

## **Algebra of functions on a Hilbert space and QFT**

We consider a space of square-integrable functions  $L^2(H)$  on an infinite-dimensional background space, a central mathematical notion in quantum field theory and stochastic processes. We then examine certain Banach algebras of functions within  $L^2(H)$  that are closed under pointwise multiplication. We describe the character spectrum of these algebras, followed by a discussion on induced CCR relations.