Evolution is the result of many competing and balancing mechanisms including mutation, natural selection, genetic drift and recombination. The 'rate of adaptation' measures how quickly populations adapt to a new environment by incorporating beneficial mutations. The nonlinear effects of natural selection and recombination on the rate of adaptation are difficult to quantify. We discuss how the Girsanov transform can be applied to deal with such difficulties. This is based on joint work with Feng Yu.

Speaker Biography
Yang Yuxin is a post-doctoral researcher of population genetics at the University of Bristol. Her research focuses on stochastic analysis on infinite dimensional manifolds, with applications to population genetics and finance. She received her Ph.D. in Mathematics from the University of Warwick, M.S. in Mathematics from the Courant Institute (New York University), M.Sc. in Financial Engineering from the National University of Singapore, and Bachelor in Accountancy (First Class Honours) from Nanyang Technological University. Between her undergraduate and doctoral educations, she spent seven years in the finance industry, working in areas including risk management, IT, financial auditing and tax consultancy.