Mini-cours : The non-archimedean SYZ fibration

The SYZ conjecture gives a geometric description of the relation between mirror pairs of Calabi-Yau varieties. It was a fundamental insight of Kontsevich and Soibelman that the structures predicted by the SYZ conjecture can be found in the world of non-archimedean geometry (Berkovich spaces). I will explain some of the main ideas, as well as the connections with the minimal model program in birational geometry. If time permits, I will also discuss how these results have led to a proof of Veys's conjecture on poles of maximal order of p-adic zeta functions. These talks are based on joint work with Mircea Mustata and Chenyang Xu.

Reference. "Berkovich skeleta and birational geometry"in: M. Baker and S. Payne (eds.), Nonarchimedean and Tropical Geometry, Simons Symposia, pages 179-200 (2016), arXiv:1409.5229

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