Math 296 - Graduate Student Colloquium

Claus Sorensen
UCSD

Automorphic forms and Galois representations

Abstract:
The goal of the talk is to give some idea of what the all-important Langlands program is all about, and it is aimed at a general audience with no or limited experience in number theory. For $GL(2)$ we will illustrate these ideas by discussing the case of elliptic curves and modular forms, which led to a proof of Fermat’s Last Theorem! We will then try to give a flavor of what’s expected for $GL(n)$, and point to how the so-called $p$-adic Langlands program was envisaged. This ties up with the number theory topics class offered in the Spring quarter.