NITheCS

National Institute for
Theoretical and
Computational Sciences

"Quantum non-Markovianity: an approach from Past-Future Correlations"

ABSTRACT

Quantum memory witnesses can be constructed over the basis of different quantum information measures, which in turn rely on the (unperturbed) system density matrix evolution. Here, an alternative approach to quantum non-Markovianity is presented [PRL 121, 240401 (2018)]. In contrast to previous approaches, its definition relies on three consecutive quantum measurements performed over the system of interest and post-selection. Consistency with classical non-Markovianity and Born-Markov approximation are achieved. Detection of "bidirectional system-environment flows" is performed with the same operational procedure [PRA 103, 012221 (2021)].

BIOGRAPHY

Dr Adrián Budini obtained his PhD degree in physics in 2004 at Institute of Physics, Universidade Federal de Rio de Janeiro, Brazil. After post-doc positions in Germany (Max Planck Institute-Dresden) and Spain (Bifi, Zaragoza), he is a physicist associated with the research council of Argentina(CONICET) in the city of Bariloche. His present research activity is mainly centered in the theory of open quantum systems and classical stochastic dynamics.

CLICK TO REGISTER

https://bit.ly/3B7BTWO

After registering, you will receive a confirmation email containing information about joining the webinar.