Corrections to Chapters 1-3 of
"An Introduction to the Langlands program"

- p. 27, line 15: replace "expansion of $\Lambda(\chi, s)$ in the Weierstrass" by "expansion of $\Lambda(\chi, s)$ in Weierstrass"
- p. 30, line 21: replace "Soudararajan" by "Soundararajan".
- p. 30, footnote 6: insert "(first solved by Linnik)" after "*the Titchmarsh divisor problem*".
- p. 31, line 3: replace $\zeta(\rho) = 0$ by $L(\chi, \rho) = 0$ in the summation condition.
- p. 33, line 12: add "and on ξ_∞" after "depending only on ε."
- p. 34, line 18: add "and on ξ_∞" after "depending only on ε"
- p. 50, line 14: replace "translates to $\lambda \in]0, 1[$" by "translates to $s \in]0, 1[$".
- p. 60, line -4: replace "we denote by $\lambda_f(n)$ its Hecke-eigenvalues" by "we denote by $\lambda(n)$ its Hecke-eigenvalues".
- p. 58, line 4: the formula (5.2) should read

$$= \prod_p (1 - (1 + \chi_4(p))p^{-s} + \chi_4(p)p^{-2s})^{-1}.$$

- p. 62, line 17: replace "There is a unique orthonormal basis..." by "There is a unique orthogonal basis..."
- p. 65–66, Prop. 6.2 and its proof: the statement of Prop. 6.2 is in fact valid, but the proof only works as stated for $k = \ell$ and for $L(f \otimes \bar{g}, s)$ where f and $g \in S_k(1)$. The point is that the two functions $z \mapsto y^{k/2} f(z)$ and $z \mapsto y^{\ell/2} g(z)$ are not in fact $SL(2, \mathbf{Z})$-invariant, but $z \mapsto y^k f(z)\overline{g(z)}$ is, for f and g of weight k. In particular in Prop. 6.2, one must state the result for $L(f \otimes \bar{g}, s)$ which is entire unless $f = g$, with residue as stated. If f and g have different weights, one must use a different Eisenstein series. See also the chapters by Cogdell which sketch the representation-theoretic approach to Rankin-Selberg convolutions.
- p. 66, line -6: replace "Since $E(z, s)$ at a simple pole" by "Since $E(z, s)$ has a simple pole".
- p. 67, remark 6.4: the formula for $a_f(p^k)$ and $a_g(p^k)$ should be replaced by

$$a_f(p^k) = \frac{\alpha_1^{k+1} - \alpha_2^{k+1}}{\alpha_1 - \alpha_2}, \text{ and } a_g(p^k) = \frac{\beta_1^{k+1} - \beta_2^{k+1}}{\beta_1 - \beta_2}.$$

- p. 69, lines 3-4: Replace from "It is conjectured..." to the end of the sentence by "It is conjectured that all primitive Maass forms with eigenvalue $\lambda = 1/4$ are similarly algebraic (arising from even Artin representations of $\mathrm{Gal}(\bar{\mathbf{Q}}/\mathbf{Q})$ into $GL(2, \mathbf{C})$; those which dihedral image in $PGL(2, \mathbf{C})$ should correspond to real quadratic fields as above.)"