Speaker: **Léo Pioge, Université Libre de Bruxelles**

Title: **Anomalous bunching of nearly indistinguishable bosons**

Date: **Thursday, May 2nd, 14.30 pm**

Place: **Seminar room 915**

Title: **Anomalous bunching of nearly indistinguishable bosons**

Abstract:

The commonly assumed straight link between boson bunching and particle indistinguishability in quantum interferometry has recently been challenged [Nat.~Photon. 17, 702 (2023)]. Exploiting the connection between quantum optical interferences and matrix permanents, it appeared that bunching effects may surpass the expected limit of fully indistinguishable particles by injecting peculiar polarization states of partially distinguishable photons in some interferometers. Surprisingly, all states giving rise to such an anomalous bunching were found to be “far” from the state of fully indistinguishable particles. This presentation explores the following inquiry: Could this intriguing phenomenon extend to scenarios involving "nearly" indistinguishable particles?

Reference: arXiv:2308.12226