

Errata as of September 16, 2011
Geometric Modular Forms and Elliptic Curves, First edition
World Scientific Publishing Company, Singapore, 2000

Here is a table of misprints in the above book (most of them already corrected in the more recent version of the first edition), and “P.3 L.5b” indicates fifth line from the bottom of the page three. Some of them is corrected in 2005 when reprinted.

page and line	Read	Should Read
P.13 L.10	$A_k A_l = A_{k+l}$	$A_k A_l \subseteq A_{k+l}$
P.15 L.3b	$\frac{ya^{ej}}{a^k/b^{dj}}$	$\frac{ya^{ej}}{a^k b^{dj}}$
P.20 L.8	$x_n \in A$	$x^n \in A$
P.25 L.16b	there exist	there exists
P.27 L.11b	the coimage	the coimage L
P.30 L.14	$abd(c) = \phi(b, c)$	$abd(c) = a\phi(b, c)$
P.35 L.12b	open subschemes in S	open subschemes U in S
P.35 L.8b	$f : \text{Spec}_S(R) \rightarrow S$	$\text{Spec}_S(R) \rightarrow S$
P.41 L.1	<i>SCH</i>	<i>AFF</i>
P.44 L.14	covariant functor	morphism of covariant functors
P.57 L.4b	an Y -scheme	a Y -scheme
P.78 L.2b	$g = f \times \text{id}_Y : X' \rightarrow Y$	$g = f \times \text{id}_Y : X' \rightarrow Y'$
P.83 L.6b	$(M \otimes_A R \otimes_R R) \otimes_A R$	$(M \otimes_A R \otimes_R R) \otimes_A R$
P.86 L.8	$X' \times_S T \cong T \times_S X'$	$X' \times_S T' \cong T' \times_S X'$
P.87 L.12b	$T \times_S T \times_T X$	$T \times_S T \times_T X'$
P.106 L.6	$\deg(D) \geq 2g + 1$. Then	$\deg(D) \geq 2g + 1$, then
P.109 L.5b	automorphism	endomorphism
P.112 L.11b	2 at 0	2 at $\mathbf{0}$
P.117 L.5b	$Y^2 Z^3$	$Y^2 Z$
P.120 (G0)	$\lambda^{-k} f((E, \omega)_{/R})$	$\lambda^{-k} \phi((E, \omega)_{/R})$
P.129 L.9	$\text{Proj}\left(\frac{\mathbb{Z}[\frac{1}{6}][[q]](X, Y, Z)}{(Y^2 Z - 4X^3 + g_2(q)X + g_3(q))}\right)$	$\text{Proj}\left(\frac{\mathbb{Z}[\frac{1}{6}][[q]][X, Y, Z]}{(Y^2 Z - 4X^3 + g_2(q)X Z^2 + g_3(q)Z^3)}\right)$
P.129 (2.26)	$\mathbb{Z}[1/6][[q]]$	$\mathbb{Z}[1/6][[q]]$
P.133 L.18b	$u + tu = t^3 - b_2 u^2 t - b_3 + 3u^3$	$u + tu = t^3 - b_2 u^2 t - b_3 u^3$
P.133 L.16b	$\Omega_{\hat{\mathcal{O}}_{E_\infty, \mathfrak{o}}/\mathbb{Z}[[q]]} = \mathbb{Z}[[q, u]]du$	$\Omega_{\hat{\mathcal{O}}_{E_\infty, \mathfrak{o}}/\mathbb{Z}[[q]]} = \mathbb{Z}[[q, t]]dt$
P.137 L.14	A/\mathfrak{m}_A Such	A/\mathfrak{m}_A . Such (insert a period).
P.140 L.13–14	$\mathbb{Z}[[q_N]]$	$\mathcal{O}[[q_N]]$
P.144 L.5b	$D = (\mathcal{L}', \ell')$	$D' = (\mathcal{L}', \ell')$
P.144 L.4b	$\phi^*(\mathcal{L} \otimes \mathcal{O}_D)$	$\phi^*(\mathcal{L} \otimes \mathcal{O}_{D'})$
P.145 L.14	corresponds a unique	corresponds to a unique
P.146 L.5b	(see Propositions 1.8.2 and 1.8.1)	(see Theorem 1.8.2 and Proposition 1.8.1)
P.148 L.9b	(1) N is	(1) If N is
P.154 L.12	M_3	M_{3N}
P.155 L.16b, 15b	\mathcal{M}_N	M_N
P.156 L.4b	components. By	components. Put $\overline{M}_N = \text{Proj}(G_N)$. By
P.163 L.15	$\ell \nmid Np$	$p \nmid N\ell$
P.163 L.11b	$\det(1 - \rho_\ell(\text{Frob}_p) _V)$	$\det(1 - \rho_\ell(\text{Frob}_p) _V X)$
P.165 L.3	$H^0(I_p, T_\ell E) = 0$	$H_0(I_p, T_\ell E) = 0$
P.174 L.17	$\phi_p^{et} : (\mathbb{Z}/p^r \mathbb{Z})/C$	$\phi_p^{et} : (\mathbb{Z}/p^r \mathbb{Z})^2/C$
P.175 L.7	$E_a/E[p^r]$	$E_a/E_a[p^r]$
P.177 L.5b	object, A	object A
P.179 L.9b,7b	(E, ϕ_N, ω)	$(\mathcal{E}, \phi_N, \omega)$
P.179 L.6b,5b	$\varphi(E)$	$\varphi^*(E)$
P.182 L.8b	upper unipotent	upper triangular
P.188 L.15	$pR = 0$	$p(R/\mathfrak{a}) = 0$

