
Preface

William Q. Meeker has made pioneering and phenomenal contributions to the general area of reliability and, in particular, to the topics of degradation and accelerated testing. His research publications and the numerous citations he has received over the past three decades provide an ample testimony to this fact.

Statistical methods have become critical in analyzing reliability and survival data. Highly reliable products have necessitated the development of accelerated testing and degradation models and their analyses. This volume has been put together in order to (i) review some of the recent advances on accelerated testing and degradation, (ii) highlight some new results and discuss their applications, and (iii) suggest possible directions for future research in these topics.

With these specific goals in mind, many authors were invited to write a chapter for this volume. These authors are not only experts in lifetime data analysis, but also form a representative group from former students, colleagues, and other close professional associates of William Meeker. All contributions have been peer reviewed and organized into 26 chapters. For the convenience of readers, the volume has been divided into the following six parts:

- Review, Tutorials, and Perspective
- Shock Models
- Degradation Models
- Reliability Estimation and ALT
- Survival Function Estimation
- Competing Risk and Chaotic Systems

It needs to be emphasized here that this volume is not a proceedings, but a carefully and deliberately planned volume comprising chapters consistent with the editorial goals and purposes mentioned above.

Our thanks go to all the authors who have contributed to this volume. Thanks are also due to Mrs. Debbie Iscoe for the excellent typesetting of the entire volume. Special thanks go to Ms. Regina Gorenshteyn and Mr. Tom Grasso (Editor, Birkhäuser, Boston) for their interest and support for this project.

The volume was difficult, it is clear, but Leah (Project Manager at Integra Software Services), Brian, Tom, and Dubby helped us very much to prepare this nice volume!

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Like us, all the authors who contributed to this volume have great admiration for the work and accomplishments of William Meeker and therefore provided us with hearty cooperation during the preparation of this volume. It is a great pleasure and honor for all of us to dedicate this volume to William Meeker.

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