

**Speaker:** Carel Faber

**Title:** Arithmetic and geometry of the moduli space of curves

**Abstract.** Recently, substantial progress has been made in the study of the cohomology of the moduli spaces of curves, through the work of many people. I will present an overview of these results. Counts of curves over finite fields play an important role. I will also discuss some of what is known (or not known) concerning modular forms and the associated Galois representations or motives in this context.