**universität
wien**

E I N L A D U N G

im Rahmen des Seminars für Mathematische Physik
(Joint TU/UV Theory Seminar)

zum Vortrag

von

Patricio Salgado-Rebolledo

(Wroclaw Tech. U.)

über

„Non-relativistic geometry and higher-spins
in the fractional quantum Hall effect"

Abstract:
It is well-known that the low-energy regime of the fractional quantum Hall effect (FQHE)
can be described by Abelian and non-AbelianChern-Simons theories,
while the corresponding chiral edge states are described by rational conformal field theories.
However, other collective excitations exist in the FQHE that cannot be described by
topological field theory.
One example is the long-wavelengthlimit of the Girvin-MacDonald-Platzman (GMP) mode,
a gapped spin-2 mode associated with an internal metric of the system, which can be
described in terms of non-relativistic geometry.
Moreover, in addition to the GMP mode, additional collective excitationsdescribed by
non-relativistic higher-spin fields need to be introduced in the known effective field theory
of the FQHE to reproduce the complete GMP algebra.

Zeit: Dienstag, **27.06.2023, 14.00 h**

Ort: **TU - Sem.R. DA gruen 05 (Freihaus, TU Wien, Wiedner Hauptstrasse 8**

gez.: S. Fredenhagen, D. Grumiller, E. Battista, R. Ruzziconi