

Preface

The organizers felt that the time was ripe for an international conference on fractals. The word "fractal" had become part of the scientific language and the number of journal articles involving fractals was dramatically rising. The use of different notations was also rising. The research on fractals had reached the point where we found more new results in the literature than through the telephone calls and letters of friends.

In this conference, the emphasis was placed on physical processes involving fractals such as diffusion into fractals, scattering of waves from fractals, vibrations of fractals, conductivity of fractals, diffusion on fractals, phase transitions on fractal lattices, dynamical systems with fractal attractors, etc. In many cases a renormalization group calculation is the canonical way to proceed to calculate the fractal dimension of these hierarchical structures. In retrospect many physical systems which appeared just a few years ago to be pathological and whose analysis seemed intractable now are characterizable via fractal concepts and seem quite natural. In fact, for devoted practitioners of fractals many processes become mundane if it is discovered that they can be described by standard one-, two-, or three-dimensional physics.

The following program and invited contributions give a good, but not total, measure of the frontier work on fractals. We would like to apologize to the many researchers who requested to contribute to this conference but due solely to lack of time or finances could not be accommodated.

We wish to thank our sponsors, without whom this meeting would not have occurred:

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