ON THE HODGE-TATE CRYSTALS OVER $\mathcal{O}_K$

Abstract. The prismatic theory is established by Bhatt-Scholze and plays an important role in the integral p-adic Hodge theory. In this talk, We will focus on the Hodge-Tate crystals; that is, vector bundles with coefficients in $\overline{\mathcal{O}}_{\mathbb{\Delta}}$ over $\mathcal{O}_K$. I will show that a Hodge-Tate crystal is determined by a "nilpotent" matrix and related to a $\mathbb{C}_p$-representation. Also, I will compute its absolute prismatic cohomology. This is a joint work with Yu Min.