

PREFACE

This volume is based on the second international conference of quantum bio-informatics held at the QBI Center of Tokyo University of Sciences.

The purpose of the conference is towards new stage making interdisciplinary bridges in mathematics, physics, information and life sciences, in particular, research for new paradigm for information science and life science on the basis of quantum theory. For this purpose we firstly return to the starting point of bio-informatics and quantum information, fields that are growing rapidly at present, and to seriously attempt mutual interaction between the two, with a view to enumerating and solving the many fundamental problems they entail. The papers submitted in this volume are all referred, whose contents are related to one of the following subjects:

- (1) Mathematical foundation of quantum mechanics
- (2) Quantum information
- (3) Quantum algorithm and computation
- (4) Quantum communication
- (5) White noise analysis and quantum dynamics
- (6) Chaos dynamics and adaptive dynamics
- (7) Experimental studies of quantum computer
- (8) Bio-Informatics
- (9) Genome analysis

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