Nonparametric Econometrics: Theory and Practice
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Qi Li and Jeffrey S. Racine

Errata as of May 26, 2021

1. Page xxi, "Yanquin Fan" ought to be "Yanqin Fan"

2. Page 9, Equation (1.10) (iii), "$= \kappa_2 > 0$" ought to be "$= \kappa_2 < \infty$"

   Also, in Theorem 1.1, we need to add the conditions that

   $$\sup_{\xi \in S(X)} |f^{(l)}(\xi)| < \infty,$$

   for $l = 0, 1, 2, 3$, where $S(X)$ denotes the support of X, and that

   $$\int |v^3 k(v)| dv < \infty.$$

   (reported by Ingmar Prucha)

3. Page 11, 2 lines below Equation (1.12),

   $$(1/3!)h^3 \left| \int f^{(3)}(\tilde{x}) v^3 k(v) \right| dv \leq Ch^3 \int \left| v^3 k(v) dv \right| = O(h^3),$$

   ought to be

   $$(1/3!)h^3 \left| \int f^{(3)}(\tilde{x}) v^3 k(v) dv \right| \leq Ch^3 \int \left| v^3 k(v) \right| dv = O(h^3),$$

   (reported by Ingmar Prucha)

4. Page 13, 3 lines above Equation (1.16), "(the support of $x \ldots$" ought to be "(the support of $f(x) \ldots$" (reported by Saisandeep Satyavolu)

5. Page 21, line 8, "c_0" ought to be "$c_0(x)$" (reported by Manuel Gonzalez Astudillo)

6. Page 21, 6 lines from the bottom, "Also note that we did not use a Taylor expansion in $\int G(v)F(x-hv)\,dv$" ought to be " Also note that we did not use a Taylor expansion in $\int G(v)f(x-hv)\,dv$" (reported by Dongni Zhu)

7. Page 23, line 13, "see Theorem A.5" ought to be "see Lemma A.5" (reported by Yongok Choi)

8. Page 29, line 1, "Theorem A.3 of" ought to be "Lemma A.3 of" (reported by Yongok Choi)

9. Page 29, line 8, "in Theorem A.5" ought to be "in Lemma A.5" (reported by Yongok Choi)

10. Page 33, in the definition of a higher order kernel, "$\int u^\nu k(u)\,du = \kappa_\nu \neq 0$" ought to be "$0 < |\int u^\nu k(u)\,du| = |\kappa_\nu| < \infty$"

11. Section 1.12, Proof of Theorem 1.4 (reported by Ximing Wu)

    (a) Page 38, the inequality above Equation (1.54), "$\exp(\pm\lambda_n Z_{n,i}) \leq 1 + \lambda_n Z_{n,i} + \lambda_n^2 Z_{n,i}^2$" ought to be "$\exp(\pm\lambda_n Z_{n,i}) \leq 1 \pm \lambda_n Z_{n,i} + \lambda_n^2 Z_{n,i}^2$" (i.e., first + ought to be $\pm$ after the inequality)

    (b) Page 39, last line, "nh^d" ought to be "nh^q"

    (c) Page 40, the formula below (1.58), "$-\lambda_n\eta/2\ldots$" ought to be "$-\lambda_n\eta\ldots$"

    (d) Page 40, second and third line below (1.59), "n^a" ought to be "n^α"

12. Page 49, Exercise 1.3 (ii), "$\hat{p}$" ought to be "$\hat{p}_n$." Also, in (iii), "$\hat{p}$" ought to be "$\hat{p}_n$" (reported by Yongok Choi)

13. Page 49, Exercise 1.4, "$F(x)$ be defined" ought to be "$F_n(x)$ be defined" (reported by Yongok Choi)

14. Page 49, missing ")" in Exercise 1.4 at end of (i)

15. Page 50, Exercise 1.4, in the hint "$\mathrm{var}(F_n(x)) = F(x)(1-F(x))$" ought to be "$\mathrm{var}(F_n(x)) = n^{-1}F(x)(1-F(x))$" (reported by Ta-Cheng Huang)

16. Page 50, Exercise 1.5, "Lemma A.26" ought to be "Lemma A.13."

17. Page 53, line 3, "$h^4 \int C_2(x)^2\,dx$" ought to be "$h^4 \int c_2(x)\,dx$" (reported by Juan Lin)

18. Page 55, Exercise 1.14, lines 4-7 ought to read as follows:

    Let $x = \alpha h$, $\alpha \in [0,1]$, we have $\hat{f}(x) = \hat{f}(\alpha h)$ and

$$
\begin{aligned}
E[\hat{f}(\alpha h)] &= \frac{h^{-1}\int_0^1 k\left(\frac{x_1-\alpha h}{h}\right) f(x_1)dx_1}{\int_{-\alpha}^{\infty} k(v)dv} \\
&= \frac{\int_{-\alpha}^{-\alpha+1/h} k(v) f(\alpha h + vh)dv}{\int_{-\alpha}^{\infty} k(v)dv} \\
&= f(0) + O(h)
\end{aligned}
$$

    provided that $k(v) \le c/(1+v^2)$ for v sufficiently large because

$$
\begin{aligned}
\int_{-\alpha+1/h}^{\infty} k(v)dv \le c\int_{-\alpha+1/h}^{\infty}(1+v)^{-2}dv &= (-c)\frac{1}{1+v}\Big|_{v=-\alpha}^{\infty} \\
&= -c\left[0 - \frac{1}{1-\alpha+1/h}\right] = ch/[(1-\alpha)h+1] = O(h)
\end{aligned}
$$

    so that $\int_{-\alpha}^{-\alpha+1/h} k(v)dv / \int_{-\alpha}^{\infty} k(v)dv = 1 - \int_{-\alpha+1/h}^{\infty} k(v)dv / \int_{-\alpha}^{\infty} k(v)dv = 1 - O(h)/O(1) = 1 + O(h)$. (reported by Zhen Zhou)

19. Page 62, equations (2.8) and (2.9), "x_1" ought to be "z" (reported by Ashley Selegue)

20. Page 70, 2 lines below Equation (2.29), "related" ought to be "unrelated" (reported by Yongok Choi)

21. Page 70, 2 lines from the bottom, "h_0^s's" ought to be "h_s^0's" (reported by Yongok Choi)

22. Page 71, 4 lines above Equation (2.30), "$C_0 = \int \sigma^2(x)M(x)\,dx$" ought to be "$C_0 = \kappa^q \int \sigma^2(x)M(x)\,dx$" (reported by Ta-Cheng Huang)

23. Page 70, right above Equation (2.30), "we can write (2.82)" ought to be "we can write (2.25)" (reported by Lidia Storjhann)

24. Page 71, 2 lines below Equation (2.31), "$z'Az = [$" ought to be "$z'Az = \int[$" (reported by Yongok Choi)

25. Page 75, Equation (2.38) "$1 \le j \le q_1$;" ought to be "$1 \le s \le q_1$;" (reported by Wankeun Oh)

26. Page 82, right below Equation (2.53) "where ... is the s^{th} component of $g(x)$" ought to be "where ... is the s^{th} component of $\partial g(x)/\partial x$"

27. Page 85, Equation (2.60), "$\min_{\{b_0,b_1,\ldots,b_q\}}$" ought to be "$\min_{\{b_0,b_1,\ldots,b_p\}}$" (reported by Lidia Storjohann)

28. Page 86, line 4, $\mathcal{X}_i =$ ought to be $\mathcal{X}_j =$ (reported by Juan Lin)

29. Page 89, Equation (2.70), $(D^r)g(v)$ ought to be $(D^r g)(v)$

30. Page 89, the references for Masry (1996a,1996b) are reversed (reported by Ping Yu)

31. Page 99, line 4, "$[m_i - \hat{f}_i g_i] f_i^{-1}$" ought to be "$\hat{m}_i f_i^{-1}$" (reported by Feng Huang)

32. Page 99, line 5, $CV_{lc,0}(h) = \sum_{i=1}^n$ ought to be $CV_{lc,0}(h) = n^{-1} \sum_{i=1}^n$ (reported by Juan Lin)

