

Contents

Chapter 1.	Introduction	1
Chapter 2.	Preliminaries	9
Chapter 3.	Preliminary analysis	25
Chapter 4.	Green's functions on $GL(2, \mathbb{R})$	33
Chapter 5.	Green's functions on $GL(2, F_v)$ with v a non archimedean place	37
Chapter 6.	Kernel functions	41
Chapter 7.	Regularized periods	47
Chapter 8.	Automorphic Green's functions	55
Chapter 9.	Automorphic smoothed kernels	59
Chapter 10.	Periods of regularized automorphic smoothed kernels: the spectral side	67
Chapter 11.	A geometric expression of automorphic smoothed kernels	75
Chapter 12.	Periods of regularized automorphic smoothed kernels: the geometric side	91
Chapter 13.	Asymptotic formulas	101
Chapter 14.	An error term estimate in the Weyl type asymptotic law	111
Chapter 15.	Appendix	123
	Bibliography	127