October 3: Cheng-Chiang Tsai (MIT), "Components of affine Springer fibers."

We explain how p-adic orbital integral provides a natural way to think about dimension and number of components of affine Springer fibers. The dimension formula (conjectured in Kazhdan-Lusztig and proved by Bezrukavnikov) of regular semisimple affine Springer fibers will be realized as an affine generalization of the well-known dimension formula for Springer fibers, and one can formulate a similar conjecture outside regular semisimple case. As a new result, we prove that for $\gamma = t\gamma_0$ with γ_0 topologically nilpotent, the number of components of the Iwahori affine Springer fiber above γ modulo centralizer is equal to $|W|$.