



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學



DEPARTMENT OF APPLIED MATHEMATICS

應 用 數 學 系

**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium

The elastodynamic models and numerical computation

By

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Abstract

The theory of elastic shells is one of the important branches of the theory of elasticity. In this talk, we discuss several kinds of elastodynamic shell models, i.e., the time-dependent Koiter model, the time-dependent generalized membrane model, the time-dependent elliptic membrane model and the time-dependent flexural model, which have not been addressed numerically. We propose space-time full discretization schemes for several models. The corresponding analyses of existence, uniqueness, stability, convergence and priori error estimates are given. Finally, we provide numerical experiments with several kinds of shells to demonstrate the efficiency of models and the stability and convergence of numerical schemes.

Date : 9 Sept, 2020 (Wednesday)

Time : 15:00-16:00 (Hong Kong Standard Time GMT +8)

Venue : Online Talk via Zoom(Meeting ID: 927 3707 0867)

Click to join : <https://polyu.zoom.us/j/92737070867>



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