

PREFACE

One of the 1997 summer conferences in the mathematical sciences, jointly sponsored by the Institute of Mathematical Statistics, the Society for Industrial and Applied Mathematics, and the American Mathematical Society, was devoted to New Developments and Applications in Experimental Design. The conference ran from June 29 to July 3 with an afternoon break in mid-week, and was held in the beautiful surroundings of the University of Washington campus in Seattle. The organizing committee consisted of Professor W. F. Rosenberger (co-chair), Professor W. K. Wong (co-chair), Professor Nancy Flournoy, and Professor Jerome Sacks, Director of the National Institute of Statistical Science. The conference was funded by a generous grant from the National Science Foundation, and included 45 participants, consisting of international experts in experimental design, leading researchers in the United States, and many new researchers. The goal of the conference was to bridge the gap between theoretical developments and applications in experimental design theory.

Some of the topics presented and discussed at the conference include computer experiments, neural networks, dose-response studies, and clinical trials. The conference saw a rich mixture of sequential and non-sequential methods. Professor Pukelsheim commented that perhaps the most valuable part of the conference was the floor discussion which ensued after a presentation. We observed that this did, in fact, happen on numerous occasions throughout the conference and we were all pleased with the active interactions from the floor.

The first three organizers went on to serve as co-editors of this proceedings volume of the conference. Included herein are 18 of the 26 papers presented at the conference. All papers underwent a rigorous refereeing process. We wish to thank several people for their special contributions to the conference and this monograph. At the initial stages Professor Herman Chernoff and Professor C. F. J. Wu provided important support and encouragement for our application. Dr. Padmanabhan Seshaiyer helped extensively with the latex software used to generate the manuscripts in this proceedings.

On a sad note, one of the most enjoyable and enthusiastic conference participants, Professor Ashim Mallik, died in November 1997, shortly after submitting a manuscript for this monograph. The two referees of the paper, Professor Vincent Melfi and Dr. Nigel Stallard, were kind enough to offer their assistance in making the manuscript suitable for publication after his death.

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