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Nota di contenuto	Preface Part 1: An introduction: What is pedometrics? Chapter 1. Scope of pedometrics (Alex B. McBratney) Part 2: Statistical footings Chapter 2. Soil statistical description and measurement scales (Thomas Bishop) Chapter 3. Statistical distributions of soil (Irena Mikheeva) Chapter 4. Effective multivariate description of soil and its environment (Mario Fajardo) Part 3: Soil measurements and attributes. Chapter 5. Pedometric treatment of soil attributes (Uta Stockmann) Chapter 6. Scaling characteristics of soil structure (Ana M. Tarquis) Chapter 7. Pedotransfer functions and soil inference systems (José Padarian) Part 4: Soil materials, horizons and profiles. Chapter 8. Soil material and horizon classes (Nathan Odgers) Chapter 9. Soil profiles and profile classes (Florence Carré) Part 5: Soil variation in space and time. Chapter 10. Classical soil geostatistics (Murray Lark) Chapter 11. Model-based soil geostatistics Chapter 12. Digital mapping of soil classes and continuous soil properties (Brendan P. Malone) Chapter 13. Vis-NIR-SWIR remote sensing products as new soil data for Digital Soil Mapping (Philippe Lagacherie)

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	Chapter 14. Uncertainty and uncertainty propagation in soil mapping and modelling (Gerard Heuvelink) Chapter 15. Complex soil variation over multiple scales (Murray Lark) Chapter 16. Pedodiversity, soil reserves and restoration (Mario Fajardo) Chapter 17. Pedometric valuation of the soil resource (David Rossiter) Part 6: Soil genesis. Chapter 18. Clorpt functions (Uta Stockmann) Chapter 19. One- Two- and Three- D pedogenetic models (Sebastien Salvador) Part 7: Applications of pedometrics. Chapter 20. Site-specific crop management (Brett Whelan) Chapter 21. Variograms of soil properties for agricultural environmental applications (Stacey Paterson) Chapter 22. Broad-scale soil monitoring schemes (Dominique Arrouays) Chapter 23. Farm-scale soil carbon auditing (Jaap de Gruiter).
Sommario/riassunto	This book presents the basic concepts of quantitative soil science and, within this framework, it seeks to construct a new body of knowledge. There is a growing need for quantitative approach in soil science, which arises from a general demand for improved economic production and environmental management. Pedometrics can be defined as the development and application of statistical and mathematical methods applicable to data analysis problems in soil science. This book shows how pedometrics can address key soil-related questions from a quantitative point of view. It addresses four main areas which are akin to the problems of conventional pedology: (i) Understanding the pattern of soil distribution in character space – soil classification, (ii) Understanding soil spatial and temporal variation, (iii) Evaluating the utility and quality of soil and ultimately, (iv) Understanding the genesis of soil. This is the first book that address these problems in a coherent quantitate approach.