## 19th Workshop: Noncommutative Probability, Noncommutative Harmonic Analysis and Related Topics with Applications, 31.07-6.08.2022, Będlewo

## ABSTRACT

## Del Vecchio Simone (Università degli studi di Bari Aldo Moro) Compact Hypergroups from Conformal Subnets

**Abstract**: The question that will be discussed in this talk is: given a conformal net A how can we characterize conformal subnets  $B \subset A$ ? An answer will be provided when the local algebras of the conformal embedding give rise to discrete subfactors (namely either finite Jones index or possibly infinite index with some additional regularity assumption), using the notion of compact hypergroup. I will show how to canonically construct a compact hypergroup from data of the subfactor. This hypergroup has a natural action on A and recovers B as the fixed points of its action, thus generalizing orbifolds by compact groups. Furthermore, the hypergroup contains information on the representation theory of the subnet and all intermediate conformal subnets are given by fixed points of its subhypergroups. The talk is based on joint work with Marcel Bischoff (Ohio University) and Luca Giorgetti (Università degli studi di Roma Tor Vergata).