Langlands parametrization for covering groups

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The Langlands program posits that automorphic forms associated to a reductive group are parametrized by Galois representations valued in its dual group. About ten years ago, Weissman-Gan-Gao proposed an extension of the Langlands program which puts covering groups (such as the metaplectic group) under the same framework. In this talk, I will introduce a formalism of covering groups based on étale cohomology and explain its applications to the Langlands program. This formalism also suggests a close relationship between covering groups and quantization of gauge theory.