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Sommario/riassunto	Just as the circle number or the Euler constant e determines mathematics, fundamental constants of nature define the scales of the natural sciences. This book presents a new perspective by means of a

few axioms and compares the resulting validity with experimental data. By the axiomatic approach Sommerfeld's mysterious fine-structure constant and Dirac's cosmic number are fixed as pure number constants. Thanks to these number constants, it is possible to calculate the value for the anomalous magnetic-moment of the electron in a simple way compared to QED calculations. With the same number constants it is also possible to calculate masses, partial lifetimes, magnetic-moments or charge radii of fundamental particles. The expressions used for the calculations, with few exceptions, yield values within the experimental error limits of the Particle Data Group. The author shows that the introduced number constants give even better predictions than the complicated QED calculations of today's doctrine. In the first part only experimental data from the literature for checking the postulates are used. In the second part the author explains electrical transport measurements with emergent behaviour, which were carried out in a professional environment.