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   Autore   Guirao Antonio Jose

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   Nota di contenuto   1 Norms, Normed spaces, Banach spaces -- 2 Some basic definitions and tools -- 3 Equivalent norms -- 4 Basic differentiability in Banach spaces -- 5 Basic convexity -- 6 Some structural properties of Banach spaces -- 7 The use of Smulyan's tests -- 8 Asplund averaging I -- 9 Tools for renorming -- 10 Renorming of nonseparable Banach spaces -- 11 Examples on C1-smoothness -- 12 Examples on Rotundity -- 13 Nonlinear Transfer Techniques -- 14 Lipschitz functions -- 15 Spaces isomorphic to Hilbert spaces -- 16 Superreflexive spaces -- 17 The Kingdom of Tsirelson's space -- 18 The L(infinity) spaces -- 19 Higher order smoothness -- 20 James boundaries -- 21 RNP property -- 22 SSD spaces -- 23 Norms with MIP -- 24 Nicely smooth Banach spaces -- 25 Weak Hadamard differentiability -- 26 Fabian's farm of Lipschitz Asplund spaces -- 27 Fonf's land of spaces isomorphic to polyhedral spaces -- 28 Hájek's garden of nice functions on c0(gamma) -- 29 Kottman-type results -- 30 3-space properties -- 31 Polynomials -- 32 Miscellaneous applications -- 33 Miscellaneous topics -- 34 More on WCG spaces and their relatives -- 35 Valdivia compacta -- 36 Renorming classical spaces -- 37 Symmetric norms -- 38 A concise list of coordinates of the relationship -- 39 Some easily formulated open questions on construction of norms in separable spaces -- Index of figures.

   Sommario/riassunto This monograph presents an up-to-date panorama of the different

techniques and results in the large field of renorming in Banach spaces and its applications. The reader will find a self-contained exposition of the basics on convexity and differentiability, the classical results in building equivalent norms with useful properties, and the evolution of the subject from its origin to the present days. Emphasis is done on the main ideas and their connections. The book covers several goals. First, a substantial part of it can be used as a text for graduate and other advanced courses in the geometry of Banach spaces, presenting results together with proofs, remarks and developments in a structured form. Second, a large collection of recent contributions shows the actual landscape of the field, helping the reader to access the vast existing literature, with hints of proofs and relationships among the different subtopics. Third, it can be used as a reference thanks to comprehensive lists anddetailed indices that may lead to expected or unexpected information. Both specialists and newcomers to the field will find this book appealing, since its content is presented in such a way that ready-to-use results may be accessed without going into the details. This flexible approach, from the in-depth reading of a proof to the search for a useful result, together with the fact that recent results are collected here for the first time in book form, extends throughout the book. Open problems and discussions are included, encouraging the advancement of this active area of research.