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An alternative description of Drinfeld space and applications

Let F be a finite extension of \mathbb{Q}_p of degree d and let E/F be a quadratic extension with ring of integers O_E . In this lecture I will explain how Drinfeld's formal 'upper half plane' also arises as a moduli space for p-divisible groups of dimension 2d and height 4d with an action of O_E and a polarization which may be principal or not depending on whether E/F is ramified or not. If time permits, I will explain how to use this model of Drinfeld space to give new examples of p-adic uniformization of certain Shimura varieties. This is joint work with Michael Rapoport.