Corrections after Second Printing (2007)

p. 18, Problem 1.1
The scaling in “erf” here is incorrect according to the standard definition of the error function. Therefore, “erf” should be renamed “f” (say) all over and not referred to as the “error function,” and its domain should be changed to $\mathbb{R}^+$. [11 Nov 08]

p. 21, Problem 1.9, item 4
In the hint, change “Schwartz” into “Schwarz”. [28 Feb 12, thanks to P. Vontobel]

p. 46, Problem 2.24, line 17
Change “$F^{2k}$” into “$\mathbb{R}^{2k}$”. [19 Dec 12, thanks to U. Pereg]

p. 29, Section 2.3, line 3
The superscript “T” should be in italics, and the definition of transposition should be shifted from line 13 to right after this equation. [26 Nov 08]

p. 56, line 3
The wording of this line can be improved into:
“Therefore, if $c(x) | a(x) \cdot b(x)$ then $s(x) \cdot a(x) \cdot b(x) \equiv b(x) \equiv 0 \pmod{c(x)}$.” [01 Dec 09]

p. 57, Example 3.5, last line
A definition of isomorphism can be added by changing “isomorphic” into:
“isomorphic: they are the same up to (possibly) renaming of the elements of the field.”
The same addition can be made also on p. 218, line above Section 7.1. [01 Dec 09]

p. 64, Corollary 3.13, last line
A more explicit definition of automorphism can be added by changing “itself” into:
“itself: it is an invertible mapping that preserves the addition and multiplication operations of $F$” [01 Dec 09]

p. 121, Problem 4.10
In lines 1 and 4, change “$d = w$” and “$d=2t+1$” into “$d \geq w$” and “$d \geq 2t+1$”, respectively (since the attaining code in part 2 can have minimum distance larger than $2t+1$, as is necessarily the case when $q = 2$). [26 Dec 09, thanks to S. Moran]

p. 122, Problem 4.12, part 3
The right-hand side of the equation can be simplified to $(n-t)(q-1)q^{t-1}+q^t$ (counting separately bursts that start at the last $t$ positions). [07 Dec 11]

p. 126, Problem 4.21, part 1
The inequality can be improved to:
$$P_{\text{err}} \leq \frac{W_C(p)-1}{q-1}.$$ [19 Aug 08]
p. 180, line 2  
[12 Aug 13]  
Change “r” into “(r−2)” (i.e., the bound is stronger than stated). Consequently, change the four occurrences of “(D−1)” in Theorem 5.4 (lines 5 and 6) and its proof (last line on p. 180 and line 2 on p. 181) into “(D−3)”, and the last two occurrences of “D” in Corollary 5.5 (lines 4 and 5) into “(D−2)”.  

p. 181, line 2 after Corollary 5.5  
[12 Aug 13]  
Change “namely, when D < p^{m/2} + 1” into “e.g., when D ≤ p^{m/2} + 1”.  

p. 188, proof of Proposition 6.1, lines 2–8  
[31 May 2012, thanks to P. Vontobel]  
The invertibility of Λ(x) is not really required: the product λ(x)S(x)Λ(x), when taken modulo x^{d−1}, is congruent to λ(x)Γ(x) by (6.6), and to Λ(x)γ(x) by (6.9), thereby yielding line 8 in the proof.  

p. 236, Problem 7.11, part 6, line 2  
[11 Feb 09, thanks to L. Neeman]  
Change “2·3^n” into “2·3^n”.  

p. 259, Problem 8.9, line 1  
[13 Jan 2013, thanks to A. Sharov]  
Although not quite necessary, it may be better to add that m > 1.  

p. 296, Notes on Section 9.7  
[25 Jul 12]  
In line 4, change “ℓO(1)N log N” and “O(ℓN)” into “O(ℓ^2N log^2 N log log N)” and “N”, respectively.  

p. 433, Problem 13.19, item 3  
[28 Feb 12, thanks to P. Vontobel]  
In the hint, change “Schwartz” into “Schwarz”.  

References  
[12 Aug 09]  
In the following references (found on pp. 531 and 535), a comma is missing after the year of publication: Bush [72], Feng and Tzeng [124], [125], Fitzpatrick and Norton [127], and Forney [128], [130].