ICFO



PLUS+ TRAINING AND DEVELOPMENT PROGRAM: Four Assorted Quantum Pieces

DR. KAROL ?YCZKOWSKI

April 20, 2021
10:00 to 12:00
Online (Zoom)

Talk 1. On distances in the space of quantum states

Various distances between two quantum states are discussed. Some properties and meaning of the trace, Hilbert-Schmidt and Bures distances and Bures angle related to fidelity will be reviewed, and some useful bounds will be given. More recent results on the transmission distance (square root of the Jensen-Shannon divergence) and the transport distance, related to the Earth-Mover distance of Monge-Kantorovich will also be presented [1]. It is fair to expect that these different distances will find their applications in quantum information and machine learning.

[1] S. Friedland, M. Eckstein, S. Cole and K. ?yczkowski, Quantum Monge-Kantorovich problem and transport distance between density matrices, preprint arXiv:2102.07787

Due to recommendations in place to contribute containing the spreading of COVID-19, th
Theory Lectures will be carried out remotely via Zoom. In case you want to receive
n invitation to attend the online session, you can send an email tAlba.Berenguer@icfo.eu

Hosted by: HRE