

PREFACE

We have inherited a very rich body of knowledge in mechanics of continuous media going back hundred of years. Theories are numerous and tools are abundant due to the advent of Personal Computers, indigenous adaptation of the tools using the limited memories of Personal Computers along with the complexity of solving non-linear differential equations for real world problems.

The present investigation is an experiment with the application of the different non-linear mathematical tools along with the Personal Computers in this field of elastic deformation analysis of dielectric and piezoelectric bodies under the influence of mechanical and electrical fields.

Our endeavour deals with computerised iterations of observation --- conjecture --- experiment --- theory --- modelling --- validation cycle.