Xinwen Zhu: **The geometric Satake isomorphism for p-adic groups**

The geometric Satake isomorphism (for a (split) reductive group over an equal characteristic local field) is a fundamental theorem in the geometric Langlands program. However, for certain arithmetic applications, it would be desirable to establish a similar statement for (split) p-adic groups. It turns out that this is possible, if one works in a world of algebraic geometry built from perfect rings in characteristic p. Time permitting, I will also explain some potential arithmetic applications of this new geometric Satake.