page and line	Read	Should Read
P.190 L.5b	(Exercise 3).	(Exercise 4).
P.191 L.17	$\text{Gal}(\mathbb{Q}, \mathbb{Q})$	$\text{Gal}(\mathbb{Q}/\mathbb{Q})$
P.198 L.11	an A -algebra R ,	the A -algebra R ,
P.199 L.10b	$H^0(G, p^{-1}(U))$	$H^0(G, \varpi(p^{-1}(U)))$
P.200 L.13b	(see Remark 1.8.4 (2))	(see Proposition 1.8.4 (2))
P.203 L.8	$X_0(N)$. The	$X_0(N)$, the
P.203 L.28	$f \in S_k(-)$	$f \in G_k(-)$
P.207 L.6	$H^0(X, -)$	$H^1(X, -)$
P.207 L.4b.	$\chi \bmod \mathfrak{m}_A$ of A	$\chi \bmod \mathfrak{m}_A$
P.210 L.3b	$\text{Proj}(G_{\Gamma_1(N)}(A))$	$\text{Proj}(G_{\Gamma_1(N)}(A))$
P.213 L.7	q -expansions	q -expansion
P.216 L.15	$O_p/p^r O_p$	$O_p/p^n O_p$
P.218 L.7	$P_m \otimes_{\mathbb{Z}/p^n \mathbb{Z}} \mathcal{O}_{\Gamma_{m,n}}$	$P_m \otimes_{\mathbb{Z}/p^m \mathbb{Z}} \mathcal{O}_{\Gamma_{m,n}}$
P.219 L.5b	$V_{m,m}$	$V_{m,\infty}$
P.220 L.8	when S_m is affine	when S is affine
P.225 L.4b	r_n	r_m
P.226 L.12	Since $eE^k f_i$ is	Since $E^k f_i$ is
P.227 L.3b	$M_{\Gamma,\alpha}^{\text{ord}}(\mathbb{Z}/p^m \mathbb{Z})$	$\overline{M}_{\Gamma,\alpha}^{\text{ord}}(\mathbb{Z}/p^m \mathbb{Z})$
P.228 (3.26)	$\text{Hom}_{p\text{-}ALG}(V_{\Gamma}, A)$	$\text{Hom}_{p\text{-}ALG}(V_{\Gamma}[\frac{1}{\Delta}], A)$
P.230 ($G_p 3$), ($S_p 3$)	Replace $f(E_{0,N}, \phi_p^{\text{can}}, \phi_N)$ by $f(E_{0,N}, z\phi_p^{\text{can}}, \phi_N)$ and add “for all $z \in \mathbb{Z}_p^\times$ ”.	
P.234 L.12	rank p^r	rank p^α
P.236 (3.34)	$f \langle a \rangle$	$f \langle d \rangle$
P.236 L.17	$G'_\Gamma(A[1/p])$	$G'_\Gamma(A[1/p])$
P.237 L.14	(a ring)	(resp. a ring)
P.238 L.11b	the Tate curve	the cusp of the Tate curve
P.238 L.9b	diamond operators	diamond operators $\langle z \rangle$
P.238 L.8b	$\mathbf{G}_m(\mathbb{Z}_p) = \mathbb{Z}_p^\times$	$z \in \mathbf{G}_m(\mathbb{Z}_p) = \mathbb{Z}_p^\times$
P.239 L.11b	of between	between
P.244 L.11b	subgroup Γ_T	subgroup Γ_Z
P.260 L.1-2	See Addenda below	
P.260 L.3	$\sum_k n_k j_k = r$	$\sum_k j_k = r$
P.264 L.17b	(Corollary 2.1.7)	(Corollary 2.1.5)
P.265 L.17	\mathcal{L} on C_j	\mathcal{L} on C
