



THE HONGKONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON APPLIED MATHEMATICS

**Charge and energy preserving numerical methods
for Vlasov-Maxwell equations**

By

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Abstract

This talk is devoted to grid-based methods for the numerical approximation of the Vlasov-Maxwell equations which is widely used to describe charged particles system. In particular, we will focus on the time integration and discuss exponential methods and splitting methods which turn out to be particularly attractive for Vlasov type equations. The preservation of important invariants (Gauss law or total energy) will be discussed as well.

Date : 16 April 2025 (Wednesday)

Time : 5:00pm - 6:00pm

Venue : Room 4475 (Lift 25/26)

All are Welcome!