33. Page 99, Equation (2.78), "$g(X_i+hv)-g(v)$" ought to be "$g(X_i+hv)-g(X_i)$" (reported by Karen Wang)

34. Page 100, line 11, the denominator $h_1 \ldots h_q$ ought to be $nh_1 \ldots h_q$ (reported by Leonardo Sanchez Aragon)

35. Page 103, line 7, Theorem 2.1 ought to be Theorem 2.7 (reported by Juan Lin)

36. Page 104, line 3 and in equation (2.92), $J = (A_{11}^{1,x})^{-1} - Q^{-1}$ ought to be $J = (A^{1,x})^{-1} - Q^{-1}$ (reported by Juan Lin)

37. Page 104, line 5, "$J_{12} = O_p(\eta_2)$" ought to be "$J_{12} = O_p(\eta_2 + \eta_1^{1/2}\eta_2^{1/2})$" (reported by Karen Wang)

38. Page 104, 1 line below Equation (2.91), "$A_{12}^{1,x} = O_p(\eta_2)$" ought to be "$A_{12}^{1,x} = O_p(\eta_2 + \eta_1^{1/2}\eta_2^{1/2})$" (reported by Karen Wang)

39. Page 104, 3 lines below equation (2.92), $O_p(\eta)$ ought to be $O_p(\eta_2)$ (reported by Juan Lin)

40. Page 105, line 12, Exercise 2.9 ought to be Exercise 2.8

    Page 105, line 13, $\sum_{s=1}^q g_{ss}(x)$ ought to be $\sum_{s=1}^q h_s^2 g_{ss}(x)$ (h_s^2 is missing) (reported by Juan Lin)

41. Page 109, Exercise 2.4 (i), "Show that, in this case," ought to be "Show that, in this case, for a fixed value of n,"

42. Page 111, 3 lines from the bottom, "(iii) $A_{12}^{1,x} = O_p(\eta_2) = o(1)$. " ought to be "(iii) $A_{12}^{1,x} = O_p(\sum_{s=1}^q h_s^2 + (\sum_{s=1}^q h_s)(nh_1 \dots h_q)^{-1/2}) = o_p(1)$." (reported by Jesus Bejarano)

43. Page 119, Theorem 3.1 (ii), " $(nh_1 \dots h^q)^{1/2}$" ought to be " $(nh_1 \dots h_q)^{1/2}$" (reported by Lidia Storjohann)

44. Page 121, first paragraph third line from the bottom, " variables, Consequently," ought to be "variables, consequently," (reported by Manuel Gonzalez Astudillo)

45. Page 122, line 8, $E[W_h(X_i^c, x^c)]$ ought to be $E[W_h(X_1^c, x^c)]$ (reported by Juan Lin)

46. Page 122, 4 and 5 lines from the bottom, dx^c ought to be dx_1^c (reported by Manuel Gonzalez Astudillo)

47. Page 123, line 10, $\int^2 W(v)dv$ ought to be $\int W^2(v)dv$

48. Page 124, line 3, U_i ought to be u_i

49. Page 124, 6 lines from the bottom, "$f_{ss}(x)$" ought to be "$g_{ss}(x)$" (reported by Yongok Choi)

50. Page 126, immediately below Equation (4.2), "where $N_{is}(x) = \mathbf{1}\left(X_{is} \neq x_s^d\right)\dots$" ought to be "where $N_{is}(x) = \mathbf{1}\left(X_{is}^d \neq x_s^d\right)\dots$" (reported by Hongjun Li)

51. Page 128, Equation (4.7), n^{-2} ought to be $(n(n-1))^{-1}$

52. Page 129, Equation (4.8), $-2n^{-2}$ ought to be $-2(n(n-1))^{-1}$

53. Page 130, 10 lines from the bottom, "Theorem 4.2" ought to be "Theorem 4.1" (reported by Yongok Choi)

54. Page 130, 6 lines from the bottom, "An important case not covered by Theorem 4.2" ought to be "An important case not covered by Theorem 4.1" (reported by Lidia Storjohann)

55. Page 133, 2 lines from the bottom, "x" ought to be "x^d" in "$L(X_i^d, x, \hat{\lambda})$", i.e., it ought to be "$L(X_i^d, x^d, \hat{\lambda})$" (reported by Yongok Choi)

56. Page 133, 2 lines from the bottom, "$p(x)$" ought to be "$p(x^d)$"

57. Page 135, in Assumption 4.2, "$\sum_{\bar{x}\in\bar{S}^d}$" ought to be "$\sum_{\bar{x}^d\in\bar{S}^d}$" (the superscript d is missing in $\bar{x}$) (reported by Manuel Gonzalez Astudillo)

58. Page 136, the last offset equation ought to have the product go from $s = 1$ to q, not from $s = 1$ to r (reported by Evan Meredith)

59. Page 137, 5 lines from the bottom, "$B_{2s}(x) = \frac{1}{c_s-1}\sum\ldots$" ought to be "$B_{2s}(x) = \sum\ldots$"

60. Page 137, 1 line from the bottom, "s" ought to be "s'" in "$\mathbf{1}(x_s^d = z_s^d)$", i.e., it ought to be "$\mathbf{1}(x_{s'}^d = z_{s'}^d)$" (reported by Yongok Choi)

61. Page 140, line 1, "$(1 \le j \le q)$" ought to be "$(1 \le s \le q)$" (reported by Brennan Thompson)

62. Page 140, the last line of Theorem 4.7, "$CV_r(h, \lambda)$" ought to be "$CV_r(\hat{h}, \hat{\lambda})$" (reported by Manuel Gonzalez Astudillo)

63. Page 143, 2 lines from the bottom of Theorem 4.8, "λ_s" ought to be "$\hat{\lambda}_s$" (reported by Manuel Gonzalez Astudillo)

64. Page 144, in Equation (4.41), "$\bar{B}_{rs}(\bar{x})$ ought to be "$\bar{B}_{2s}(\bar{x})$" (reported by Cesar Cancho)

65. Page 144-145, "$l(x_s^d, v_s^d, \lambda_s) = \binom{c_s}{j}\lambda_s^j(1-\lambda_s)^{c_s-j}$ when $|x_s^d - v_s^d| = j$ $(0 \le s \le c_s)$, where $\binom{c_s}{j} = (c_s)!/[j!(c_s-j)!]$" ought to be "$l(x_s^d, v_s^d, \lambda_s) = \binom{c_s-1}{j}\lambda_s^j(1-\lambda_s)^{c_s-1-j}$ when $|x_s^d - v_s^d| = j$ $(0 \le j \le c_j - 1)$, where $\binom{c_s-1}{j} = (c_s-1)!/[j!(c_s-1-j)!]$", i.e., replace all c_s with $c_s - 1$ and subscript s with j for the expression $0 \le j \le c_j - 1$ (reported by Christoph Hanck)

66. Page 157, 8 lines from the bottom, $G(\cdot)$ ought to be $\hat{G}(\cdot)$ (reported by Juan Lin)

67. Page 160, in Theorem 5.1, the first two "$\to$" ought to be "$\xrightarrow{p}$" (reported by Cesar Cancho)

68. Page 163, in the second line of Theorem 5.2, "$\hat{h}_1$," ought to be "$\hat{h}_0, \hat{h}_1$,". In the fourth line of Theorem 5.2, "$1 \le j \le q_1$" ought to be "$0 \le j \le q_1$" (reported by Manuel Gonzalez Astudillo)

69. Page 163, in the third line of Theorem 5.3, "$\tilde{g}(y|x)$" ought to be "$\hat{g}(y|x)$" and "$\sum_{s=1}^{q_1}$" ought to be "$\sum_{s=0}^{q_1}$" (reported by Manuel Gonzalez Astudillo)

