

Errata for **Automorphic Forms and Representations**
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Note: a negative line number is a line number counted upwards from the bottom of the page.

- p.22, line 5: Figure 2 should be Figure 1.
- p.30, line 15: ‘to get rid $\epsilon(\gamma)$ ’ should be ‘to get rid of $\epsilon(\gamma)$ ’.
- p.34, Exercise 1.3.2(a): ‘An *elliptic function* with respect to the lattice Λ , is meant a meromorphic ...’ should be ‘By an *elliptic function* with respect to the lattice Λ , we mean a meromorphic ...’.
- p.36, line -5: ‘such there’ should be ‘such that there’.
- p.41, line -15: ‘if’ is missing before ‘it *vanishes*’.
- p.43, line -9: ‘that’ is missing after ‘such’.
- p.51, right after Exercise 1.4.7: one line of space should be added.
- p.53, line 4: Theorem 3.3.11 should be Theorem 3.3.6
- p.53, last line and p.54 first line: ‘Deligne and Serre(1974)’ should be ‘Deligne(1971) and Deligne and Serre(1974)’.
- p.97, bottom:

$$\chi(\mathfrak{p}) = \begin{cases} -1 & \text{if } \mathfrak{p} \text{ splits in } K; \\ -1 & \text{if } \mathfrak{p} \text{ is inert in } K; \\ -0 & \text{if } \mathfrak{p} \text{ ramifies.} \end{cases}$$

should be

$$\chi(\mathfrak{p}) = \begin{cases} 1 & \text{if } \mathfrak{p} \text{ splits in } K; \\ -1 & \text{if } \mathfrak{p} \text{ is inert in } K; \\ 0 & \text{if } \mathfrak{p} \text{ ramifies.} \end{cases}$$

- p.99, equation (8.13):

$$\begin{pmatrix} & \tau(\sigma\gamma^{-1}) \\ \tau(\gamma\sigma) & \end{pmatrix} \text{ should be } \begin{pmatrix} & \tau(\gamma\sigma) \\ \tau(\sigma\gamma) & \end{pmatrix}$$

- p.101, paragraph 2: In this paragraph, n and r should be switched except those appearing in $GL(r, E)$ and $GL(nr, F)$.
- p.110, line 6: ‘It is, of course possible...’ should be ‘It is, of course, possible...’, i.e. the comma is missing.
- p.130, equation (1.5): $f|_k g$ should be $(f|_k g)(z)$.
- p.141, proof of Proposition 2.1.7: $\Gamma \backslash G / \mathbb{Z}^+$ should be $\Gamma \backslash G / Z^+$
- p.165, line 13: ‘self-adjointed’ should be ‘self-adjoint’.
- p.168, line 5: ‘a’ before ‘accomplished’ should be omitted.
- p.170, line -14: ‘upper bounded’ should be ‘upper bound’.
- p.173, Proposition 2.3.2: $e^{2\pi i k \theta} f$ should be $e^{i k \theta} f$.
- p.176, line 1: $L^2(\Gamma \backslash \mathcal{H}, \chi, k)$ should be $L^2(\Gamma \backslash G, \chi, k)$.

- p.185, line 3: $\sum \lambda_i^2$ should be $\sum \lambda_i^{-2}$.
- p.187, line 10: \mapsto should be \rightarrow .
- p.216, line -4: ‘consider’ should be ‘to consider’.
- p.217, line 2: V should be W .
- p.220, line -4: ‘ $GL(2, \mathbf{R})$ and $GL(2, \mathbf{R})$ ’ should be ‘ $GL(2, \mathbf{R})^+$ and $GL(2, \mathbf{R})$ ’.
- p.221, line -1: (\mathfrak{g}, k) -module should be (\mathfrak{g}, k) -module.
- p.222, line 1: ‘kernel of V ’ should be ‘kernel of Λ ’.
- p.222, first sentence of section 2.6: ‘qurrection’ should be ‘question’.
- p.234, line -5: $f\left(\frac{az+d}{cz+d}\right)$ should be $f\left(\frac{az+b}{cz+d}\right)$.
- p.265, line -6: ‘By Proposition 3.1.3(i)’ should be ‘By Proposition 3.1.4(i)’.
- p.266, second sentence of third paragraph: ‘if $\operatorname{re}(s) > 0$ ’ should be omitted.
- p.272, line -11: The indefinite article ‘a’ is missing in front of ‘rational function’.
- p.279, line -7: ‘ F is if it is contained..’ should be ‘ F is \mathcal{Z} -finite if it is contained ...’.
- p.280, second and fourth paragraph: $\mathcal{A}(\Gamma, \chi, \omega)$ should be $\mathcal{A}(\Gamma \backslash G, \chi, \omega)$.
- p.282, equation (2.9): $f|_z k g$ should be $(f|_k g)(z)$.
- p.289, third sentence of proof of Theorem 3.2.2: Proposition 3.2.4 should be Proposition 3.2.3.
- p.292, second sentence of fourth paragraph: ‘the set of the set of’ should be ‘the set of’.
- p.299, line -11: Theorem 2.3.7 should be Theorem 2.3.3.
- p.299, line -2: $h_f \in A_f$ should be $h_f \in GL(n, A_f)$.
- p.300, line 16: $\mathbb{A}^{n^2+1}(F_v)$ should be $F_v^{n^2+1}$.
- p.300, line 20: $f(g)$ should be $|f(g)|$.
- p.301, line 4: $\bigotimes_v V_v$ should be $\bigotimes_{v \in \Sigma} V_v$.
- p.301, second sentence of third paragraph: $x_v^\circ \cong y_v^\circ$ should be $x_v^\circ = y_v^\circ$.
- p.301, line -9: The first ξ_v should be $(\bigotimes_v \xi_v)$.
- p.302, line 11: ‘isomorphic to K ’ should be ‘isomorphic to V_ρ ’.
- p.305, line -9: the central character $\chi^2 \omega$ should be $\chi^n \omega$.
- p.305, line -8: $GL(2, A)$ should be $GL(n, A)$.
- p.307, line 15: One of ‘in our discussion of’ should be omitted.
- p.310, line -1: $C^\infty(G)$ should be $C_c^\infty(G)$.
- p.311, line 1: ‘Vogan or in Section 2.9’ should be in parentheses.
- p.311, line 2: ‘denote’ should be ‘denoted’ and ‘denoted’ should be ‘denote’.

