

What is noncommutative functional analysis about?

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Functional analysis is the theory of Banach spaces and their operators. Rooted in the early works on quantum mechanics by Heisenberg and von Neumann, “noncommutative functional analysis” has been developed since the 1980s and is now a vibrant and flourishing area of mathematics. But what are these noncommutative spaces and operators? In my talk I will present a gentle introduction into these ideas and exemplify them by discussing the question when a derivation on a C^* -algebra is inner (when the Hamiltonian of a system can be observed).