Nonparametric Econometrics: Theory and Practice
Princeton University Press (2007)

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Errata as of February 2, 2010

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

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

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

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

8. 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"

9. 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)

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

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

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

13. 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)

14. 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 $k(v) \leq c/(1+v^2)$ for v sufficiently large because

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

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)

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

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

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

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

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

20. 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 $\partial g(x)/\partial x$"

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

22. 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)

23. 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)

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

25. 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)

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

27. 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)

28. 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,"

29. 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)

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

31. 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)

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

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

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

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

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

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

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

39. 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)

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

41. 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)

42. 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)

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

44. 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)

45. 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)

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

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

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

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

50. 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, "$1 \leq j \leq q_1$" ought to be "$0 \leq j \leq q_1$" (reported by Manuel Gonzalez Astudillo)

51. 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)

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

53. Page 163, 2 lines from the bottom, "$B_{2s}(\bar{x}, y) = \ldots.\{\ldots\}$" 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)

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

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

56. Page 187, 3 lines from the bottom, $n^{(5+q)/(4+q)}$ ought to be $n^{1/(5+q)-1/(4+q)}$ (reported by Leopold Simar)

57. Page 216, 4 lines from the bottom, "This proves (6.5)" ought to be "This proves (6.13)"

58. 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, Pages 277-285 (reported by Long Liu)

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

60. 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)

61. 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 $g(\cdot)$"

62. 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)

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

64. 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)

65. 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)

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

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

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

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

70. 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)

71. Page 303, Theorem 9.3, line 6, "$\delta_s(z)$" ought to be "$\beta_s(z)$"

72. 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 $\kappa_2 = \int k(v)v^2 dv$, $M_s(z) = \partial M(z)/\partial z_s$"

73. 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)

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

75. 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)

76. 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)

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

Hence" by

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

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

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

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

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

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

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

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

(reported by Christopher Parmeter)

83. 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)

84. 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)

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

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

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

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

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

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

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

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

93. 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)

94. 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)

95. 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)

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

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

98. 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)

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

100. 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)

101. 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

102. 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)

103. 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)

104. 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)

105. 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)

106. 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)

107. 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)

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

109. 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)

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

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

112. 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)

113. 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)

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

115. 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)

116. 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)

117. 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)

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

119. 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)

120. 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)

121. 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)

122. Page 492, right below the long formulae, "we can show that $\hat{I}_n, \hat{S}_n, S_n, S_n^* \ldots$" $\hat{I}_n$ 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 $P'P$"

123. 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

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

125. 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)

126. 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, $||\bar{\gamma} - \gamma_0|| \leq ||\hat{\gamma} - \gamma_0||$

127. 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)

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

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

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

130. 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)

131. 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)

132. 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)

133. 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)

134. 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)

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

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

137. 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)

138. 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)

139. 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)

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

141. Page 651, 2 lines above (20.28), "$P(t_1 = 1|X_i)$" ought to be "$P(t_i = 1|X_i)$" (reported by Evan Meredith)

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

143. 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)

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

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

146. 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)

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