

Preface

Seventeen years ago the Center for Frontier Sciences at Temple University was launched with an intriguing workshop entitled *The Philosophy of Quantum Theory*. The event, chaired by our first director, Gideon Carmi, brought together leading physicists and philosophers to address this issue. Participants included Roger Penrose, Abner Shimony, Bernard d’Espagnat, Yakir Aharonov, Basil Hiley and the late David Bohm, as the keynote speaker. In looking back, one of the workshop’s greatest achievements was to establish a dialogue on quantum mechanics among these scientists, a dialogue that is still continuing today.

Quo Vadis Quantum Mechanics? is a further brainchild of the Center for Frontier Sciences. Some of the contributors to this volume were present at the first workshop, whilst others were still unknown students at that time. All contributors to the present volume were initially invited to a closed workshop/brainstorming at the Center. During that gathering, they each presented their ideas and exchanged views on what they believe are today’s greatest challenges and open questions in quantum mechanics. The informal presentations were followed by lively round-table discussions. Subsequently all authors have written down, expanded and revised their contributions. To add extra spice to the book, the editors have included transcripts of some highlights of the round-table discussions. Springer did the rest – and their best.

Comparing this volume with some transcripts of the 1987 workshop at our disposal has made us very aware of the enormous progress that theoretical and experimental quantum physics has undergone during this period.

When Richard J. Fox founded the Center in 1987, he stated that leading scientists worldwide working on frontier scientific issues needed the opportunity to come together and exchange information on their work and brainstorm on their topics. The Center continues to uphold its founder’s vision. Let us all keep in mind that the frontier scientific issues of the present are often the mainstream science of the future.

Acknowledgements

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Temple University,
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