

Data processing inequalities for alpha-z Rényi relative entropies and the equality conditions

Haonan Zhang
IST Austria, Austria

Data processing inequality for quantum relative entropy is a fundamental inequality in quantum information theory. The alpha-z Rényi relative entropies are a two-parameter family of quantum Rényi relative entropies. In this talk we give the full range of the parameters (alpha,z) for which the data processing inequalities are valid and discuss their equality conditions. Along the way we review the results of joint convexity/concavity of certain trace functionals, and prove a conjecture of Audenaert and Datta and a conjecture of Carlen, Frank and Lieb. The talk is based on two papers arXiv:1811.01205 and arXiv:2007.06644.

2 Sep 2020, 12:00 (BST)

You can join the event via this link:
<https://us02web.zoom.us/j/82915270598>

More information about the webinar series can be found at the following homepages
<https://www.renyi.hu/~titkos/preserverwebinar.html>
<https://researchseminars.org/seminar/PreserverWebinar>

The slides and video recordings of all previous talks are available in this google drive folder:
drive.google.com/drive/folders/1FZJ6KP1b6dpLrbY2wJMoqj3hYK-IYomx?usp=sharing