70. Page 163, 3 lines from the bottom, "$B_{1s}(\bar{y}, x) = \dots \{\dots\}$" ought to be "$B_{10}(\bar{x}, y) = \frac{1}{2}\kappa_2 \hat{h}_0^2 \bar{g}_{00}(y|\bar{x})$", and "$B_{1s}(\bar{x}, y) = \frac{1}{2}\kappa_2\{\dots\}$ for $s = 1, \dots, q_1$" (reported by Manuel Gonzalez Astudillo)

71. Page 163, 2 lines from the bottom, "$B_{2s}(\bar{x}, y) = \dots .\{\dots\}$" ought to be "$B_{2s}(\bar{x}, y) =$", that is, remove the $\sum_{s=1}^{r_1} \hat{\lambda}_s$ in the original expression (reported by Manuel Gonzalez Astudillo)

72. Page 165, just above Equation (5.19), $g = f/m$ ought to be $g = f/\mu$ (reported by Tristen Hayfield)

73. Page 167, $\sqrt{n\hat{h}_1 \dots h_q}$ ought to be $\sqrt{nh_1 \dots h_q}$ (i.e., no 'hat' over h_1, though the theorem remains true for the cross-validated bandwidths, i.e., the $\hat{h}$'s)

74. Page 183, 3 lines from the bottom, $n^{(5+q)/(4+q)}$ ought to be $n^{1/(5+q)-1/(4+q)}$ (reported by Leopold Simar)

75. Page 188, Equation (6.15), the correct equation ought to be

$$(nh)^{1/2}\left[\bar{F}(y|x) - F(y|x) - \sum_{s=1}^{q} h_s^2 \bar{B}_s(y, x)\right] \xrightarrow{d} N(0, \Sigma_{y|x})$$

(there was a redundant $F_{ss}(y|x)$ that was already accounted for in the bias term, reported by Kristoph Steikert).

76. Page 191, Equation (6.22), $f(q_\alpha(x)|x)$ appearing in the bias term ought to be $f(x)$ instead.

77. Page 191, line 1, $\mu(q_\alpha(x))$ ought to be $\mu(x)$, which also appears on page 196, (ii) (reported by Jiangang Zeng).

78. Page 199, 2 lines below Equation (6.34), the expression ought to be $\hat{F}_T(t|x) = F_T(t|x) + O_p\left(\sum_{s=1}^{q} h_s^2 + \sum_{s=1}^{q} \lambda_s + (nh_1 \cdots h_q)^{-1}\right)$. In other words, the second $\hat{F}_T(t|x)$ ought to be $F_T(t|x)$; the second $=$ ought to be $+$; the subscript of the first summation ought to be $s = 1$ instead of $s = 0$ (reported by Long Liu)

79. Page 216, Exercise 6.5, ought to be as follows (with the obvious modification to equation numbers, reported by Kristoph Steikert)

Write the Lagrangian function as

$$\mathcal{L} = \sum_{i=1}^{n} \ln p_i(x) - \gamma_1 \left[\sum_{i=1}^{n} p_i(x) - 1 \right] - \gamma_2 \sum_{i=1}^{n} (X_i - x) p_i(x) K_h(X_i, x).$$

The first order conditions are

$$\frac{\partial \mathcal{L}}{\partial \gamma_1} = \sum_{i=1}^{n} p_i(x) - 1 \overset{set}{=} 0, \quad (1)$$

$$\frac{\partial \mathcal{L}}{\partial \gamma_2} = \sum_{i=1}^{n} p_i(x)(X_i - x) K_h(X_i, x) \overset{set}{=} 0, \quad (2)$$

$$\frac{\partial \mathcal{L}}{\partial p_i(x)} = \frac{1}{p_i(x)} - \gamma_1 - \gamma_2 (X_i - x) K_h(X_i - x) \overset{set}{=} 0, \quad (3)$$

Equation (3) leads to $1 = p_i(x)[\gamma_1 + \gamma_2(X_i - x)K_h(X_i, x)]$. Summing this over i and using (1) and (2) gives

$$n = \gamma_1 \sum_{i=1}^{n} p_i(x) + \gamma_2 \sum_{i=1}^{n} p_i(x)(X_i - x) K_h(X_i, x) = \gamma_1.$$

Substituting $\gamma_1 = n$ into (3), we get ($\gamma = \gamma_2/n$)

$$p_i(x) = \frac{1}{n[1 + \gamma(X_i - x)K_h(X_i, x)]}.$$

80. Page 216, 4 lines from the bottom, “This proves (6.5)” ought to be “This proves (6.13)”

81. Pages 221-247 (Chapter 7), all references to Li (1996) ought to be “On the root-N-consistent semiparametric estimation of partially linear models,” Volume 51, Economics Letters, Pages 277-285 (reported by Long Liu)

82. Page 231, in both (7.18) and (7.20), M^{-1} ought to be $-M^{-1}$ (minus sign missing)

83. Page 231, the unnumbered equation above the current (7.18) ought to be (7.18) and all subsequent equation numbers ought to be incremented accordingly (i.e., the existing (7.18) would be (7.19), etc.) (reported by Long Liu)

84. Page 235, (reported by Yongok Choi)

    (a) In Equation (7.26), "$+g(Z_i)$" ought to be "$-g(Z_i)$"

    (b) In Equation (7.27), "$+g(Z_i)$" ought to be "$-g(Z_i)$"

    (c) One line from the bottom, "known function $f(\cdot)$" ought to be "known function $g(\cdot)$"

85. Page 236, Equation (7.29), the equation ought to be

$$g(Z_i) = \frac{1}{\mathrm{E}\left(\frac{1}{\sigma_i^2}|Z_i\right)}\left[\mathrm{E}\left(\frac{Y_i}{\sigma_i^2}|Z_i\right) - \mathrm{E}\left(\frac{X_i'}{\sigma_i^2}|Z_i\right)\beta_0\right]$$

(i.e. β ought to appear inside the rightmost parenthesis and have a $_0$ subscript, as should that in (7.30) and that in $\tilde{\beta}_{\text{eff}}$ - reported by Leonardo Sanchez Aragon)

86. Page 236, 1 line below Equation (7.30), "$E(Y_i/\sigma_i^2)$" ought to be "$E(Y_i/\sigma_i^2|Z_i)$", and 2 lines below Equation (7.30) "$E(X_i/\sigma_i^2)$" ought to be ' "$E(X_i/\sigma_i^2|Z_i)$" (reported by Yongok Choi)

87. Page 237, Equation (7.33), V_0 ought to be $V_{0,R}$

88. Page 241, third line in Lemma 7.4, "$|S_{(\hat{m}-m)\hat{f},\hat{\epsilon}f}|$" ought to be "$|S_{(\hat{m}-m)\hat{f},\hat{\epsilon}\hat{f}}|$" (reported by Yongok Choi)

89. Page 247, 3 lines from the bottom, "$\sigma^2(X_iZ_i)$" ought to be "$\sigma^2(X_i, Z_i)$" (i.e., there is a comma missing between X_i and Z_i)

90. Page 247, Exercise 7.6, 5th line, (7.24) ought to be (7.23) (reported by Yongok Choi)

91. Page 247, Exercise 7.7 (i), "deriving (7.33)" ought to be "deriving (7.32)" (reported by Yongok Choi)

92. Page 255, below the definition of $\hat{\Omega}_I$,

    "where $\hat{V} = n^{-1}\sum_i w(X_i)\hat{g}^{(1)}(X_i'\hat{\beta})(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))'$" ought to be "where $\hat{V} = n^{-1}\sum_i w(X_i)(\hat{g}^{(1)}(X_i'\hat{\beta}))^2(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))'$", while "$\hat{\Sigma} = n^{-1}\sum_i w(X_i)\hat{u}_i^2\hat{g}^{(1)}(X_i'\hat{\beta})(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))'$" ought to be "$\hat{\Sigma} = n^{-1}\sum_i w(X_i)\hat{u}_i^2(\hat{g}^{(1)}(X_i'\hat{\beta}))^2(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))(X_i - \hat{\mathrm{E}}(X_i|X_i'\beta))'$", while "$\hat{g}^{(1)}(X_i'\hat{\beta}) = [\partial\hat{g}_{-i}(X_i'\beta)/\partial\beta]|_{\beta=\hat{\beta}}$" ought to be "$\hat{g}^{(1)}(X_i'\hat{\beta}) = [\partial\hat{g}_{-i}(X_i'\beta)/\partial X_i'\beta]|_{\beta=\hat{\beta}}$".

