April 15: Qëndrim Gashi (MPI Bonn), “A converse to Mazur’s inequality.” Followed by dinner. Given an isocrystal $N$ and a lattice $M$ in it, Mazur proved that the Hodge vector of $M$ lies above the Newton vector of $N$. The converse to Mazur’s Inequality, due to Kottwitz and Rapoport, is the assertion that given a vector $v$ that lies above the Newton vector of $N$ (and satisfies certain obvious conditions), there exists a lattice $M$ whose Hodge vector is equal to $v$. These statements can be viewed as statements for the group $GL_n$ and it is known that they can be formulated for other reductive groups. We prove the (generalized) converse to Mazur’s Inequality for split and quasi-split groups and discuss some implications of the proof.