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## **Noncommutative Geometry: Why and how?**

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The idea that spacetime might be quantised was already pondered by Heisenberg in 1930s, as a potential remedy to the divergencies lurking in quantum electrodynamics. However, the concept of a ‘noncommutative spacetime geometry’ needed over a half of century to become established as a mathematical structure. Although it has not fulfilled the original Heisenberg’s dream (so far), it revealed a completely new perspective on fundamental physics and has found applications ranging from condensed matter and particle physics to gravity and cosmology.

The lecture will be a friendly introduction to the misty realm of noncommutative geometry. I shall discuss the motivations and basic mathematical concepts basing on the operational paradigm of physics.

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