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**Topics in the theory of Pettis integration.** (English) Zbl 0798.46042  
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This paper is based on lectures presented at the School on Measure Theory and Real Analysis (Grado (Italy), 1991/92). It is divided into the following chapters:

1. Preliminaries, 2. Measures in a normed space, Measurable functions, 4. Pettis integral, 5. Integrability of strongly measurable functions, 6. Criteria for Pettis integrability, 7. Integration of scalarly bounded functions, 8. Limit theorems, 9. Approximation by simple functions – the compact case, 10. Approximation by simple functions – the separable case, 11. The weak Radon-Nikodym property – the general case, 12. The weak Radon-Nikodym property of conjugate Banach spaces, 13. Comments, 14. References.

The paper is an excellently written exposition of the main topics in the theory of Pettis integration. It contains 40 open problems. The paper is of interest for the experts as well as for the beginners in this field; it is selfcontained and requires from the reader only the basic facts in the theory of Banach spaces and in measure theory.

Reviewer: [H.Weber \(Potenza\)](#)

**MSC:**

**46G10** Vector-valued measures and integration  
**28B05** Vector-valued set functions, measures and integrals  
**46G12** Measures and integration on abstract linear spaces

Cited in **2** Reviews  
Cited in **47** Documents

**Keywords:**

measures in a normed space; limit theorems; Pettis integral; strongly measurable functions; scalarly bounded functions; weak Radon-Nikodym property of conjugate Banach spaces