93. Page 255, -13 lines, the expression ought to be $\hat{\mathrm{E}}(X_i|X_i'\beta) = \sum_j X_j K((X_i - X_j)'\hat{\beta}/h)/\sum_j K((X_i - X_j)'\hat{\beta}/h)$ (the $/h$ terms were missing in $K(\cdot)$ and the transpose on $\hat{\mathrm{E}}(X_i|X_i'\beta)'$ has been removed - reported by Ivan Korolev)

94. Page 256, equation below (8.9), the factor n^{-1} is missing and the equation ought to be (reported by Long Liu)

$$T_n = n^{-1}\sum_{i=1}^{n}\left[\hat{G}_{-i}(X_i'\beta_0) - g(X_i'\beta_0)\right]^2$$

95. Page 257, lines 8 and 10, "$f^{(1)}(X_i'\beta_0)$" ought to be "$g^{(1)}(X_i'\beta_0)$"

96. Page 259, to avoid conflicting notation for g and m, Equation (8.16) is better expressed as (reported by Ivan Korolev)

$$\begin{aligned}
\delta &\stackrel{\text{def}}{=} \mathrm{E}\left[f(X)m^{(1)}(X)\right] \\
&= \int m^{(1)}(x)f^2(x)dx \\
&= \int \left(\frac{\partial m(x'\beta_0)}{\partial x}\right) f^2(x)dx \\
&= 0 - 2\int m(x'\beta_0)f(x)f^{(1)}(x)dx \\
&= -2\mathrm{E}\left[m(X'\beta_0)f^{(1)}(X)\right] \\
&= -2\mathrm{E}\left[Yf^{(1)}(X)\right],
\end{aligned}$$

where $m(x) = E(Y|X = x) = E(Y|X = x'\beta_0) = g(x'\beta_0)$.

97. Page 259, line 2, the use of $|\cdot|$ for the norm previously defined as $||\cdot||$ is inconsistent and should use the latter (reported by Ivan Korolev)

98. Page 260, 5 lines from the bottom, "$\tilde{\beta}$" ought to be "$\tilde{\beta}_{ave}$" (reported by Long Liu)

99. Page 261, 2 lines from the bottom, "$\hat{\beta}_a$" and "$\hat{\beta}$" in the equation ought to be "$\hat{\beta}_{ave}$" (reported by Long Liu)

100. Page 262, in line 1, 2 lines below that, and line 2 in Section 8.3.2, "$\hat{\beta}_a$" and "$\tilde{\beta}_a$" ought to be "$\hat{\beta}_{ave}$" and "$\tilde{\beta}_{ave}$" respectively (reported by Long Liu)

101. Page 266, 2 lines from the bottom, "$\mathrm{P}(\epsilon < x'\beta)$" ought to be "$\mathrm{P}(x'\beta > -\epsilon)$"

102. Page 268, second paragraph, "where ϵ_i and X_i are uncorrelated so that $\mathrm{E}(\epsilon_i X_i) \neq 0$" ought to be "where ϵ_i and X_i are correlated so that $\mathrm{E}(\epsilon_i X_i) \neq 0$" (reported by Leandro M. Magnusson)

103. Page 269, 4 lines below Equation (8.31), "for $Y_i = 0$, $S_M = 1$ if $X_i'\beta < 0\ldots$" ought to be "for $Y_i = 0$, $S_M = 0$ if $X_i'\beta < 0\ldots$" (reported by Daiqiang Zhang)

104. Page 280, Table 8.3, "Actual Nonpurchase 1378 1" ought to be "Actual Nonpurchase 1378 5"

105. Page 284, 1 line below Equation (9.2), remove " , and also let $\eta(z_\alpha, Z_{\underline{\alpha}j}) = \mathrm{E}(X_j|Z_{\alpha j} = z_\alpha, Z_{\underline{\alpha}j})$." Also, in Equation (9.3), the subscript α in ξ ought to be removed (reported by Dongni Zhu)

106. Page 291, 3 lines from the bottom, "where $l = 1, 2, \ldots,$ denote the number of iterations." ought to be "where $r = 1, 2, \ldots,$ denote the number of iterations." (reported by Lidia Storjohann)

107. Page 302, just above (9.59), the expression "$\mathrm{E}[X_i Y_i|Z_i] = \mathrm{E}[X_i X_i']\beta(Z_i)$" ought to be "$\mathrm{E}[X_i Y_i|Z_i] = \mathrm{E}[X_i X_i'|Z_i]\beta(Z_i)$" (the $|Z_i$ was missing, reported by Ivan Korolev)

108. Page 303,

   (a) Replace M_z and M_z^{-1} in Theorem 9.3 by $M(z)$ and $M(z)^{-1}$, respectively

   (b) In lines 5-7 in Theorem 9.3, replace "$B_s(z) = \kappa_2 M_z^{-1} E[X_i X_i' \{\delta_s(z) f_s(X_i, Z_i)/f(X_i|Z_i = z) + (1/2) f_z(Z_i)\beta_{ss}(Z_i)\}|z]$, $\kappa_2 = \int k(v)v^2 dv$," by "$B_s(z) = \kappa_2 M(z)^{-1}[M_s(z)\beta_s(z) + (1/2)M(z)\beta_{ss}(z)]$, where $\kappa_2 = \int k(v)v^2 dv$, $M_s(z) = \partial M(z)/\partial z_s$"

109. Page 304, 2 lines above (9.64), in the definition of $\hat{\delta}$, a transpose sign is missing on the right hand side expression (reported by Ximing Wu)

110. Page 305, in Theorem 9.4, "$\Omega(z)^{-1}(z)\Omega^*(z)\Omega(z)/f(z)$" ought to be "$\Omega^{-1}(z)\Omega^*(z)\Omega^{-1}(z)/f(z)$" (reported by Jui-Chung Yang)

111. Page 307, 2 lines above Footnote 2, "following nonparametric bootstrap" ought to be "following parametric bootstrap"

112. Page 308, line 5, "$Y_i^* = \hat{\beta}_1(Z_i)X_{i1} + \cdots + \hat{\beta}_p(Z_i)X_{ip} + u_i^*$" ought to be "$Y_i^* = \beta_1(Z_i, \hat{\gamma})X_{i1} + \cdots + \beta_p(Z_i, \hat{\gamma})X_{ip} + u_i^*$" (reported by Christopher Parmeter)

113. Page 309, the line immediately following Equation (9.71), "$B = \mathrm{E}[\sigma^2(X_i, Z, W_i)\zeta_i\zeta_i']$" ought to be "$B = \mathrm{E}[\sigma^2(X_i, Z_i, W_i)\zeta_i\zeta_i']$" (reported by Ta-Cheng Huang)

114. Page 309, line immediately following Equation (9.71), "$\zeta_i = w_i - \mathrm{E}_{sm}(w_i)$, and where $\mathrm{E}_{sm}(W_i)$ denotes the projection of W_i into the smooth coefficient functional space, i.e., $\mathrm{E}_{sm}(W_i) = X_i'\beta_w(Z_i)$, where $\beta_{ws}(\cdot) = \inf_{\beta(\cdot)} \mathrm{E}\{[W_{is} - X_i'\beta(Z_i)]'[W_{is} - X_i'\beta(Z_i)]\}$" ought to be "$\zeta_i = W_i - \mathrm{E}_{sm}(W_i)$, and where $\mathrm{E}_{sm}(W_i)$ denotes the projection of W_i into the smooth coefficient functional space, i.e., $\mathrm{E}_{sm}(W_i) = X_i'\beta_w(Z_i)$, where $\beta_w(\cdot) = \inf_{\beta(\cdot)} \mathrm{E}\{[W_i - X_i'\beta(Z_i)]'[W_i - X_i'\beta(Z_i)]\}$" (reported by Yongok Choi)

