Iterative Receiver Design

Errata

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1 Introduction

Below is a list of errors from the book Iterative Receiver Design. The errors are listed according to page number and highlighted in red. Should you find additional errors, please contact me at the above e-mail address.

Acknowledgment

Thanks to Frederik Simoens, Pedro Pinto, and (most of all) Mike Addlesee for pointing out these errors.

2 List of Errors

1. Page 17: last sentence of section 2.5: “[...] as long as the users are [...]”
2. Page 17: section 2.6, last sentence of first paragraph: “[...] we will need to make a number of assumptions [...]”
3. Page 20: definition 3.1: “An estimator is a function [...]”
4. Page 23: example 3.3: “(the probability of heads is $1 - x$ and the probability of tails is $x$)”
5. Page 29: equations (3.31) and (3.33): the denominators should be
   $$\sum_{k=1}^{L} w(z^{(k)})$$
6. Page 30: equations (3.37) and (3.38): the denominators should be
   $$\sum_{k=1}^{L} w(z^{(k)})$$
7. Page 33: missing comma on line 6: “sample $z_3'$ from $p_{Z_3|Z_1Z_2} (\cdot | z_1'z_2')”
8. Page 35: section 4.1, line 8: “They generalize concepts such as Tanner graphs [...]”
9. Page 46: incorrect symbol for empty set in definition 4.7, line 3: “[...] such that $S_A \cap S_B = \emptyset$”
   Comment: multiple occurrences of this error
10. Page 85: equation (5.18): $\mu_{g\rightarrow C_k} (c_k)$ should be $\mu_{f_k\rightarrow C_k} (c_k)$. On the line below: $\mu_{g\rightarrow C_k} (b)$ should be $\mu_{f_k\rightarrow C_k} (b)$
11. Page 92: example 5.4: “Repetition code”
    Comment: multiple occurrences of this error
12. Page 98: Algorithm 5.1, line 4: “draw $y^{(k)} \sim p_Y (y)$”
13. Page 111: line 6 of Marginals: “Summing out $X_1$ tells us that $p (Y = [lb], \mathcal{M}) = 0.0828.”
14. Page 121: beginning of rule 5: "Given $\mu_{E_2 \rightarrow f(e_2)} [...]"

15. Page 122: line 4: "[...] tend to infinity, then we have [...] and take over [...]"

16. Page 147: second sentence after (8.7): "A systematic code can be obtained [...]"

17. Page 154: section 8.4.4, second line of forward-backward step: "The forward and backward phases are shown in Fig. 8.5".

18. Page 169: Algorithm 8.9, line 12: "(without lines 6, 9 and 10)"

19. Page 182: sentence below (9.12): "(see Eq. (8.63))" should be "(see Eq. (8.59))"

20. Page 199: sentence below (10.31): "[...] for a fixed $a_p",""

21. Page 200: section 10.3.7.1, seventh line: "[...] in (10.23),[...]" should be "[...] in (10.32),[...]"

22. Page 213: line 3: "The enables [...]" should be "This enables [...]"

23. Page 237: last sentence of section 14.1: "[...] in the context of tracking a [...]"

24. Page 238: equation (14.2): the factor $p(C|A,M)$ should be $p(A|C,M)"

25. Page 240: first line of section 14.3.3: "We will denote the message as shown [...]"

26. Page 243: in the definition of a circulant matrix, the entry on the 3rd row, 5th column should be $a_2$ (and not $a_3$)

27. Page 246: last display equation of section 15.2: should be $p_{Z_2|Z_1}(z_2|z_1)$ (no period after $z_1$)