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Zeta Functions of Shimura Varieties : Past, Present, and the Near Future

Abstract : I will first recall the general expectations of Shimura, Langlands, and Kottwitz on the shape of the zeta function of a Shimura variety, or more generally its étale cohomology. I will then report on some recent progress which partially fulfills these expectations, for Shimura varieties of unitary groups and special orthogonal groups. Finally, I will give a preview of some foreseeable developments in the near future.