Preface

In this new century, the world is changing. The evolution of the society is made by scientific and technological innovations. The invention of the car, the plane or the battery has revolutionized the human society. To build these new inventions, the scientists have developed new concepts on the basis of scientific theories. Therefore, it is necessary that the theoretical concepts evolve continuously. The innovation is the product of science. Nowadays, there are many inventions which cannot be developed in the actual scope of engineering. There is no scientific theory able to cross this challenge. For example, the teleportation machine is one of these crucial innovations. All these problems attract the scientific curiosity. In this book, some of these issues are studied. There are twelve (12) chapters in this document. All chapters are individual articles. Each of them presents a particular study on a subject. The domain of this book is really vast. It includes the laws of the Universe and some applications behind these principles.

In the Chapter 1, the new definition of the concepts of time and growth are presented. This first chapter is based on the theories which explain the Universe. By this new approach, the mass, the volume and the density of the Universe have been calculated. The equations show that the entire Universe has the same density than a single photon. This result proves that the Universe is a huge photon. This chapter opens the way to a new conception of physics. Two new laws, applied to the evolution of the Universe and its constituents, have been developed. They take the name of the author: Yandza first law and Yandza second law. The Chapter 2 is based on the Function Number Method (FNM). This method facilitates the resolution of the analytic differential equations. By the FNM, an analytic function is transformed into a real number. Then, the calculus is made by associating different quantities (real numbers) in the equation of the differential problem. The differential equation solution gotten is also a number. This new solution number can also be transformed into an analytic solution. This method really facilitates the calculus. So, a complex problem, like the Navier-Stokes equation, is solved in the Chapter 6. The Chapter 3 presents a generalization of this method.

The Chapter 4 presents the growth study and the applications behind this phenomenon. According to the author, the growth is defined as the increase of the density in the constant volume. Its study opens the way to many applications like the superconductivity, the energy storage and the gravitational systems. The characterization of the growth ensures all these applications. The growth of analytic functions, in the Chapter 8, is the abstract concept of this phenomenon. By applying the growth to the atoms, their new characteristics are defined. Therefore, the Chapter 5 proposes a classification of the periodic elements. In this book, a new tool of language is also presented to solve the translation problems. It is called: the logic of words. This technique consists to transform a word into a number. Each letter corresponds to a number by its position in the alphabet. And, to find the translation in another language, the logic of words permits to calculate the new coefficient of the word in the new language. The logic of words helps to translate words without any dictionary. It

can be used for translating the archives in old languages.

The Chapters 9 and 11 present the multicomplex numbers. A multicomplex number is a complex number with many imaginary parts. It has a modulus and one or many arguments. The study of the multicomplex numbers opens the way to the design of the teleportation machine in the Chapter 12. To make this conception, the study of the related sets in the Chapter 11 is made. The related sets are the connected ensembles in which the entities (or numbers) are conserved from one set to another. It is based on Lavoisier law. So, the teleportation machine is an application of this last concept. This invention is crucial for the transport of matter and the electricity. The Chapter 10 explains the reasons of the creation of the Universe by characterizing the gravity. Behind the gravity, which can be seen as the density of force, the cosmic flux temporal variation induces the production of mass or matter. The secret of the creation of the Universe is based on the cosmic flux variation. This flux represents the invisible ocean of the Universe. All notions on the cosmic flux (speed, density) are developed in the Chapter 10. The calculus on this approach is also an application of the multicomplex numbers. This book is a physics and mathematics report of articles. All the subjects presented in its development are studied on a theoretical area.

The readership of this book associates the researchers, students and teachers of physics and mathematics. The book also concerns the literary people because, in the Chapter 7, a crucial tool for the translation of words from a language to another one is presented. The historians and archaeologists can use this tool for the study of the archives. And, the ordinary people can learn this instrument for the daily conversation. In addition, this book develops a singular method which facilitates the comprehension of physics and mathematics notions. It makes the book allowable to the general community of readers.

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