

Energy conserving numerical schemes for Vlasov Ampere and Vlasov Maxwell systems

Yingda Cheng, Michigan State University

In this talk, we will introduce energy conserving schemes for Vlasov Ampere and Vlasov Maxwell systems. The proposed methods preserve the total energy of the system, and they have a systematic framework to incorporate explicit and implicit temporal discretizations. The discontinuous Galerkin methods with suitable numerical fluxes are used to guarantee such properties.