Errata and Corrigenda

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In the tables below I list the misprints and errors in my books that have been brought to my attention. My thanks are due to the readers who took the trouble to tell me about them.

I shall not list the misprints in the hardcover edition of *Error Correcting Codes and Finite Fields.* Most have been corrected in the student edition.

1. Error-Correcting Codes and Finite Fields (Student Edition)

The following misprints and errors were corrected in the 2nd printing:

Pge,Lne	**Printed**	:	**Correction**
96, −9	introdce	:	introduce
100, −12	$x^6 + x^2 + x + 1 =$	:	$x^6 + x^2 + x =$
104, 8	Danish	:	Norwegian

Misprints and errors (still) in the second printing:

Pge,Lne	**Printed**	:	**Correction**
20, −11	$s \leq d(u, v) \leq 2t + s$	:	$0 < d(u, v) \leq 2t + s$
33, 4	if u	:	If u
33, −12	$\begin{bmatrix} 1 & 1 & 0 \\ 1 & 0 & 1 \\ 0 & 1 & 1 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix} \begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}$	:	$\begin{bmatrix} 1 & 1 & 0 \\ 1 & 0 & 1 \\ 0 & 1 & 1 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix} = \begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}$
35, 6	$\begin{bmatrix} 1 & 0 & 0 \\ & \vdots & \\ & \vdots & \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix} \begin{bmatrix} 1 \\ \vdots \\ \vdots \end{bmatrix}$	:	$\begin{bmatrix} 1 & 0 & 0 \\ & \vdots & \\ & \vdots & \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix} = \begin{bmatrix} 1 \\ \vdots \\ \vdots \end{bmatrix}$
47, 9	$q^m \times q^{n-m}$	:	$q^{n-m} \times q^m$
50, −16	$u = u_{i,k}$ and $v_{j,l}$	:	$u = u_{i,k}$ and $v = u_{j,l}$
51, −9	word v.	:	word v. $\square$
52, −8	$x - y = \ldots$	:	$x - v = \ldots$
64, −7		:	$\square$
66, 8	r-fold repetition	:	$2r$+1-fold repetition
163, −12	$af_i \neq af_i$	:	$af_i \neq af_j$
163, −11	$f_2 f_3, \ldots, f_q$	:	$f_2 f_3 \cdots f_q$
196, 15	$b_{kl} \neq 0$. Then	:	$b_{kl} \neq 0$, with i and k as large as possible. Then
201, −1	word,	:	word.
204, −13	minium	:	minimum
205, −1	independent.	:	independent. $\square$
213, −6	exist.	:	exist. $\square$

Pge,Lne	**Printed**	:	**Correction**
219, 19	is $m.$	:	is $m.$ $\square$
225, 6	additons	:	additions
225, −12	dividng. . .	:	dividing. . .$\square$
228, 4	additon	:	addition
235, 1	Chapter 14	:	Chapter 13
235, 14	$5+8+3+1+1=15$	:	$5+8+3+1+1=14$
237, −10	2 15	:	2 8 15
239, 11	13 1 13 $\underline{0}$	:	13 1 10 $\underline{0}$
241, 5	αz	:	$\alpha^j z$
241, −6	Syndrome	:	syndrome
242, −7	as difference	:	as the difference
244, 1	Multiplyingby	:	Multiplying by
251, 13	$s(z) = 14z + z + 6z + 9z + 12z + 7$	:	$s(z) = 14z^5 + z^4 + 6z^3 + 9z^2 + 12z + 7$
251, −2	(2 0)	:	(0 2 0)
276, −1	$l^\circ(z) = 13z^3 + 10z + 8z + 11 = 10l(z)$	:	$l^\circ(z) = 13z^3 + 10z^2 + 8z + 11 = 11l(z)$
288, −9	$\binom{n}{k}$.	:	$\left({}_{k.}{}^{n}\ \square\right)$
289, 1	$\mathbf{B}^n$	:	A^n
291, 11	$\lfloor 128/29 \rfloor = 4$	:	$\lceil 128/29 \rceil = 5$
291, −1	The obviously	:	Then obviously
291, −1	$a,\ a',\ bb'$	:	$a,\ a',\ b,\ b'$
292, 2	$b(u + av) - b'(u' + a'v)$	:	$b(u - av) + b'(u' - a'v)$
296, −8	$1/(12)n)$	:	$1/(12n)$
298, 5	N. V. Goppa	:	V. D. Goppa
303, 6	N. V. Goppa	:	V. D. Goppa
308, 18	$\sum_{j=1}^{k} d_j \sum_{\substack{i=1 \\ i\neq j}}^{k} (z - \beta_i) = n(z)$	:	$\sum_{j=1}^{k} d_j \prod_{\substack{i=1 \\ i\neq j}}^{k} (z - \beta_i) = n(z)$
322, 5	G	:	$g(z)$