P.266 L.10b	fiber a union	fiber a smooth curve or a union
P.268 L.9	Obviously.	Obviously,
P.279 L.15b	$X \times_S X \cong \text{Ker}(f) \times_S Y$	$X \times_Y X \cong \text{Ker}(f) \times_S Y$
P.285 L.2b	$\text{rank}_{\mathbb{Z}} O_s$	$\text{rank}_{\mathbb{Z}_p} O_s$
P.293 L.16	cyclic subgroup C of order p	locally free subgroup C of rank p
P.293 L.19	$\phi'_N \circ \pi = \phi_N$	$\phi'_N = \pi \circ \phi_N$
P.295 L.4	$T^2 - T(p)X + p\langle p \rangle = 0$	$X^2 - T(p)X + p\langle p \rangle = 0$
P.295 L.11	which are to	which are
P.301 L.6b	Theorem 2.9.13 (1)	Theorem 2.9.13 (3)
P.309 L.17	diagonal	upper-triangular
P.309 L.11b	$\mathbb{Q}_p(\lambda)$	$\mathbb{Q}_\ell(\lambda)$
P.311 L.8	$\varepsilon_\alpha(p) = p^2 \omega(p)^{-2} \varepsilon_\alpha(p)$	$\varepsilon_\alpha(p) = p^2 \omega(p)^{-2} \varepsilon(p)$
P.324 Th.5.1.4	$m\sigma_1 + n\sigma_2$	$-m\sigma_1 - n\sigma_2$
P.326 L.4b	has proved	have proved
P.329 L.18	I/I_p	I/I_1
P.345 L.11, 12	$M_5 \times_{\mathbb{Q}} \mathbb{Q}(E[5])$	$M_{\Gamma(5)} \times_{\mathbb{Q}(\mu_5)} \mathbb{Q}(E[5])$
P.345 L.3b	$p \neq 5$.	$p \neq 5$.
P.347 L.8b	Topologis	Topologie

page and line	Read	Should Read
P.349 L.3b	ellitpiques,	elliptiques,
P.352 L.1	[Ri4] Report	[Ri4] K. A. Ribet, Report
P.357 (W1-3)	(W1-3), 309	(W1-3), 310
P.359 L9-10		Add “diamond operator, 235”

Addenda

- Page 243 Line 17-14 from bottom: Replace the sentence starting from “Since on $\mathbf{G}_{\Gamma,\Lambda}$,” ending “weight s .” by the following: “The map is injective by the q -expansion principle (Corollary 3.2.11). Since on $\mathbf{G}_{\Gamma,\Lambda}$, the two Λ -module structures coincide, this map brings $\Phi \in \mathbf{G}_{\Gamma,\Lambda}$ to a p -adic modular form of weight s .”
- Page 260 Lines 1: Add the following after “we have”: “supposing the divisor P has s distinct points of C with multiplicities j_1, j_2, \dots, j_s ,”
- Page 260 Line 2: Replace the formula by the following:

$$\widehat{\mathcal{O}}_{C^r, \pi^{-1}(P)} \cong R[[T_1, \dots, T_r]]^n \quad (n = r! / j_1! j_2! \cdots j_s!)$$