Title: Classical/quantum correspondence in Lindblad evolution

Abstract: Lindblad evolution is a standard model for describing a (Markovian) quantum interaction with a larger system. I will introduce this concept and present results showing that the evolution of a quantum observable remains close to the classical Fokker–Planck evolution in the Hilbert–Schmidt norm for times vastly exceeding the Ehrenfest time (the limit of such agreement with no interaction with a larger system). The time scale is the same as in two recent papers by Hernndez–Ranard–Riedel but the statement and methods are different. The talk is based on joint work with J Galkowski and numerical results obtained jointly with Z Huang. I will also comment on recent progress on trace class estimates by Z Li and on the hypoelliptic case by H Smith.