ICFO

SEMINAR: Detecting Genuine Multipartite Entanglement Using Moments of Positive Maps

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12:00 to 13:00
Seminar Room

Genuine multipartite entanglement (GME) constitutes the strongest form of quantum correlations in multipartite systems and serves as a key resource for a wide range of quantum information processing tasks. In this talk, I will present an experimentally feasible framework for detecting GME based on truncated moment sequences associated with positive maps. I will then demonstrate the effectiveness of the proposed detection criteria through several examples of both pure and mixed states in tripartite and quadripartite quantum systems. Finally, I will discuss a possible experimental scheme for realizing the required moments, paving the way for practical implementations of the proposed framework.

Hosted by: Prof. Dr. Antonio Acin