Contribution ID: **296** Type: **Talk (preferred)**

Quantum mean states are nicer than you think: finding states maximizing average fidelity

Wednesday 14 December 2022 16:30 (15 minutes)

We compute states that maximize average fidelity over ensembles of quantum states via semidefinite programs. We derive lower and upper bounds to maximal average fidelity that are exact in the commuting scenario. Our results find applications in tomography.

Author: Dr FERRIE, Christopher (Center for Quantum Software and Information, University of Technology Sydney)

Co-authors: AFHAM, A (PhD student, Center for Quantum Software and Information, University of Technology Sydney.); Dr KUENG, Richard (Johannes Kepler University Linz)

Presenter: Dr FERRIE, Christopher (Center for Quantum Software and Information, University of Technology Sydney)

Session Classification: AIP: Quantum Science and Technology

Track Classification: AIP Congress: AIP: Quantum Science and Technology