



Department of Mathematics  
The Chinese University of Hong Kong

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數學系  
香港中文大學

Phone: (852) 3943 7988-9 • Fax: (852) 2603 5154 • Email: dept@math.cuhk.edu.hk  
Rm. 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

# Representation and Number Theory Seminar

**(Newton stratification and weakly  
admissible locus in p-adic Hodge theory)**

*by*

***(Professor Miaofen Chen)***  
*(East China Normal University)*

**Abstract:**

Rapoport and Zink introduce the p-adic period domain (also called the admissible locus) inside the rigid analytic p-adic flag varieties. The weakly admissible locus is an approximation of the admissible locus in the sense that these two spaces have the same classical points. On the flag variety, we have the Newton stratification parametrized by the isomorphism classes of the modifications of G-bundles on the Fargues-Fontaine curve. In this talk, we consider the condition that the weakly admissible locus is maximal (i.e. the weakly admissible locus is a union of Newton strata). This unifies the extreme cases when the weakly admissible locus equals to the admissible locus or the whole flag variety. We will give several equivalent criterions for the condition that the weakly admissible locus is maximal. We will also give a group theoretic classification for this condition when G is absolutely simple. Moreover, we give a criterion when a single Newton stratum is contained in the weakly admissible locus. This is a joint work in progress with Jilong Tong.

Date : February 15, (Tuesday)

Time : 9:00am – 10:00am (Hong Kong SAR)

Zoom link :

<https://cuhk.zoom.us/j/97838822137?pwd=ZTVvSC9abmNjR3RCcS9FTzJNTVhXdz09>

Meeting ID : 978 3882 2137

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*All are Welcome*