

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

$$\sum_{k=1}^L w \left(\mathbf{z}^{(k)} \right)$$

6. Page 30: equations (3.37) and (3.38): the denominators should be

$$\sum_{k=1}^L w \left(\mathbf{z}^{(k)} \right)$$

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: "Rep**e**tition code"
Comment: multiple occurrences of this error
12. Page 98: Algorithm 5.1, line 4: "draw $\mathbf{y}^{(k)} \sim p_Y(\mathbf{y})$ "
13. Page 111: line 6 of Marginals: "Summing out X_1 tells us that $p(\mathbf{Y} = [\text{lb}] | \mathcal{M}) = 0.0828$."

14. Page 121: beginning of rule 5: "Given $\mu_{E_2 \rightarrow f}(\ell_2)$ [...]"
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~~s~~"
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 $\mathbf{a}_i$,"
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 ~~a~~ tracking a [...]"
24. Page 238: equation (14.2): the factor $p(\mathbf{C} | \mathbf{A}, \mathcal{M})$ should be $p(\mathbf{A} | \mathbf{C}, \mathcal{M})$
25. Page 240: first line of section 14.3.3: "We will denote the messagess 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)