



# Numerical Analysis Seminar

## Compact WENO Limiters for Discontinuous Galerkin Methods

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### Abstract

Discontinuous Galerkin (DG) method is a class of finite element methods that has gained popularity in recent years due to its flexibility for arbitrarily unstructured meshes, with a compact stencil, and with the ability to easily accommodate arbitrary h-p adaptivity. However, some challenges still remain in specific application problems. In this talk, we design compact limiters using weighted essentially non-oscillatory (WENO) methodology for DG methods solving hyperbolic conservation laws, with the goal of obtaining a robust and high order limiting procedure to simultaneously achieve uniform high order accuracy and sharp, non-oscillatory shock transitions. The main advantage of these compact limiters is their simplicity in implementation, especially on multi-dimensional unstructured meshes.

Date: January 26, 2022 (Wednesday)

Time: 4:00 - 5:00pm (Hong Kong Time)

Venue: ~~Room 309, Run Run Shaw Bldg., HKU~~  
and

ZOOM: <https://hku.zoom.us/j/>

Meeting ID: 913 6532 3891

Password: 310656