Galois representations associated to modular forms and Hida theory
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It is known that, for each eigen cuspform f of weight k for GL(2), we associated a Galois representation which carries essential informations of f. This is proved by Eichle and Shimura for $k = 2$ and generalized by Deligne and Shimura for $k > 2$. The proof by Shimura is different from that of Deligne, but it is important since the Shimura's method inspired Hida to develop his theory called Hida theory. I will recall these stories and explain what Hida theory is. These stories lead to generalized Hida theories, Galois deformations and modularity and the theory of eigen curves by Coleman-Mazur. If time permits, I will comment on such topics which are studied actively these days