



INVITATION

as part of the Mathematical Physics Theory Seminar

to the online talk by

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on

***“3d $N=4$ Chern-Simons matter theories, twisted traces,
and dualities”***

Abstract:

Every 3d $N=4$ theory carries two non-commutative algebras, which are the deformation quantization of the maximal branches of the moduli space of vacua. I will review a conjecture for the familiar quiver gauge theories, relating the sphere partition function to twisted traces on modules over these algebras. The conjecture relies crucially on the assumption that the gauge theory admits topologically-trivial massive vacua. I will show how to extend this conjecture to Chern-Simons-matter theories, which do not satisfy the crucial assumption. Along the way, I will present new Abelian dualities between Chern-Simons-matter theories and gauge theories with higher charges.

Based on arXiv:2604.20959

Time: Tuesday, 19 May 2026, 2:00 p.m.

**Location: Erwin-Schrödinger Lecture Hall, 1090 Vienna, Boltzmannngasse 5, 5th floor
(Live Stream) + online on Zoom**