115. Page 310. All $\beta(X_j)$ ought to be $\beta(Z_j)$ [these appear 3 times, in lines 5, 6, and 10] (reported by Ximing Wu)

116. Page 311, replace lines 11-18, i.e., replace " (ii) $E[A_{1n}(z)] =$ ......, where $B_s(z)$ is ...... Hence" by

$$\begin{aligned}
\text{(ii) } E[A_{1n}(z)] &= E[X_iX_i'(\beta(Z_i) - \beta(z))K_{h,z_i,z}] \\
&= E\{E[X_iX_i'|Z_i](\beta(Z_i) - \beta(z))K_{h,z_i,z}\} \\
&= \int E[X_iX_i'|z_i]f(z_i)(\beta(z_i) - \beta(z))K_{h,z_i,z}dz_i \\
&= \int M(z+hv)(\beta(z+hv) - \beta(z))K(v)dv \\
&= \kappa_2 \sum_{s=1}^{q} h_s^2[M_s(z)\beta_s(z) + (1/2)M(z)\beta_{ss}(z)] \\
&\quad + O\left(\sum_{s=1}^{q} h_s^3\right) \\
&= \kappa_2 M(z) \sum_{s=1}^{q} h_s^2 B_s(z) + O\left(\sum_{s=1}^{q} h_s^3\right),
\end{aligned}$$

where $B_s(z)$ is defined in Theorem 9.3. Similarly, one can show that $var(A_{1n}(z)) = O(\sum_{s=1}^{q} h_s^2(nh_1 \ldots h_q)^{-1})$. Hence"

117. Page 316, 2 lines below Equation (10.6), "provided that $\mathrm{E}(Y_{2i}|X_i, Y_{1i} = 1)$" ought to be "provided that $\mathrm{E}(u_{2i}|X_i, Y_{1i} = 1)$" (reported by Lidia Storjohann)

118. Page 320, line 10, "In this section we study the semiparametric estimation of a Type-2 Tobit model" ought to be "In this section we study the semiparametric estimation of

a Type-3 Tobit model" (reported by Lidia Storjohann)

119. Page 339, line 14, "$\mathrm{P}(I_0 = 1)$." ought to be "$\mathrm{P}(I_0 = 1) = 1$." (reported by Lidia Storjohann)

120. Page 340, equations (11.16) and (11.17), "$\prod_{s=1}^{j} \hat{\mathrm{P}}(I_{j-1} = 1|I_{j=1})$" ought to be "$\prod_{s=2}^{j} \hat{\mathrm{P}}(I_s = 1|I_{s-1} = 1)$" (reported by Lidia Storjohann)

121. Page 353, just below Equation (12.3), "$f(\cdot)$ test" ought to be "F test"

122. Page 354, 6 lines from the bottom, "because the sample analogue of the latter is $n^{-1}\sum_{i=1}^{n} u_i^2[\mathrm{E}(u_i|X_i)]^2 f(X_i)$" ought to be "because the sample analogue of the latter is $n^{-1}\sum_{i=1}^{n}[\mathrm{E}(u_i|X_i)]^2 f(X_i)$" (reported by Daiqiang Zhang)

123. Page 355, just below Equation (12.5), "unknown parameter" ought to be "unknown parameters"

124. Page 358, one line from the bottom, "$O_p(n^{-11/20})$" ought to be "$O_p(n^{-3/5})$" (reported by Yongok Choi)

125. Page 360, lines 6 and 7 ought to be "where $K_{h,ij} = \prod_{s=1}^{q} h_j^{-1} k((X_{js} - X_{is})/h_j)$, $\bar{K}_{h,ij} = \prod_{s=1}^{q} h_j^{-1} \bar{k}((X_{js} - X_{is})/h_j)$" (the h_s ought to be h_j, reported by Ondrej Vozar)

126. Page 362, 3 lines from the bottom, "definition A.15" ought to be "Definition A.40" (reported by Brennan Thompson)

127. Page 366, Equation (12.17), $\frac{1}{n}$ ought to be $\frac{1}{n^2}$ (reported by Kristoph Steikert)

128. Page 366, Theorem 12.6,

$$n(h_1 \dots h_q)^{1/2}(I_{n,HM} - c_{n,a})/\tilde{\sigma}_a^2 \xrightarrow{d} N(0,1),$$

ought to be

$$n(h_1 \dots h_q)^{1/2}(I_{n,HM} - c_{n,a})/\tilde{\sigma}_a \xrightarrow{d} N(0,1),$$

i.e. the standard deviation ought to appear in the denominator (reported by Kristoph Steikert)

129. Page 373, 2 lines below "A Bootstrap Procedure for T_n^d", the expression $u_i^* = [(1 + /\sqrt{5})/2]\tilde{u}_i$ ought to be $u_i^* = [(1 + \sqrt{5})/2]\tilde{u}_i$ (reported by Arne Henningsen)

130. Page 373, bottom line, the variance expression is missing two terms, namely $\hat{f}^2_{w_i}$ and $\hat{f}^2_{w_j}$. The correct expression is

$$\hat{\sigma}_d^{*2} = 2(n^2 h_1 \dots h_q)^{-1} \sum_{i=1}^{n} \sum_{j \neq i}^{n} \tilde{u}_i^{*2} \hat{f}^2_{w_i} \tilde{u}_j^{*2} \hat{f}^2_{w_j} K \left(\frac{X_i - X_j}{h} \right)^2 .$$

(reported by Christopher Parmeter)

131. Page 381, Equation (12.28). The middle term ought to be $\int [K_h * f_0(x, \hat{\delta})]^2 dx$ (the zero subscript is missing), while the first summation ought to be $\sum_{i=1}^n$ (the n superscript is missing) (reported by Brennan Thompson)

132. Page 381, Theorem 12.12, "Under Condition 12.4" ought to be "Under Condition 12.5" (reported by Ondrej Vozar)

133. Page 381, line 12, $\frac{1}{n^2} \sum_{i=1}^n \bar{K}_h(X_i, X_j)$ ought to be $\frac{1}{n^2} \sum_{i=1}^n \sum_{j=1}^n \bar{K}_h(X_i, X_j)$ (i.e. the second $\sum_{j=1}^n$ is missing, reported by Ondrej Vozar)

134. Page 388, line 11, "$+(\hat{\gamma} - \gamma)' n^{-2} \sum_{i=1}^n \sum_{j \neq i}^n Z_i Z_j K_{h,ij} (\hat{\gamma} - \gamma)$" ought to be "$+(\hat{\gamma} - \gamma)' n^{-2} \sum_{i=1}^n \sum_{j \neq i}^n Z_i Z_j' K_{h,ij} (\hat{\gamma} - \gamma)$" (reported by Daiqiang Zhang)

135. Page 388, 4 lines from the bottom, "$\cdots \equiv (n^2 H_q) \{\sigma_a^2 + o(1)\}$" ought to be "$\cdots \equiv (n^2 H_q)^{-1} \{\sigma_a^2 + o(1)\}$" (reported by Jui-Chung Yang)

136. Page 388, 5 lines from the bottom, "$\cdots \int f^2(x_1) \sigma^4(x_1) dx_1 dx_1 dv + o(1)\}$" ought to be "$\cdots \int f^2(x_1) \sigma^4(x_1) dx_1 + o(1)\}$" (reported by Jui-Chung Yang)

137. Page 389, line 16, $C = E[(g(X_i) - Z_i' \bar{\gamma})^2]$ ought to be $C = E[f(X_i)(g(X_i) - Z_i' \bar{\gamma})^2]$ (reported by Leonardo Sanchez Aragon)

138. Page 391, the text considers a density weighted version of the test statistic I_n^d in page 371, but the proof from pages 391 to 394 considers a test statistic without density weighting. For notational simplicity, in the proof of Theorem 12.9, we only consider a statistic that does not use density weighting (i.e., replace $\hat{f}_{w_i}$ and f_{w_i} by 1 wherever they occur). (reported by Ivan Korolev).

