identify the ultimate precision limit in quantum metrology and design optimal protocols to achieve it. I will also talk about the tradeoff relation among the precision limit for the estimation of multiple parameters. At the end of the talk, I will briefly mention our summer workshop for PhD applicants of 2024 (see <http://hkpfs.org.cuhk.edu.hk> for the application of the summer workshop)

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地点: 恒隆物理楼 248 多功能会议室



Haidong Yuan received his B.E. in Electronic Engineering from Tsinghua University, M.A. in Engineering science and Ph.D. in Applied Mathematics, both from Harvard University. He did his postdoctoral work at Harvard University and Massachusetts Institute of Technology. From 2012 to 2014 he was an assistant professor at the department of Applied Mathematics, the Hong Kong Polytechnic University. He is with the department of Mechanical and Automation Engineering, the Chinese University of Hong Kong since Sep 2014. His current research interests include quantum control, quantum metrology, quantum information science.