

## Field $C^*$ -algebra and spectral analysis of quantum many channel Hamiltonians.

*vendredi 1 septembre 2023 10:15 (45 minutes)*

This talk concerns the field  $C^*$ -algebra associated to a symplectic space (in a representation, this is the  $C^*$ -algebra generated by the field operators) and the spectral theory of the self-adjoint operators affiliated to it. The field algebra is graded by the semilattice of finite dimensional subspaces of the symplectic space and this fact has deep consequences in the spectral analysis of the self-adjoint operators affiliated to it, which turns out to be a broad generalization of N-body Hamiltonians. We also briefly mention some results and difficulties in the case of infinite dimensional symplectic spaces, where the field algebra seems to be too small.

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