Contribution ID: **24** Type: **Seminar**

M. Walters - A New Framework for Strongly-Coupling Physics

Thursday 7 September 2023 15:00 (40 minutes)

While quantum field theory has given us a successful description of physical phenomena at many different length scales, almost all computations are currently limited to systems which are weakly-coupled. I will present a new theoretical framework for solving general strongly-interacting physical systems, which uses universal short-distance data to numerically compute long-distance observables. After presenting a general framework which can be applied to quantum field theories in any number of dimensions, I will then discuss its application to multiple strongly-coupled systems, focusing in particular on recent results studying non-equilibrium dynamics at finite temperature and nonperturbative scattering.