

## **Nuclear Matter properties from the ladder resummation method**

*Friday, April 4, 2025 1:50 PM (20 minutes)*

In this talk I will present a method to compute the properties of dilute nuclear matter from quantum field theory at finite density. This approach provides a parameter-free calculation of the energy per particle of nuclear matter relying only on experimental nucleon-nucleon phase shifts. This method can be used to compute the equation of state of dilute symmetric and neutron matter. As practical application I will show how to use the result for dilute neutron matter to calculate the equation of state of neutron stars.

**Presenter:** ALARCON, Jose Manuel (University of Alcala)

**Session Classification:** Parallel Session (B)