139. Page 391, Lemma 12.1, $J_{n1}^d = o_p\left((nh^{q/2})^{-1}\right)$ ought to be $I_{n1}^d = o_p\left((nh^{q/2})^{-1}\right)$, i.e., J ought to be replaced by I (reported by Ivan Korolev).

140. Page 392, in the proof of Lemma 12.3,

- J_{n3}^d ought to be I_{n3}^d (replace J by I, reported by Ivan Korolev)
- In the 3rd line of proof, $(n^2h^d)^{-1}$ ought to be n^{-2} (reported by Ivan Korolev)

141. Page 393, in the second line in the proof for I_{n4}^d, $(n^2h^d)^{-1}$ ought to be n^{-2} (reported by Ivan Korolev)

142. Page 393, in the proof of I_{n5}^d, the first line, $\hat{u}_i(r_j - \hat{r}_j)$ ought to be $\hat{u}_i(r_j - \hat{r}_j)K_{h,ij}$, while in the second line, $(n^2h^d)^{-1}$ ought to be n^{-2} (reported by Ivan Korolev)

143. Page 394, in the second line of the proof for I_{n6}^d, $(n^2h^d)^{-1}$ ought to be n^{-2} (reported by Ivan Korolev)

144. Page 394, 3 lines from the bottom (in Exercise 12.2), " $E^*(u^{*j})$" ought to be "$E^*(u_i^{*j})$" (the subscript i was missing)

145. Page 395, line 2, "$u_i Z_i$" ought to be "$u_i Z_j$"

146. Page 395, 7 lines from the bottom, "$G_n(W_1, W_2)$" ought to be "$G_n^2(W_1, W_2)$"

147. Page 396, line 4 in Exercise 12.6, "$-2K_{h,ij}^{x,y}$" ought to be "$-K_{h,ij}^{x,y} - K_{h,ij}^{y,x}$"

148. Page 398, Equation (13.3), the expression "$\int [n^{-1} \sum_i u_i \mathcal{H}(X_i, x)]^2 \, dF(x)$" ought to be "$\int \left[n^{-1/2} \sum_i u_i \mathcal{H}(X_i, x)\right]^2 dF(x)$" (reported by Ivan Korolev)

149. Page 405, one line above Equation (13.23), the superscripts "$(0, m, l$" ought to be "$(0, m, l)$" (reported by Long Liu)

150. Page 405, first line in Equation (13.23), "$\int \int$" ought to be "$\int \int_{-\pi}^{\pi}$"

151. Page 405, first line in Equation (13.23), "$\hat{f}^{(0,m,l)}(w, u, v)$" ought to be "$\hat{f}_n^{(0,m,l)}(w, u, v)$"

152. Page 405, second line in Equation (13.23), "$\frac{1}{\pi}$" ought to be "$\frac{2}{\pi}$" (reported by Long Liu)

153. Page 418, two lines after Theorem 14.1, "with the results given in (1.23) and (1.24)" ought to be "with the results given in (1.13) and (1.14)" (reported by Ta-Cheng Huang)

154. Page 420, Theorem 14.3,

$$\mathrm{bias}(\hat{g}(x)) = c_3 \left(\frac{k}{n}\right)^{2/q} \frac{g^{(1)}(x)' f^{(1)}(x) + 2f(x)\,\mathrm{tr}[g^{(2)}(x)]}{f(x)^{(2+q)/q}} + o(k^{-1/2}) + o\left((k/n)^{q/2}\right)$$

ought to be

$$\mathrm{bias}(\hat{g}(x)) = c_3 \left(\frac{k}{n}\right)^{2/q} \frac{2g^{(1)}(x)' f^{(1)}(x) + f(x)\,\mathrm{tr}[g^{(2)}(x)]}{f(x)^{(2+q)/q}} + o(k^{-1/2}) + o\left((k/n)^{2/q}\right)$$

(reported by Ta-Cheng Huang)

155. Page 420, Theorem 14.4,

$$B_g(x) = c_3 \left\{g^{(1)}(x)' f^{(1)}(x) + 2g(x)\,\mathrm{tr}[f^{(2)}(x)]\right\} / \left[f(x)^{(2+q)/q}\right]$$

ought to be

$$B_g(x) = c_3 \left\{2g^{(1)}(x)' f^{(1)}(x) + f(x)\,\mathrm{tr}[g^{(2)}(x)]\right\} / \left[f(x)^{(2+q)/q}\right]$$

(reported by Ta-Cheng Huang)

156. Page 422, line two,

$$\mu_L(x) = (1/2)\kappa_2\,\mathrm{tr}\{g^{(2)}(x)\}/(c_0 f(x))^{q/2}$$

ought to be

$$\mu_L(x) = (1/2)\kappa_2\,\mathrm{tr}\{g^{(2)}(x)\}/(c_0 f(x))^{2/q}$$

(reported by Ta-Cheng Huang)

157. Page 433, two lines below the proof of Lemma 14.1,

$$R_i \sim (c_0 f(X_i) q)^{-1/q}\,(k/n)^{1/q}$$

ought to be

$$R_i \sim (c_0 f(X_i))^{-1/q}\,(k/n)^{1/q}$$

(reported by Ta-Cheng Huang)

158. Page 450, Assumption 15.2 (ii), "$\zeta_0(K)^2/n \to 0$" ought to be "$\zeta_0(K)^2K/n \to 0$" (reported by Ximing Wu)

159. Page 450, 4 lines above Assumption 15.3, "$O_p(n^{-q/(q+2m)})$" ought to be "$O_p(n^{-2m/(q+2m)})$" (reported by Ximing Wu)

160. Page 453, line 17, "$\sqrt{K/n}[\hat{g}(x) - g(x)]$" ought to be "$\sqrt{n/K}[\hat{g}(x) - g(x)]$" (reported by Xi Zhao)

161. Page 453, equation above Theorem 15.2,

$$\begin{aligned} V_K &= n^{-1}p^K(x)'Q^{-1}\Sigma Q^{-1}p^K(x) \\ &= n^{-1}\Sigma \end{aligned}$$

ought to be

$$\begin{aligned} V_k &= p^K(x)'Q^{-1}\Sigma Q^{-1}p^K(x) \\ &= p^K(x)'\Sigma p^K(x) \end{aligned}$$

(reported by Ximing Wu)

162. Page 460, paragraph 4. "and define $\eta_i = E(X_i|X_i) - E_A(Z_i)$." ought to be "$\eta_i = E(Z_i|X_i) - E_A(Z_i)$." (reported by Ximing Wu)

163. Page 465, line 2 of equation (15.38), $(Z_{\alpha i} - z_\alpha)^j$. The superscript is missing (reported by Ximing Wu)

164. Page 466, $D_1(Z_\alpha)$. At the end of the right hand side, ought to be $dz_{\underline{\alpha}}$ (reported by Ximing Wu)

165. Page 468, in the definition of $p^K(X_i, Z_i)$, on the right hand side. The last entry ought to be $Z_{ir}p_r^{k_r}(X_i)'$. The subscript for Z is incorrect (reported by Ximing Wu)

166. Page 468, 2 lines below (15.48). (W, P) ought to be $(\mathcal{W}, P)$ (reported by Ximing Wu)

167. Page 470, Assumption 15.9. (i): $f(x, z) = \sum_{l=1}^r x_l\beta_l(z)$ ought to be $f(x, z) = \sum_{l=1}^r z_l\beta_l(x)$ (reported by Ximing Wu)

168. Page 470, Theorem 15.7 (ii), $1/nsum_i(\hat{\beta}_l(x) - \beta_l(x))^2$ ought to be $1/nsum_i(\hat{\beta}_l(X_i) - \beta_l(X_i))^2$ (reported by Ivan Korolev).

