



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**

Hamiltonian system with singular Hamiltonians

**By**

**Prof. Shi Jin  
Shanghai Jiao Tong University**

**Abstract**

We consider Hamiltonian mechanical systems with potential functions admitting jump discontinuities. We first introduce the notion of solutions, which is consistent to the physical laws of reflection and refraction. Then we construct numerical schemes for such problems. In particular we will study the symplectic and time-reversible integrators for such problems.

**Date : 22 April 2021 (Thursday)**

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

**Venue : Online Talk via Zoom (Meeting ID: 948 1596 6934)**

**Speaker : Prof. Shi Jin, Shanghai Jiao Tong University**

**Host : Dr. Zhonghua Qiao, The Hong Kong Polytechnic University**

**Click to join :**

<https://polyu.zoom.us/j/94815966934?pwd=cUM1N1U1L3BERTVlazVOK0pCOUltQT09>



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**\*\*\* ALL ARE WELCOME \*\*\***

For enrolment, please send your name and email to [shuk-wai.ko@polyu.edu.hk](mailto:shuk-wai.ko@polyu.edu.hk) on or before 21 April 2021