2. Codes and Algebraic Curves

Pge,Lne	**Printed**	:	**Correction**
3, −14	intersection parabola . . .	:	intersection of a parabola . . .
13, 16	irreducible	:	irreducible.
17, −9	$(u{=}0, v{=}1)$	:	$(u{=}1, v{=}0)$
24, −18	$s(h)$	:	$\sigma(h)$
24, −12	$\tau k(\dot{x}, \dot{y})\dot{x}^{d-e}$	:	$\tau k(\dot{u}, \dot{v})\dot{x}^{d-e}$
24, −11	$\tau k(\dot{x}, \dot{y})\dot{x}^{d-e}$	:	$\tau k(\dot{u}, \dot{v})\dot{x}^{d-e}$
26, 16	$= f(\dot{x} - \alpha, \dot{y} - \beta)$	:	$= f(\dot{x} + \alpha, \dot{y} + \beta)$
26, 17	$f_{\alpha\, b}$	:	$f_{\alpha,\beta}$
26, 23	$f_{\alpha\beta}$	:	$f_{\alpha,\beta}$
26, 26	$= (\dot{x} - \alpha)^m (\dot{y} - \beta)^n$	:	$= (\dot{x} + \alpha)^m (\dot{y} + \beta)^n$
28, −7	rational function φ	:	function $\varphi \in K(C)$
29, 11	$h(x, y) \neq 0$	:	$h(0, 0) \neq 0$
29, 21	$h(x, y) \neq 0$	:	$h(0, 0) \neq 0$
29, −8	$P{:}(\mathsf{i}, -\mathsf{i})$	:	$P{:}(\mathsf{i}, -\mathsf{i})/\sqrt{2}$
29, −8	$\bar{P}{:}(-\mathsf{i}, \mathsf{i})$	:	$P{:}(-\mathsf{i}, \mathsf{i})/\sqrt{2}$
30, −18	$P \in K[C]_P$	:	$\varphi \in K[C]_P$
33, −15	$(y^5 + y^4 + y^2 + y + 1)$	:	$(y^4 + y^3 + y^2 + y + 1)$
34, 8	x^2	:	$\dot{x}^2$

Pge,Lne	**Printed**	**Correction**
38, -6	$g(\dot{x}, y) - \gamma$	$g(\dot{x}, \dot{y}) - \gamma$
41, 7	modulo $f(\dot{x}, \dot{y})$.	modulo $f(\dot{x}, \dot{y})$. $\square$
41, 17	form f/g with $g(0, 1) \neq 0$.	form f/g.
41, -14	$y^2 + y + 1/x^2$	$(y^2 + y + 1)/x^2$
41, -10	$y^2 + y + 1/x^3$	$(y^2 + y + 1)/x^3$
41, -8	$v^2u + vu^2 + u^3$	$u^2v + uv^2 + u^3$
41, -7	$(u{=}0, v{=}10)$ and $(u{=}0, v{=}11)$	$(u{=}10, v{=}0)$ and $(u{=}11, v{=}0)$
42, -17	$\nu_P(\psi) = n_j$	$\nu_P(\psi) = -n_j$
43, -7	estimate $l(D)$	estimate for $l(D)$
43, -4	that is.	that is
52, 2	$\varphi \in L(-B)$	$\varphi \in L(-B, B)$
55, -11	P is the point	P_0 is the point
57, -15	d of C.	d of G.
58, 13	C has rank	G has rank
58, 15	word of C	word of G
58, 16	$B_j = \sum_{i=1}^{j} P_j$	$B_j = \sum_{i=1}^{j} P_i$
58, 19	$r - k + 1 - \gamma \ldots r - k + 2 - \gamma$	$a - k + 1 - \gamma \ldots a - k + 2 - \gamma$
58, 22	$d \in C$. $\square$	$d \in G$. $\square$
61, -14	$x/(y + 1) \cdot f = 0 + 0 + 1 + 1 + 11 + 10 + 1 + 10 = 10$	$x/(y + 1) \cdot f = 0 + 0 + 1 + 1 + 11 + 10 + 11 + 1 = 11$
61, -10	$y^2/(y + 1)^2$	$x^3/(y + 1)^2$
65, -17	$\leq -2\gamma - t + 1$	$\leq m - 2\gamma - t + 1$
65, -2	Let c be a code word of the code $C_\Omega(B, D)$ defined	Let the code $C_\Omega(B, D)$ be defined
66, 15	set of s	set of r
67, 15	Tble	Table
71, 16	$2g + 2t - 1$	$2\gamma + 2t - 1$
72, 16	$H + rQ$	$L(H + rQ)$
72, -2	GG	C_Ω
73, -9	GG	C_Ω
75, 12	$2g - 1 + t$	$2\gamma - 1 + t$
76, 10	$\mu_{A'}(\eta) \leq r'$	$\mu_{A'}(\eta) < r'$
76, 11	$\mu_{A'}(\theta)$	$\mu_{A'}(\eta)$
76, 12	$\mu_A(\theta) \leq r$	$\mu_A(\theta) < r$
76, 20	a_r	α_r
76, 21	$S\|_{r,r'}$	$S\|_{r,r'-1}$
76, 24	$(r, t + 2\gamma - 1)$	$(r, t + 2\gamma)$
76, 28	$(r, r' - 1)$	(r, r')
76, 30	$(r - 1, r')$	(r, r')
76, -8	$S\|_{r,r'}$	$S\|_{r,r'-1}$
76, -6	$k \leq r' \ \ldots\ k \leq r'$	$k < r' \ \ldots\ k < r'$
76, -5	$k \leq r' \ \ldots\ L(A' + (r' - t)Q)$	$k < r' \ \ldots\ L(A' + (r' - t - 1)Q)$
76, -4	$\mu_{A'}(\eta) \leq r'$	$\mu_{A'}(\eta) < r'$
77, 11	The part (c)	Then part (c)
77, -6	$\psi_7 + \psi_3 + \psi_2$	$\psi_7 + \psi_5 + \psi_3$
77, -5	$\psi_5 + 8\psi_4 + 14\psi_3$	$\psi_7 + 8\psi_6 + 14\psi_5$
78, -13	$(r, r' - 1) \ \ldots\ (r - 1, r')$	$(r, r') \ \ldots\ (r, r')$
81, -3	$\sum_{P_l \in M} \varphi_i(P_l)e_l = \varphi_i \cdot f, \quad i < s.$	$\sum_{P_l \in M} \varphi_i(P_l)e_l = \varphi_i \cdot e, \quad i < s.$
92, 7	functions $F(\dot{x})$	functions $K(\dot{x})$
94, 19	$\mathsf{F}_2[C]_P = \mathsf{F}_4[C]_P \cap \mathsf{F}_2[C]$,	$\mathsf{F}_2[C]_P = \mathsf{F}_4[C]_P \cap \mathsf{F}_2(C)$,
94, 20	$\mathsf{F}_4[C]$. then $\ldots$of $\mathsf{F}_2[C]$	$\mathsf{F}_4(C)$. then $\ldots$of $\mathsf{F}_2(C)$