169. Page 472, Equation (15.60), $\bar{J}_{se}^{a} \stackrel{def}{=}$ ought to be $\bar{J}_{se}^{a} =$ since $\bar{J}_{se}^{a}$ is defined differently in Theorem 15.9 that follows

170. Page 473, 2 lines below the formula $E\{\cdots\} = o(\cdots)$. "Also, $\bar{J}_{se}^{a}$ does have a nonzero center term" ought to be "...does not have ..." (reported by Ximing Wu)

171. Page 473, Theorem 15.9. (i) change $\hat{J}_{se}^{a}$ to $\bar{J}_{n,se}^{a}$. Also, in (ii), H_1 ought to be H_1^a (reported by Ximing Wu)

172. Page 473, second to last paragraph (5 lines from the bottom), $\hat{S}_n^2$ ought to be $\hat{S}_{n,a}^2$; $\hat{S}_{n,se}$ ought to be $\hat{S}_{n,a}^2$ (note: the notation is not right, and the superscript is missing) (reported by Ximing Wu)

173. Page 474, last paragraph, second line. "..., where u_i is defined in (15.61)." It is not defined in (15.61), it is defined previously (reported by Ximing Wu)

174. Page 474, 1 line above (15.62), "negation of H_0^a" ought to be "negation of H_0^b" (reported by Lidia Storjohann)

175. Page 474, below (15.61), "and $\mathcal{G}$ is the class of additive functions defined below." $\mathcal{G}$ is not defined in the rest of this section or the proof of Theorem 15.10. $\mathcal{G}$ simply denotes the class of additive functions (reported by Ximing Wu)

176. Page 481, in the proof of Theorem 15.1 (i). The function $\mathbf{1}_n$ is not defined until end of the proof for Lemma 15.2 (reported by Ximing Wu)

177. Page 482, all x_i ought to be X_i (reported by Ximing Wu)

178. Page 483, the first formula in equation (15.69), on the third line inside the square bracket, ought to be $(G - P\beta)' P\hat{Q}^{-1/2}\cdots$. The P is missing (reported by Ximing Wu)

179. Page 484, paragraph 3, $\tilde{A} = P(P'P)^{-} P'A$. The first P is missing. Also, $\tilde{\theta} = P(P'P)^{-}P'\theta$ in the next line (reported by Ximing Wu)

180. Page 484, paragraph 4, line 2, $\tilde{Z} = \tilde{\theta} + \tilde{v}$, not $\tilde{\eta} + \tilde{v}$. (reported by Ximing Wu)

181. Page 484, second to last paragraph, 3 lines from the bottom, refers to 'Lemma 15.8 (i) and (iii).' ought to be 'Lemma 15.8 (i).' (reported by Ximing Wu)

182. Page 485, 6 lines from the bottom, '$\{S_{h-\tilde{h}}S_{\tilde{u}}\}^{1/2}$' ought to be '$\{S_{\theta-\tilde{\theta}}S_{\tilde{u}}\}^{1/2}$' (reported by Ximing Wu)

183. Page 486, first line, $\sum_i [\eta_i + v_i]\, u_i$ ought to be $\sum_i v_i u_i$ (reported by Ximing Wu)

184. Page 486 (middle of the page). In the proof of $\hat{\Sigma}$. 'Lemma 15.8 (i) and (iii)' ought to be 'Lemma 15.8 (ii)' (reported by Ximing Wu)

185. In Lemma 15.5 and 15.7, in the terms $O_p\left(K^{-\delta}\right)$ and $O_p\left(K^{-2\delta}\right)$, the δ ought to be α (reported by Ximing Wu)

186. Page 487. Lemma 15.7 "where $f = g$ or $f = h$. " ought to be "$f = g$ or $f = \theta$" (reported by Ximing Wu)

Also the first line of the proof (reported by Ximing Wu)

$S_{f-\tilde{f}} = 2n^{-1}||f - \tilde{f}||^2 \leq n^{-1}\{||f - P\beta||^2 + ||P(\beta_f - \tilde{\beta}_f)||^2\} = O(K^{-2\delta}) + (\beta_f - \tilde{\beta}_f)'(P'P/n)(\beta_f - \tilde{\beta}_f) = O(K^{-2\delta}) + O_p(1)||\beta_f - \tilde{\beta}_f||^2 = O(K^{-2\delta})$

ought to be

$S_{f-\tilde{f}} = n^{-1}||f - \tilde{f}||^2 \leq 2n^{-1}\{||f - P\beta||^2 + ||P(\beta_f - \tilde{\beta}_f)||^2\} = O(K^{-2\alpha}) + 2(\beta_f - \tilde{\beta}_f)'(P'P/n)(\beta_f - \tilde{\beta}_f) = O(K^{-2\alpha}) + O_p(1)||\beta_f - \tilde{\beta}_f||^2 = O(K^{-2\alpha})$

(reported by Ximing Wu)

187. Page 488, in Section 15.6.3, paragraph 1, line 4, $g_i = X_i'\beta\,(Z_i)$ ought to be $g_i = Z_i'\beta\,(X_i)$ (reported by Ximing Wu)

188. Page 489, right below (15.72), $g_i = x_i'\beta\,(z_i)$ ought to be $g_i = Z_i'\beta\,(X_i)$ (reported by Ximing Wu)

189. Page 490, line 2, $Cn^{-1}\left(\sum_{l=1}^d k_l^{2\delta_l}\right)$ ought to be $Cn^{-1}\left(\sum_{l=1}^d k_l^{-2\delta_l}\right)$, ditto for the next one that appears the same line, i.e., $\left(\sum_{l=1}^d k_l^{2\delta_l}\right)$ ought to be $(\sum_{l=1}^d k_l^{-2\delta_l})$ (reported by Ximing Wu)

190. Page 492. 15.6.4, in Proof of (i). $(P'P)^{-1}$ is used in the proof, while $(P'P)^{-}$ is used in the text Page 472-473. Since $P'P$ is non-singular with probability approaching one as $n \to \infty$, we replace $(P'P)^{-}$ by $(P'P)^{-1}$ in the proofs (reported by Ximing Wu)

191. Page 492, right below the long formulae, "we can show that $\hat{I}_n, \hat{S}_n, S_n, S_n^* \dots$" $\hat{I}_n$ and S_n^* are not defined; in the next formula, $\lambda_{\min}^{-1}(\cdot)$ is not defined; $\xi_0^2(K)$ ought to be $\zeta_0^2(K)$ (4 lines from the bottom) (reported by Ximing Wu)

    This could read "we can show that $\hat{I}_{jn}$(j=1,2,3)$, \hat{S}_n, S_n$"', and "λ_{min} is the minimum eigenvalue of $P'P$"

192. Page 493, in the Taylor expansion, $\tilde{\gamma}$ is not defined (reported by Ximing Wu)

    $\tilde{\gamma}$ is on the line segment connecting $\hat{\gamma}$ and γ_0

193. Page 494, in the second long formula, "$\|I_{2n,4}\|^2 Y = \dots$". The "Y" ought to be removed (reported by Ximing Wu)

194. Page 494, in the last line, the left hand side ought to be $m(X_i, \hat{\gamma}) - m(X_i, \gamma_0)$; the right hand side, $m(fX_i, \bar{\gamma})$ ought to be $m(X_i, \bar{\gamma})$ (reported by Ximing Wu)

195. Page 495, line 1, Γ is not defined, and $\|\tilde{\gamma} - \gamma_0\|$ ought to be $\|\bar{\gamma} - \gamma_0\|$ (reported by Ximing Wu)

