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A data book to understand the universe

This is a book which my father bought for me as a child. It uses photographs and illustrations to cover a vast amount of ground, with explanations ranging from the origins of the universe through to the elementary particles which make up matter and their interactions, the birth and evolution of celestial bodies, black holes, the solar system and earth, and the origins of life. I consequently believe that this was the starting point for my later life as a researcher. I glance back at this book from time to time to remind myself of my original motivations.

What is gravity?/Strong and weak forces

These are books which provide clear and attractive explanations of gravity, the fundamental interactions occurring in nature, and of the strong and weak forces, aimed at a general readership. They are written in such a readily understandable way as to make me wish that such books existed during my own childhood. I read them with great personal interest due to the appearances of my first boss during my post-doc days Dr. Son, as well as Dr. Hatsuda, my supervisor during my graduate school days in "What is gravity?" and "Strong and weak forces," respectively.

Lectures on Quantum Theory

This is a textbook of lectures on quantum theory, a subject I took in my first year at university. I was shocked by this world as described in terms of quantum mechanics, which at first glance seemed like a really strange theory to me, and at the same time, I realized I, who was still dominated by the worldview of classical mechanics, in fact really knew nothing about this world. In the latter half of the textbook, there are explanations covering quantum field theories and the difficulties involved in constructing quantum theories of gravity.

• Quantum Field Theory in a Nutshell

This textbook elegantly explains applications of quantum field theory to various physical phenomena transcending scales, including the theory of elementary particles and gravitational theory, condensed matter physics, such as superfluidity and superconductivity, and the nonequilibrium physics of interface growth. It gives you a real feel for the universality and beauty of quantum field theory. I read it with the enjoyable sense that I was listening to a frank lecture.

Mechanics

A mechanics textbook which I first encountered after entering university. While I learned physical laws at high school as mere scripture, the scales fell from my eyes when I realized that simple theories could allow them to be comprehended logically. The ten volumes making up Evgeny Lifshitz and Lev Landau's "The Course of Theoretical Physics" including this on Mechanics, are fundamental to the thinking informing my current research. It is no exaggeration to say that a majority of theoretical physicists are engaged in research which aims to reveal the physics beyond the Landau paradigm.