多尺度动力学问题研讨会日程

2018年10月15日 14：00-17：00研讨会报到

2018年10月16日 10：00-12：30主旨报告会 地点：格物楼503

2018年10月16日 14：00-17：00座谈会 地点：格物楼503

2018年10月17日 离会

主旨报告会题目：Uncertainty quantification for multiscale kinetic equations with uncertain coefficients

报告摘要：

In this talk we will study the generalized polynomial chaos-stochastic

Galerkin (gPC-SG) approach to kinetic equations with uncertain coefficients/inputs, and multiple time or space scales, and show that they can be made asymptotic-preserving, in the sense that the gPC-SG scheme preserves various asymptotic limits in the discrete space.

This allows the implementation of the gPC methods for these problems without numerically resolving (spatially, temporally or by gPC modes) the small scales. Rigorous analysis, based on hypocoercivity of the collision operator, will be provided for general kinetic equations to prove uniform convergence toward the local or global equilibrium, and the spectral convergence of the gPC-SG method.