Non-local games and Quantum Groups
Reading Group | Winter 2019

Rubén Martos

1 Topic

The goal of the reading group is to study the connection between non-local games and compact quantum groups in the context of quantum information theory after the work of Laura Mančiska and D. E. Roberson (among others). More precisely, we want to study the papers *Nonlocal games and quantum permutations groups*, by M. Lupini, L. Mančiska and David E. Roberson as well as the paper *Bigalois Extensions and the Graph Isomorphism Game*, by M. Brannan et al.

2 Practical info

- **Place** : Department of Mathematical Sciences and QMATH Centre, University of Copenhagen.
- **Time** : 10h – 12h.

3 Program

1. **Non-local games** : *January 30*, Laura Mančiska.

2. **Introduction to Compact Quantum Groups** : *February 6*, Rubén Martos.

3. **Quantum Permutation Groups** : *February 13*, Rubén Martos.

4. **Representation Theory of Compact Quantum Groups** : *February 20*, Rubén Martos.

5. **Strategies for synchronous games and the Graph Isomorphism Game** : *February 27*, Jitendra Prakash.

6. **Actions of Compact Quantum Groups. Quantum Permutation Groups revisited** : *March 6*, Rubén

7. **Monoidal Equivalence and Bigalois Extensions** : *March 13*, Rubén Martos.

8. **Quantum Sets, Quantum Graphs and Quantum Isomorphisms of Graphs** : *March 20*, Jitendra Prakash.