PREFACE

At the time of the publication of this volume, fifty years have passed since the appearance of an article in *The Physical Review* by Chen Ning Yang and Robert L. Mills, entitled "Conservation of Isotopic Spin and Isotopic Gauge Invariance". This book on the one hand serves as a tribute to that monumental piece of work, and on the other intends to show how its subject has evolved since that time, highlighting the landmarks that followed after the original paper emerged, and allowing its authors to indulge in new ideas and concepts. Gauge Theory has indeed grown into a pivotal concept in the Theory of Elementary Particles, and it is expected to play an equally essential role in even more basic theoretical constructions that are speculated upon today, with the aim of providing an all-embracing picture of the universal Laws of Physics.

Some of the chapters in this book are contributions that have appeared elsewhere; most of the contributions are original pieces of work. All are accompanied by brief comments by the Editor. Needless to state that this volume is far from complete. There are numerous well-known landmarks that we could not cover. Furthermore, like most developments in Science, progress not only comes from the relatively small set of papers by famous authors that enjoy enormous scores on citation indices, but it predominantly comes from the large crowds of scientists who confirm and reproduce the original research while adding inconspicuous but essential bits of understanding, not only by writing papers, but also by lecturing to students, by performing experiments and doing calculations. Without them, this book could not have been written.