

Robert Shrock Named Distinguished Professor

Written by Administrator

Wednesday, 16 March 2022 15:33

The Institute is proud that its long-term faculty member Robert Shrock has been appointed to the rank of Distinguished Professor in recognition of his numerous contributions to the theory and phenomenology of high energy physics. Robert's work helped establish the electroweak sector of the Standard Model of elementary particles and forces, and continues to provide guidance to experimental searches for physics beyond the Standard Model.

These include the analysis of lepton number non-conservation, proposals for novel and theoretically consistent measurements of neutrino masses and mixing in particle and nuclear decays, the proposal of invisible decays of the Higgs boson, explorations of neutron-antineutron oscillations and investigations of strongly-coupled quantum field theories, among many others.

His theoretical work has proved essential in current experiments, and in the planning for future ones in the United States and elsewhere. These include experiments that search for forces beyond the Standard Model in rare decays, conducted at many international sites, including Brookhaven National Laboratory. His research helped set the stage for ongoing experiments at the Fermi National Laboratory, such as MicroBooNE on neutrinos and Mu2e on lepton number non-conservation, and is an integral part of the planning for the flagship domestic project of U.S. high energy physics, the Deep Underground Neutrino Experiment.