- p.311, line 3: $C^\infty(G)$ should be $C_c^\infty(G)$.
- p.316, last sentence of Proposition 3.4.8: ' $\phi \cdot x = \pi(\phi)x$ for $\phi \in \mathcal{H}_G, x \in V$ ' should be ' $\pi(g)x = \pi(\phi)x$ for $g \in G, \phi \in \mathcal{H}_G, x \in V$ '.
- p.316, line 13: in the integral, dv should be dg .
- p.316, line 15: 'if' should be 'for'.
- p.323, line -11: W should be \mathcal{W} .
- p.324, line 11 and p.325, line 12: Theorem 5.3 should be Theorem 6.3.
- p.324, line 20: $U(\mathfrak{g}_C)$ should be $U(\mathfrak{g}_\mathbb{C})$.
- p.324, line -6: \mathcal{W} should be W .
- p.330, first sentence of *Proof of Theorem 3.3.6*: Theorem 3.3.7 should be Theorem 3.3.6.
- p.343, line -7: ' $N \nmid s$ ' should be ' $p \nmid s$ for all prime $p \mid N$ '.
- p.346, line 10: $\omega(z)$ should be $\omega(z)f(g)$.
- p.350, line -7 and p.351, line 2: Eq.(7.7) should be Eq.(7.6).
- p.351, line 12: $E(g, F)$ should be $E(g, f)$.
- p.351, line -2: Eq.(7.8) should be Eq.(7.9).
- p.352-353: There are three places where

$$E\left(\left(\begin{pmatrix} 1 & x \\ & 1 \end{pmatrix} g\right)\right) \text{ should be } E\left(\left(\begin{pmatrix} 1 & x \\ & 1 \end{pmatrix} g, f\right)\right).$$

- p.382, line 17: 'L-functions' should be 'automorphic representations'.
- p.383, line 11:

$$\prod_v \prod_{i=1}^n \prod_{j=1}^{m_i} \text{ should be } \prod_v \prod_{i=1}^n \prod_{j=1}^{m_i}$$

- p.400, line 18: 'Bruhat (1956, 1966), extended' should be 'Bruhat (1956, 1966) extended'. Namely, the comma should be omitted.
- p.401, line 19: $D \in E$ should be $D \in F$.
- p.401, line -13: $T_a(F)$ should be $T_a(F)$.
- p.402, line -1: $\text{Hom}_C(\mathbb{C}, \mathbb{C})$ should be $\text{Hom}_\mathbb{C}(\mathbb{C}, \mathbb{C})$.
- p.405, line -16: ' T_0 of F ' should be ' T_0 of $GL(2)$ '.
- p.407, line 16: 'the Fourier transform $\Phi(x)$ ' should be 'the Fourier transform $\widehat{\Phi}$ of Φ '.
- p.410, line 13: l should be π .
- p.411, proof of Proposition 4.1.6.: $V(\chi)$ should be $W(\chi)$. There are two such places.
- p.412, line 6: 'an irreducible representation' should be 'a representation'.
- p.414, line -2: Eq.(1.3) should be Eq.(1.4).

- p.417, line 13: in the exact sequence, all the arrows should be changed from \mapsto to \rightarrow .
- p.427, line -8: ‘ π is not smooth’ should be ‘ π is not admissible’.
- p.429, line 14: $\frac{1}{\text{vol}(K_0)}$ should be $\text{vol}(K_0)$.
- p.434, line 1: *Theorem 4.22* should be *Theorem 4.2.2. Theorem 4.23* should be *Theorem 4.2.3*.
- p.434, line 3: *Theorem 4.2.2* should be *Theorem 4.2.3*.
- p.434, line -14: ‘a Abelian’ should be ‘Abelian’.
- p.437, line -8: *Proposition 4.5.1* should be *Proposition 4.2.1*.
- p.445, line 19: ‘action of $C^\infty(X)$ ’ should be ‘action of $C_c^\infty(X)$ ’.
- p.446, line 1: ‘set’ should be omitted.
- p.458, line -7 and -8: ‘Because if $u \in N(F)$, $t \in T(F)$,’ should be ‘If $u \in N(F)$ and $t \in T(F)$,’.
- p.459, line 1: ‘ $x \in V$ ’ and ‘ $x \in V_N$ ’ should be ‘ $v \in V$ ’ and ‘ $v \in V_N$ ’, respectively.
- p.491, line 1: ‘...commutative, then we draw...’ should be ‘...commutative. Then we draw...’.
- p.512, line 1: section 5.4 should be section 4.4.
- p.518, line 2: $\phi(a) = \binom{a}{1}$ should be $\phi(a) = W \binom{a}{1}$.
- p.527, line -12: ■ should be omitted.
- p.532, line -18: ‘two-dimensional’ should be ‘four-dimensional’.
- p.548: The end of Lemma 4.8.2 in line 5 should be an open rectangle instead of ■, and ■ is missing at the end of Proposition 4.8.9 in line 8.
- p.564, first paper of Luo: p.441-p.425 should be p.411-p.425.