

NIMS Award 2021 Winner

Prof. Allan H. MacDonald

Professor of Physics,
University of Texas at Austin

Research Field

Condensed Matter Theory



History

1969-1973 St. Francis Xavier University, Canada, B.Sc.
1973-1978 University of Toronto, Canada, Ph.D.
1978-1981 Postdoctoral Research, National Research Council of Canada, Ottawa
1981-1987 Research Scientist, National Research Council of Canada, Ottawa
1987-2000 Professor of Physics, Indiana University, Bloomington IN, USA
2000- Professor of Physics, University of Texas, Austin TX, USA

Major Awards

1987 Herzberg Medal (Canadian Association of Physicists)
2007 Oliver Buckley Prize (American Physical Society)
2012 Ernst Mach Honorary Medal (Czech Academy of Sciences)
2020 Wolf Prize (Wolf Foundation)

Major Publications/Books

- 1) "Moire bands in twisted double-layer graphene",
Bistritzer, R.; MacDonald, Allan H., PNAS **108**, 12233 (2010).
- 2) "Universal Intrinsic Spin-Hall Effect", Sinova, Jairo; Culcer, Dimitri; Niu, Qian; Sinitsyn, N. A.; Jungwirth, T.; MacDonald, Allan H., Phys. Rev. Lett. **92**, 126603 (2004).
- 3) "Magnetoroton Theory of Collective Excitations in the Fractional Quantum Hall Effect",
Girvin, S. M.; MacDonald, Allan H.; Platzman, P. M., Phys. Rev. B **33**, 2481 (1986).