April 20, 2016: Pavel Etingof (MIT), *The Broué-Malle-Rouquier conjecture on Hecke algebras of complex reflection groups.*

In 1998, Broué, Malle, and Rouquier attached a Hecke algebra $H(W)$ to every finite complex reflection group W, and conjectured that $H(W)$ is a free module of rank $|W|$ over the ring R of parameters. Using complex analysis, they proved their conjecture for formal parameters, but in the non-formal setting it remains open. However, in characteristic zero it was settled in 2014 in the works of Losev and Marin-Pfeiffer. More precisely, Marin and Pfeiffer settled it outside of rank 2, while in rank 2 it follows from the results of Losev (2014) and Rains and myself (2005). I will discuss the BMR conjecture and the ideas behind its proof.