    $\bar{\gamma}$ is at the line segment connecting $\hat{\gamma}$ and γ_0, and hence, $||\bar{\gamma} - \gamma_0|| \leq ||\hat{\gamma} - \gamma_0||$

196. Page 495, the last line, $n\bar{I}_{se}^a/\hat{S}_n$ ought to be $n\bar{I}_{se}^a/S_n$ (there ought to be no hat in S_n there)

197. Page 496, in the Proof of (ii) γ^* is not defined (reported by Ximing Wu)

    γ^* denotes the probability limit of $\hat{\gamma}$

198. Page 496, Equation (15.73), the last term ought to be "$o_p(1)$," not "(1)" (reported by Ximing Wu)

199. Page 496, Equation (15.74), both summations ought to be $\sum_{j\neq i}^n$; The last line of Equation (15.74), right after the summation, $p^K(x_i)$ ought to be $p^K(X_i)$, and $p^K(X_j)'\beta_K$ ought to be $p^K(X_i)'\beta_K$ (reported by Ximing Wu)

200. Page 497, 3 lines below "Proof of Theorem 15.10 (i)." $\hat{m}(X_i) \equiv p_K(X_i)$ ought to be $p^K(X_i)$ (reported by Ximing Wu)

201. Page 507, the third line from bottom, the term "$w'u/\sqrt{n}$" ought to be "$W'u/\sqrt{n}$" (reported by Long Liu)

202. Page 508, the first equation in (16.8), "$w'v/n \xrightarrow{p} E\left[W_t' v_t\right] \equiv \bar{A}$" ought to be "$W'v/n \xrightarrow{p} E\left[W_t v_t'\right] \equiv A$", i.e., "$w'v/n$" ought to be "$W'v/n$"; "$E\left[W_t' v_t\right]$" ought to be "$E\left[W_t v_t'\right]$" and "$\bar{A}$" ought to be the same as "A" that is defined in (16.5) (reported by Long Liu)

203. Page 508, the line under (16.9), "$\bar{A}$" ought to be "A" (reported by Long Liu)

204. Page 527, Equation (17.14), "$Z_i = (Z_{11}, Z_{2i})$" ought to be "$Z_i = (Z_{1i}, Z_{2i})$" (reported by Lidia Storjohann)

205. Page 537, the first line of the paragraph just before Theorem 18.1. $\hat{g}(x)$ ought to be $\hat{f}(x)$ (reported by Manuel P. Gonzalez)

206. Page 540, the third line of Theorem 18.2, after α-mixing the $\rho(\tau)$ symbol ought to be $\alpha(\tau)$ (reported by Manuel P. Gonzalez)

207. Page 540. The result of Theorem 18.2 indicates that the asymptotic variance is $\kappa^q f_J(x)$. "J" should not be there (reported by Manuel P. Gonzalez)

208. Page 541, 3 lines from the bottom, "Y_{t-1},. . . ,y_{t-d}" ought to be "Y_{t-1},. . . ,Y_{t-d}" (reported by Isabel Casas)

209. Page 548, line 1, "autoregresssive" ought to be "autoregressive" (reported by Lidia Storjohann)

210. Page 551, in the first equation of subsection 18.3.1, the second "X_t" ought to be "Z_t" (reported by Long Liu)

211. Page 551, in the second equation of subsection 18.3.1, the first "+" ought to be "=" (reported by Long Liu)

212. Page 551, in the sentence right after the second equation of subsection 18.3.1, "$\hat{f}(X_t)$" ought to be "$\hat{f}(Z_t)$" (reported by Long Liu)

213. Page 566, in line 9, "$\hat{y}_{t,L}$" ought to be "$\hat{Y}_{t,linear}$", while in line 10 "$\hat{y}_{t,linear}$" ought to be "$\hat{Y}_{t,linear}$" (reported by Wankeun Oh)

214. Page 568, three lines above (18.65), "$\left[f_{1,1+j}(x,x)\int K(u)K(u+v)dudv + O(|h|)\right]$" ought to be "$\left[f_{1,1+j}(x,x)\int K(u)K(v)dudv + O(|h|)\right]$" (reported by Daiqiang Zhang)

215. Page 573, two lines from the bottom, "$O(H^{-2q/(1+\delta)}) = o(H^{-q})$" ought to be "$O(nH_q^{-2\delta/(1+\delta)}) = o(nH_q^{-1})$" (reported by Daiqiang Zhang)

216. Page 602, one line above Equation (19.76), "nonlinear least squares estimator" should be "least squares estimator" (reported by Gerwin Kiessling)

217. Page 610, one line from the bottom, "estimators $\hat{\alpha}$ and $\hat{g}_j(.)$ are" ought to be "estimator $\hat{\alpha}$ is" (reported by Ximing Wu)

218. Page 629, 4 lines from the top, "$\hat{f}(x) = f(x) + O(h^2 + [\ln(n)/(nh)]^{-1/2})$ " ought to be "$\hat{f}(x) = f(x) + O(h^2 + [\ln(n)/(nh)]^{1/2})$"

219. Page 641, 2 lines above (20.28), "$P(t_1 = 1|X_i)$" ought to be "$P(t_i = 1|X_i)$" (reported by Evan Meredith)

220. Page 653, Equation (20.56), the expression ought to be $\ln c\left(\tilde{F}_{n1}\left(X_{1i}\right), \ldots, \tilde{F}_{np}\left(X_{pi}\right); \theta\right)$ instead of $\ln c\left(\tilde{F}_{np}\left(X_{pi}\right), \ldots, \tilde{F}_{np}\left(X_{pi}; \theta\right)\right)$. i.e., θ ought to be outside of $\tilde{F}_{np}\left(X_{pi}\right)$ (reported by Long Liu)

221. Page 655, Example A.4, "$\cap_{i=1}^{n} A_i^c = A_i^2 \cap A_2^c$" ought to be "$\cap_{i=1}^{2} A_i^c = A_1^c \cap A_2^c$" (reported by Horatio Cuesdeanu)

222. Page 661, 3 lines from the top, $\mathrm{E}(\mathbf{1}(d_{iy})|X_i)$ ought to be $\mathrm{E}(d_{iy}|X_i)$ (reported by Long Liu)

223. Page 685, line 3, "$a_n \leq 5b_n$" ought to be "$a_n \leq 6b_n$" (reported by Brennan Thompson)

224. Page 687, Equation (A.20), "$Jn(b')$" ought to be "$J_n(b')$" (also page 696, Equation (A.30))

225. Page 689, Lemma A.5,

    (a) Line 5, remove "$\sigma_n^2 = \sigma^2 + o(1)$ (σ^2 is a constant), and"

    (b) Change (A.21) to

$$\lim_{n\to\infty} \frac{1}{\sigma_n^{2+\delta}} \sum_{i=1}^{n} E|Z_{n,i} - \mu_{n,i}|^{2+\delta} = 0 \text{ for some } \delta > 0, \qquad (A.21)$$

    (reported by Manuel Gonzalez Astudillo)

226. Page 692, in the fifth line of Lemma A.16, "$\mathrm{E}[H_n|X_1, X_2)|X_1] = 0$" ought to be $\mathrm{E}[H_n(X_1, X_2)|X_1] = 0$ (reported by Hongjun Li)

227. Page 696, Exercise A.10, "$\int_{\pi}^{\pi} \sin(kx)dx$" ought to be "$\int_{-\pi}^{\pi} \sin(kx)dx$" (reported by Long Liu)

228. Page 698, there ought to be no "+" sign in the title of Akaike (1974)

229. Page 708, the paper by Embrechts, McNeil and Straumann ought to be (2002) and not (1999) (reported by Long Liu)

230. Page 724, Linton, Whang and Maasoumi (2005) ought to be Linton, Maasoumi and Whang (2005) and the volume ought to be 72 (not 73) (reported by Brennan Thompson)

231. Author index, Carroll, R. J. and Carroll, R.J. are one and the same