

HO Yew Hung Derek
9 Joo Seng Road, #12-20, Singapore 360009
9825 8319
derek.ho@yale-nus.edu.sg

EDUCATION

- Ph.D. Physics, National University of Singapore, 2010 – 2014.
Thesis: “Topological Phenomena in Periodically Driven Quantum Systems”
Ph. D. Supervisor: Jiangbin Gong
- B. Sc. Physics (2nd Class Honours Upper Division), National University of Singapore, 2005 - 2009.

PROFESSIONAL EXPERIENCE

- Research Fellow in the group of Shaffique Adam, National University of Singapore, 2014 – Dec 2017.
- Senior Research Fellow in the group of Shaffique Adam, National University of Singapore, Jan 2018 – Dec 2019.
- Senior Research Fellow in Yale-NUS College, Jan 2019 – present.

PROFESSIONAL AFFILIATIONS

- Institute of Physics, Singapore, Life Member.
- American Physical Society, Member.
- Sigma Pi Sigma NUS Chapter, Member.

PUBLICATIONS

- **D. Y. H. Ho** and J. B. Gong, *Quantized Adiabatic Transport in Momentum Space*, Phys. Rev. Lett. **109**, 010601 (2012) [Editor’s Suggestion].
- H. Wang, **D. Y. H. Ho**, W. Lawton, J. Wang, J. B. Gong, *Kicked-Harper model vs On-Resonance Double Kicked Rotor Model: From Spectral Difference to Topological Equivalence*, Phys. Rev. E **88**, 052920 (2013).
- **D. Y. H. Ho** and J. B. Gong, *Topological Effects in Chiral Symmetric Driven Systems*, Phys. Rev. B **90**, 195419 (2014).
- L. Zhou, H. Wang, **D. Y. H. Ho**, J. B. Gong, *Aspects of Floquet Bands and Topological Phase Transitions in a Continuously Driven Superlattice*, Eur. Phys. Journal B **87**, 204 (2014).
- **D. Y. H. Ho**, I. Yudhistira, N. Chakraborty, S. Adam, *Theoretical Determination of Hydrodynamic Window in Monolayer and Bilayer Graphene from Scattering Rates*, Phys. Rev. B **97**, 121404(R) (2018).
- **D. Y. H. Ho**, I. Yudhistira, B. Y-K. Hu, S. Adam, *Theory of Coulomb Drag in Spatially Inhomogeneous 2D Materials*, Communications Physics **1**, 41 (2018).

INVITED TALKS

- Effective Medium Theory for Coulomb drag, 20th May 2016, Columbia University, New York, U.S.A.
- Theory of Coulomb drag in Spatially Inhomogeneous Materials, 21st April 2017, Italian Institute of Technology, Genova, Italy.

TEACHING EXPERIENCE

- National University of Singapore, Laboratory Teaching Assistant/Demonstrator for PC 3193 (Undergraduate Third Year Experimental Physics Module), Aug 2010 – May 2013.
- National University of Singapore, Mentored an NUS High School student on a senior year research project investigating Coulomb drag in graphene, Aug 2014 – June 2015.
- National University of Singapore, Mentored a Yale-NUS undergraduate performing research on electron hydrodynamics in graphene that resulted in a publication in Physical Review B Rapid Communications, Aug 2015 – Dec 2017.
- Yale-NUS College, Teaching YSC 4207: Solid State Physics, Jan 2019 – present.
- Yale-NUS College, Teaching YCC 2137: Scientific Inquiry 2, Aug 2019 – Dec 2019.
- Yale-NUS College, Teaching YSC 1220: More is Different: Emergence in Physical Systems, Aug 2019 – Dec 2019.
- Yale-NUS College, Teaching YSC3210: Introduction to Quantum Mechanics, Aug 2020 – present.