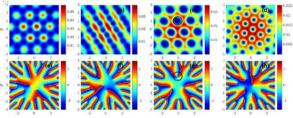
Department of Physics

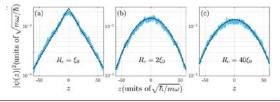
My research interests mainly focus on condensed-matter physics and cold-atom physics. I am particularly interested in the topics where cold atoms provide the platform towards the understanding of condensed-matter problems. The topics we are working on include quantum thermodynamics, disorderinduced thermalization and localization, quantum turbulence, and superconductivity.

Quantum Matters & Cold Atoms

Vortex structures of a fast rotating 2D Rydberg-dressed condensate with LHY correction



Anderson localization of a long-ranged Rydberg-dressed BEC



Wen-Chin Wu, Professor Department of Physics, College of Science wu@ntnu.edu.tw

Background:

PhD in Physics, University of Toronto, Toronto, ON, Canada

Funding:

Ministry of Science and Technology National Taiwan Normal University



Publications

- C.-H. Hsueh, C.-W. Wang, and W. C. Wu, Vortex structures in a rotating Rydberg-dressed Bose-Einstein condensate with the Lee-Huang-Yang correction, *Phys. Rev. A* **102**, 063307 (2020).
- R. Ong, C.-H. Hsueh, and W. C. Wu, Anderson localization in an oscillating Rydberg-dressed condensate with random disorder, *Phys. Rev. A* **100**, 053619 (2019).
- C.-H. Hsueh, R. Ong, J.-F. Tseng, M. Tsubota, and W. C. Wu, Thermalization and localization of an oscillating Bose-Einstein condensate in a disordered trap, *Phys. Rev. A* **98**, 063613(2018).
- R. Joynt and W. C. Wu, Superconductivity in Empty Bands and Multiple Order Parameter Chirality, *Scientific Reports* 7, 12968 (2017).

