



Seminar/Talk

On the three-body Hamiltonian for abelian anyons

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Host: Robert Seiringer

Anyons are 2d identical quantum particles with an intermediate exchange symmetry characterized by representations of the braid group. In the abelian case, they can be modelled through the so-called magnetic representation, namely as a system of bosons with an Aharonov-Bohm flux attached to each particle. In this talk, I will discuss the construction of self-adjoint Hamiltonians, different from the Friedrichs realization, for a system of three abelian anyons. I will focus in particular on the Ter-Martirosyan-Skornyakov extensions. This family of Hamiltonians turns out to be parametrized by a suitable boundary operator; I will present a complete classification of its self-adjoint realizations and compute the negative spectrum for the specific case of interest. These results shed light on the possible occurrence of Thomas instability in the three-anyon model. Joint work with Michele Correggi (PoliMi) and Davide Fermi (PoliMi).

Tuesday, September 22, 2026 03:00pm - 04:00pm

Office Bldg West / Ground floor / Heinzl Seminar Room (I21.EG.101)



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