VARIATIONAL CALCULATIONS IN QUANTUM FIELD THEORY

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This Proceedings is dedicated to the memory of R.P.Feynman who devoted much of his research to the variational principle in field theory and who shared his intuition with the participants of this workshop.

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Preface

For a long time now there has been considerable interest in the possibility of obtaining accurate qualitative and quantitative information on the structure of quantum field theories using non-perturbative continuum and lattice variational techniques. This workshop brought together for the first time the leading researchers in this field in order to review its current state-of-art as well as to identify profitable directions for future research.

The themes of the meeting were: the Schrödinger formulation of QFT, the incorporation of gauge-fixing and renormalization, finite-mode and Gaussian approximations, the systematic improvement of trial states, investigations of vacuum instabilities and applications to scalar, gauge and supersymmetric theories.

The organizers would like to thank the participants for their encouragement before and during the meeting, and for providing a lively and informal workshop atmosphere.

It is a pleasure to thank our workshop secretary, Juliane Hilf, for her efficient handling of the day-to-day conference business. Furthermore, we are grateful to Uwe Ritschel and Michael Wendel for technical assistance, to Paulina Mendel and Theresia Meyer for retyping some of the contributions in $\text{\LaTeX}$, and to the staff of the Computer Center at Oldenburg University for their assistance in using $\text{\LaTeX}$ and the printing facilities.

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Oldenburg/Winchester, May 1988

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