Misprints in
"The Theory of the Riemann Zeta-Function"

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Second Edition

Page vii (Preface to First Edition), Line 15. For "Dr. T. M. Fleet" read "Dr. T. M. Flett"

Page 9, formulae (1.4.1) and (1.4.2) In both cases the sums on the left should begin at $n = 1$ rather than $n = 0$.

Page 27, line 10. The second integral in this display only exists when $\Re(w) > 0$. However the integral on the left is equal to the expression on the right for all w under consideration.

Page 48, line 1. The historical picture is more complicated than this. De la Vallée Possin's original argument (*Ann. Soc. Sci. Bruxelles I*, 20 (1896), 183–256) was far more complicated than Hadamard's. Two years later Mertens (*S.-B. akad. Wiss. Wien Math.-Natur. Kl. Abt. 2A,* 107 (1898), 1429–1434) introduced (3.1.1) to simplify their proofs. Subsequently de la Vallée Poussin (*Mém. Courronnés et Autres Mém. Publ. Acad. Roy. Sci. Lettres Beaux-Arts Belgique* 59 (1899/1900), 1–74) applied (3.3.1) to prove Theorem 3.8.

Page 50, line 10. For 6.11 read 6.14

Page 51, line 7. For $1 - A \log T < \sigma < 1$ read $1 - A/\log T < \sigma < 1$

Page 55, line 3 from bottom. For $\frac{1}{2}A_1/\log\gamma$ read $\frac{1}{2}/A_1 \log\gamma$

Page 59, (3.11.4). The left hand side should be $\zeta'(1+it)/\zeta(1+it)$, not $\zeta(1+it)/\zeta'(1+it)$

Page 69, line 8 from bottom. For "fourier" read "Fourier"

Page 73, line 10. For $F'''\{c + \theta(x-c)\}]dx$ read $F'''(c + \theta(x-c))\}]dx$

Page 76, line 10. For $O(\lambda_2^{-\frac{4}{5}}\lambda_3)$ read $O(\lambda_2^{-\frac{4}{5}}\lambda_3^{\frac{1}{5}})$

Page 93, line 8 from bottom. For "multipling" read "multiplying"

Page 94, last two lines. In fact there appears to be an error in Taylor's work, which does not quite agree with the result found by Motohashi and Jutila.

Page 99, last line. The exponent $\frac{1}{2}$ should be moved one bracket to the left to produce $|)\}^{\frac{1}{2}}]$

Page 107, line -9. For $f^{(k-1)}(x+r)-f^{(k)}(x)$ read $f^{(k-1)}(x+r)-f^{(k-1)}(x)$

Page 108, line 12. In this displayed formula, the term $\lambda^{1/2(K-2)}$ should be replaced by $\lambda^{1/(2K-2)}$

Page 111, line 5 from bottom. In the sum on the left, a brace is missing from the summation condition, which should read $n \le t^{R/\{(r-1)R+1\}}$

Page 115, line 14. This should read $a = N, b = 2N; a = 2N, b = 4N, \ldots$

Page 117, line 12. The second exponent pair should be $ABA^2B(0,1)$.

Page 125, line 20. The exponent for the power of 2 should be

$$\mu(\tfrac{1}{2}k^2 + \tfrac{1}{2}k - 2l) + 2l + k^2$$

(that is to say, the final k should be deleted); and the exponent for the power of q should be $2(l-k)/k + \frac{3}{2}k - \frac{1}{2}$ (that is to say the final $-\frac{3}{2}$ should be $-\frac{1}{2}$).

Page 125, line 23. The exponent for the power of 2 should be $2l + k^2$

Page 126, lines 3 and 4. In each case the exponent for the power of 2 should be $2l + k^2 + 1$

Page 133, line 6 from bottom. In the final numerator on the right hand side of the display the letter s should be in italic, so that $\mathrm{s} + k - 2$ should be $s + k - 2$

Page 135, 4th display. This has become misaligned, and should read

$$\theta(t) = \left(\frac{\log\log t}{100\log t}\right)^{\frac{2}{3}}, \ \phi(t) = \log\log t$$

Page 181, lines 6 and 7. This should read "…hold with equality for $0 < k < 1$ (as it does for $k = 0$ and $k = 1$)."

Page 181, line 9. For "occurence" read "occurrence"

Page 185, line 12. For $u_m - u_1$ read $u_{m+1} - u_1$

Page 193, line 5. This line should end with a full stop.

