

# Functional Analysis

## Volume 1: A Gentle Introduction

Notes and errata, as of Feb. 19, 2011

The posting for page 495 is new.

We thank Richard Palas for his contributions to this list.

Page 8 In Example 1.1.6, reference is made to Appendix B.5; it should be to Notation B.2.2 (in Appendix B.2).

Page 100 Exercise 1.11.1 repeats Corollary 1.11.12 (but the solution, given in Appendix D, is more detailed than the proof of the corollary).

Page 466 In Example A.2.7, the first sentence should be: “Let  $S$ ,  $P(S)$ , and  $\preceq$  be as in part 2 of Examples A.2.5”. (The problem with the existing text is that  $S$  has to be defined as  $\{a, b\}$ , which it is in Examples A.2.5, but not in Examples A.2.3.)

Page 495, solution to 1.1.11, at the end of the third line:

$$|x_k|^p \leq |x_k|^q \quad \text{should have been} \quad |x_k|^q \leq |x_k|^p.$$

Page 515 The solution to Exercise 1.13.15 is missing. Here it is:

False. Let  $X$  be any countable discrete topological space. Then, by Exercise 1.13.1,  $X$  is fat in itself.

Page 621 The two books listed in reference [57] should have been listed separately.

### Additions and corrections to index

Page 626 “ $C(X)$ ”: add page 96

Page 627 “compact operator”: add page 265 (Exercise 3.5.7)

Page 627 “continuity”: add page 367

Page 629 “eigenvalue”: add page 254 (Exercise 3.4.5)

Page 631 “Hilbert space,  $\mathbb{R}^n$ ”: add page 288

Page 639 “uniform boundedness principles”: change 245 to 244