

1. Record Nr.	UNINA9910465208903321
Autore	Harris Michael
Titolo	The Geometry and Cohomology of Some Simple Shimura Varieties. (AM-151), Volume 151 // Richard Taylor, Michael Harris
Pubbl/distr/stampa	Princeton, NJ : , : Princeton University Press, , [2001] ©2002
ISBN	1-4008-3720-0
Descrizione fisica	1 online resource (288 p.)
Collana	Annals of Mathematics Studies ; ; 163
Disciplina	516.3/5
Soggetti	Mathematics Shimura varieties MATHEMATICS / Number Theory Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Frontmatter -- Contents -- Introduction -- Acknowledgements -- Chapter I. Preliminaries -- Chapter II. Barsotti-Tate groups -- Chapter III. Some simple Shimura varieties -- Chapter IV. Igusa varieties -- Chapter V. Counting Points -- Chapter VI. Automorphic forms -- Chapter VII. Applications -- Appendix. A result on vanishing cycles / Berkovich, V. G. -- Bibliography -- Index
Sommario/riassunto	This book aims first to prove the local Langlands conjecture for GL_n over a p -adic field and, second, to identify the action of the decomposition group at a prime of bad reduction on the l -adic cohomology of the "simple" Shimura varieties. These two problems go hand in hand. The results represent a major advance in algebraic number theory, finally proving the conjecture first proposed in Langlands's 1969 Washington lecture as a non-abelian generalization of local class field theory. The local Langlands conjecture for $GL_n(K)$, where K is a p -adic field, asserts the existence of a correspondence, with certain formal properties, relating n -dimensional representations of the Galois group of K with the representation theory of the locally compact group $GL_n(K)$. This book constructs a candidate for such a local Langlands correspondence on the vanishing cycles attached to the

bad reduction over the integer ring of K of a certain family of Shimura varieties. And it proves that this is roughly compatible with the global Galois correspondence realized on the cohomology of the same Shimura varieties. The local Langlands conjecture is obtained as a corollary. Certain techniques developed in this book should extend to more general Shimura varieties, providing new instances of the local Langlands conjecture. Moreover, the geometry of the special fibers is strictly analogous to that of Shimura curves and can be expected to have applications to a variety of questions in number theory.
