



Contribution ID: 558

Type: **Talk (preferred)**

## Quantum algorithm for time-dependent differential equations using Dyson series

*Monday 12 December 2022 16:45 (15 minutes)*

We provide a quantum algorithm for time-dependent differential equations with only logarithmic dependence on the error and derivative. It can be applied to discretised partial differential equations for simulation of classical physics.

**Author:** BERRY, Dominic (Macquarie University)

**Co-author:** Dr COSTA, Pedro (Macquarie University)

**Presenter:** BERRY, Dominic (Macquarie University)

**Session Classification:** AIP: Quantum Science and Technology

**Track Classification:** AIP Congress: AIP: Quantum Science and Technology