



Contribution ID: 14

Type: **Invited talk**

Advances in modeling of space-charge effects

Wednesday, 2 October 2024 16:00 (30 minutes)

The nonlinear space-charge effects play an important role in high intensity high brightness particle accelerators.

In this talk, we will report on progress in modeling space-charge effects in recent years.

We will discuss about simulating the space-charge effects using a quantum Schrodinger approach and possible implementation on quantum computers. We will also discuss differentiable space-charge modeling for accelerator design.

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Session Classification: Sessions in Living Room 1+2

Track Classification: D-2 Dynamics – Spin, Precision, Space Charge