Will give a lecture entitled
The global geometry of the moduli space of curves

Abstract:
The moduli space of curves $M_g$ is the universal parameter space for Riemann surfaces of given genus. Its study has been initiated by Riemann in 1857 and it has been a long-standing problem to describe the nature of the moduli space as an algebraic variety. I will survey the history of the problem starting with Severi's conjecture from 1915 predicting that $M_g$ is always unirational, continuing with the work of Harris and Mumford spectacularly disproving Severi's conjecture and finally discussing very recent results obtained jointly with Jensen and Payne which settle this problem in two of the most interesting remaining cases, those of genus 22 and 23.