

Mathematics Department Colloquium

Organizer: Maciej Zworski

Thursdays, 4:10–5:00pm, 60 Evans

February 17 **Elena Mantovan**, UC Berkeley

Langlands's conjectures and Shimura varieties

In 1967, Langlands suggested the existence of a relation between two seemingly unrelated mathematical objects: Galois representations and automorphic representations. Since then, the work of many mathematicians has focused on isolating and constructing algebraic varieties whose geometry is supposed to explain the existence of such correspondences.

For correspondences defined over a number field, this role is played by Shimura varieties. In my talk I will discuss some aspects of Langlands's conjectures and how they are reflected in the geometry of the Shimura varieties.