# Article information:

Survey on nonlocal games and operator space theory: Journal of Mathematical Physics: Vol 57, No 1
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# Article summary:

1. This article reviews the connection between operator spaces, a noncommutative extension of Banach spaces, and quantum nonlocality.

2. It uses the framework of nonlocal games to relate measures of the nonlocality of quantum mechanics to certain norms in the Banach and operator space categories.

3. Recent results are surveyed which exploit this connection to derive large violations of Bell inequalities, study the complexity of classical and quantum values of games, quantify the nonlocality of different classes of entangled states, etc.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article is written by two authors who have been supported by various grants from Spanish research projects, Singaporean Ministry of Education, Perimeter Institute in Waterloo, Canada and NSF Physics Frontiers Center with support from Gordon and Betty Moore Foundation. This indicates that the authors have access to reliable resources for their research. The article provides an overview on recent findings related to operator spaces and quantum nonlocality using the framework of nonlocal games. It also surveys recent results that exploit this connection to derive large violations of Bell inequalities, study complexity of classical and quantum values of games and quantify the nonlocality of different classes of entangled states. The article does not provide any counterarguments or explore any potential risks associated with these findings which could be seen as a limitation in terms of providing a balanced view on this topic. Additionally, there is no mention about possible biases or sources for these findings which could be seen as another limitation in terms of trustworthiness and reliability.

# Topics for further research:

* Quantum nonlocality risks
* Quantum nonlocality implications
* Quantum nonlocality biases
* Quantum nonlocality complexity
* Bell inequalities violations
* Entangled states nonlocality

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