

Preface

The 3rd International Workshop on “Mysteries, Puzzles and Paradoxes in Quantum Mechanics” was held 17–23 September, 2000 at the Palazzo Feltrinelli in Gargnano, Italy, on the shore of Lake Garda, where the 1st and 2nd workshop of the series had been held as well.

As the previous ones, the 3rd workshop was trying to assess the present status of the foundations of quantum mechanics with particular emphasis on the counterintuitive features associated with superposition and entanglement. It was hoped that reports on recent experimental progress and the prospects arising from proposals for experiments of the future would balance, and supplement, the conceptual advances gained in theoretical studies.

The 41 contributions collected in these proceedings are ample evidence that these hopes were not in vain. Many sincere thanks to all authors! Their joint efforts have produced a fitting document of the 3rd workshop.

There is, of course, no way of knowing if and to which extent the more than 50 authors agree with Richard Feynman’s often-quoted assertion that “nobody understands quantum mechanics”, or with Roger Penrose’s provocative diagnosis that quantum mechanics is “incomplete, wrong or something else” and “makes absolutely no sense”. But there can hardly be any doubt that all participants in the workshop share a genuine deep appreciation of the profound lessons that quantum mechanics teaches those who are willing to learn.

The papers are organized in three groups – reflecting invited talks, contributed oral presentations, and posters, respectively – and, for lack of better criteria, ordered alphabetically by the first author’s name within each group. The wide scope of subjects discussed is evidence for the richness of the field, and it provides strong encouragement for continuing the series with a 4th workshop in 2001 and, hopefully, further ones in the following years.

Giovanna La Pietra is the real soul of these workshops. The conferences could not have been organized without her continuous and warm assistance. All of us, and especially R. B., wish to express our heartfelt gratitude for her limitless efforts. Giovanna’s unstoppable enthusiasm infected all participants.

Rodolfo Bonifacio
David Vitali
Berthold-Georg Englert