Page 193, last line. In the second product, for $p_n^{\mu_n}$ read $p_n^{-\mu_n}$

Page 194, line 15. For "exits" read "exists"

Page 209, line 6. For $(\sigma - \frac{1}{2})^{-1}$ read $(\sigma - \frac{1}{2})^{-1/2}$

Page 209, line 10. For

$$\frac{\frac{1}{20}}{\sigma - \frac{1}{2}} \quad \text{read} \quad \frac{(\sigma - \frac{1}{2})^{1/2}}{20}$$

Page 209, line 16. For "constrast" read "contrast"

Page 233, last line. In the second sum, the denominator should be $m^{1+\delta} n^{1+\delta} \log n/m$

Page 246, line 7. Fujii's statement allows h to be as large as $\frac{1}{2}T$, but this is clearly impossible, since (9.25.2) would contradict (9.25.1) for large h. Fujii does not present his argument. However Tsang (*Acta Arith.,* 46 (1986), 369–395) proves a result with a better dependence on k for the restricted range $0 \le h \le 1$.

Page 249, line 14. For $\frac{2\pi\lambda}{\log T} S$ read $\frac{2\pi\lambda}{\log T} \# S$

Page 252, 6th display. The summand should be $a_n n^{-s_r}$

Page 253, lines 9 and 10 from bottom. The references should be to Theorem 9.24 and Theorem 9.19 (C) respectively.

Page 271, (10.11.1). The factor $\log(2+\eta^{-1})$ should be inside the summation, since η depends on the variables $\kappa, \lambda, \mu, \nu$.

Page 272, line 4. On the right, $\sum_{p|\rho}$ should be $\prod_{p|\rho}$

Page 283, line 10. For $\sin 2\theta$ read $\tan 2\theta$

Page 286, line 8 from bottom. For $\mathbf{I}(s)$ read $\mathbf{R}(s)$

Page 310, line 3 from bottom. This should read "a 2-dimensional normal distribution"

Page 313, line 4 from bottom. For $P_{k-1}(\frac{x}{m})$ read $P_{k-1}(\log \frac{x}{m})$

Page 320, line 12. Insert "for $x^{1/2+\epsilon} \ll T \ll x^{2/3-\epsilon}$" before "and deduce that"

Page 334, line 6. For "Jensen's Thorem" read "Jensen's Theorem"

Page 347, line 15. This is correct, but the final O-constant depends on α, whereas applications of this estimate later in the chapter require a uniform bound. One should therefore replace "By (14.2.2)" on line 14 with "By Theorems 9.6(B) and 9.2, together with the estimate

$$\int_\alpha^2 |\log(\sigma - \tfrac{1}{2} + i(t-\gamma))| d\sigma \ll 1$$

for $|t-\gamma| \le 1$, we have"

Page 370, line 5. Replace "for $\sigma \ge \sigma_0 > \frac{1}{2}$" by "in any compact subset"

Page 383, line 1 of section 14.33. For $\frac{1}{2} \le \sigma_0 \le \sigma$ read $\frac{1}{2} < \sigma_0 \le \sigma$

Page 384, line 14. For $c \log\log T$ read $c \log\log\log T$

Page 382, (14.23.3). For $O(x^{-1/4})$ read $O(x^{-1/4+\epsilon})$

Page 383, line 4 from bottom. This should be "$\leq \frac{9}{8}$, see Littlewood (3), giving"

Page 386, last line. Replace "However a slightly better" by "A closely related"

Page 387, 1st display. For $(\log T)^2$ read $(\log T)^3$

Page 387, 2nd display. Replace T on the right by $T(\log T)^{-1/2}$

Page 387, line 6. For "zero" read "zeros"

Page 388, last two lines. This should be

$$K = 0.0854, \quad 3\log 3 - K = 3.2104,$$

$$3\log 2 - K = 1.9939, \quad 3\log 4 - K = 4.0732,$$

Page 389, line 2. This should say $\cos 2\pi K = 0.8594\ldots$

Page 396, last line. For "(1918)" read "(1916)"

Page 398, line 6. For "(1926)" read "(1928)"

Page 408, line 18. For "mean square of the" read "mean value theorem for the"

Page 408, line 28. For "(2), 20 (1979)" read "(2), 19 (1979)"

Page 410, line 5 from bottom. For "Disproof of Mertens conjecture" read "Disproof of the Mertens conjecture"

Page 410, line 2 from bottom. For "Dirichiletsche" read "Dirichletsche"