THE UNIVERSITY   **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

Numerical Analysis Seminar

Complexes from complexes

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Abstract

The Maxwell equations have a close connection to the de-Rham complex. This differential form point of view inspired the development of numerical methods, particularly in the framework of finite element exterior calculus (FEEC). This talk discusses other continuous and discrete differential complexes with backgrounds in continuum mechanics, geometry and general relativity. These complexes bridge several topics, including algebra, topology (cohomology), analysis (Korn inequalities, compactness) and numerics. The construction is inspired by the Bernstein-Gelfand-Gelfand (BGG) construction.

Date:	October 5, 2022 (Wednesday)
Time:	4:00 – 5:00pm (Hong Kong Time)
Venue:	ZOOM: https://hku.zoom.us/j/
	Meeting ID: 913 6532 3891
	Password: 310656

All are welcome