Pge,Lne	Printed		Correction
94, −16	$\mathsf{F}_2[C]$	:	$\mathsf{F}_2(C)$
94, −10	$\mathsf{F}_2(C)_Q$	:	$\mathsf{F}_2[C]_Q$
100, 9	place of $\mathsf{F}_4[C]$	:	place of $\mathsf{F}_4(C)$
100, 9	$\cap\mathsf{F}_2[C]$ satisfies	:	$\cap\mathsf{F}_2(C)$ satisfies
100, 10	of $\mathsf{F}_2[C]$	:	of $\mathsf{F}_2(C)$
100, −11	one containing x/y and the other containing y/x.	:	one containing $x/(x+y)$ and the other containing $x/(x-y)$. *Hint: evaluate* y^2/x^2.
100, −9	$\mathsf{Q}[C]$	:	$\mathsf{Q}(C)$
102, −15	with φ, $\psi \in K[C]_P$	:	with φ', $\psi' \in K[C]_P$
105, 13	$y/x \in V$	:	$y/x \in F_P$
105, −4	Thus $\nu(x) > \nu(y)$	:	Thus $\nu(x) \geq \nu(y)$
107, 15	$\{\nu_k(u_j) + v_k(v_j) : j \neq k\}\big)$	:	$\{\nu_k(u_j) + \nu_k(v_j) : j \neq k\}\big)$
109, 5	$\nu_k(x - t_i^{n_i} > n_i$	:	$\nu_i(x - t_i^{n_i} > n_i$
109, 17	place P of L	:	place P of F
112, 17	that $\lvert V : K\rvert$ is	:	that $\lvert V/P : K\rvert$ is
113, 16	such	:	such that
113, 16	$v_p(x) + D(P) \geq 0$	:	$v_P(x) + D(P) \geq 0$
113, 20	$\dim L(D)$ is	:	$L(D)$ is
115, 2	$x_1, \ldots, x_d$	:	$\bar{x}_1, \ldots, \bar{x}_d$
116, 10	hence $\nu_P(g(x)) \geq 0$.	:	hence $\nu_P(g_i(x)) \geq 0$.
117, 21	establishing	:	thus establishing
126, 21	complementary partion	:	complementary repartion
132, 12	non-aero divisors	:	non-zero differentials
134, 5	zero divisor.	:	zero differential.
130, −9	letting $A(P) = \min\{A_0(P), \ldots, A_n(P)\}$	:	letting $A(P) = \max\{A_0(P), \ldots, A_n(P)\}$
135, 14	$l(D) = d(D) + \kappa - g + l(W - D)$	:	$l(D) = d(D) + \kappa - \gamma + l(W - D)$
165, −16	curve $y^2 = x^3 + x$	:	curve $y^2 = x^3 + x^2$
171, 18	Proposition 13.3	:	Corollary 13.4