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## Tackling strongly interacting quantum systems

*Tuesday 28 May 2024 09:15 (30 minutes)*

Nature appears to respect certain laws to exquisite accuracy, for example information never travels faster than light. These laws, codified in quantum field theory, underwrite the Standard Model of particle physics. Recently it is appreciated that this structure is so rigid that there is often a unique quantum field theory compatible with a few additional assumptions. This gives an important new tool to theorists: internal consistency enables precise calculations. I will describe my contributions to this vast effort, and what it teaches us about strongly interacting field theories that appear in two surprisingly related situations: critical phenomena and quantum gravity.

**Presenter:** CARON-HUOT, Simon (McGill University)

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